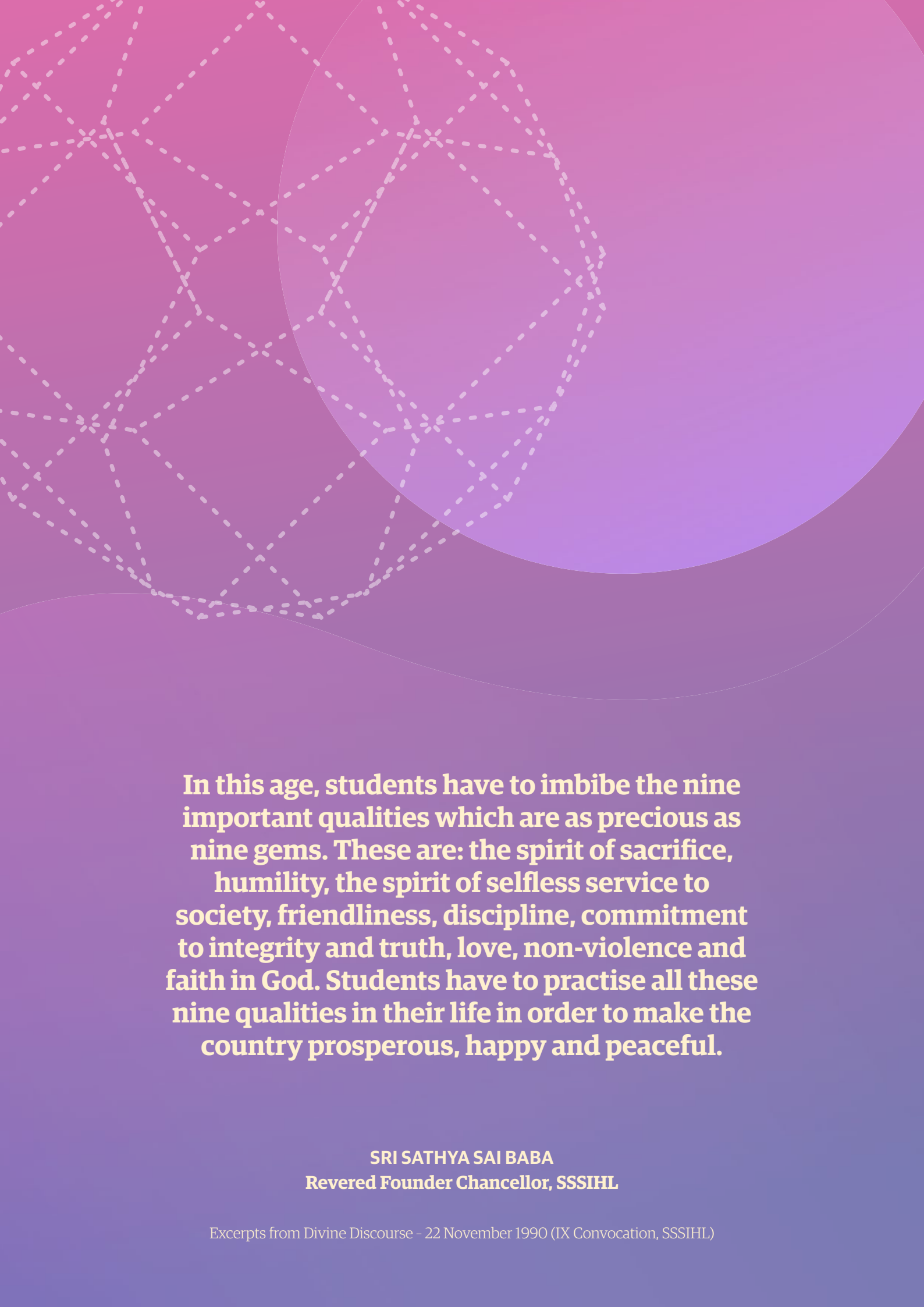




Annual Report 2022





In this age, students have to imbibe the nine important qualities which are as precious as nine gems. These are: the spirit of sacrifice, humility, the spirit of selfless service to society, friendliness, discipline, commitment to integrity and truth, love, non-violence and faith in God. Students have to practise all these nine qualities in their life in order to make the country prosperous, happy and peaceful.

**SRI SATHYA SAI BABA
Revered Founder Chancellor, SSSIHL**

Excerpts from Divine Discourse - 22 November 1990 (IX Convocation, SSSIHL)





Foreword

Nurturing excellence through Values-based Integral Education

Knowledge intertwines with character, and innovation embraces tradition at Sri Sathya Sai Institute of Higher Learning (SSSIHL). Since its inception in 1981, the Institute has been synonymous with Values-based Integral Education, which nurtures the holistic growth of students by seamlessly integrating the physical, mental, emotional, and spiritual aspects of higher education. As we enter our 42nd year, our journey continues with unwavering dedication.

The guiding light behind this ethos is the Divine message of our Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba, which forms the basis of SSSIHL's educational philosophy.

The specially designed curricula infuse the spirit of self-reliance in students and foster traditional values and Indian knowledge systems through its Awareness Courses and the annual Summer Course in Indian Culture & Spirituality. As a result, it embeds the guiding principles of the National Education Policy 2020.

SSSIHL's research landscape continues to extend a helping hand to the marginalised sections of society. Our research projects and collaborations testify to our commitment towards serving humanity. In a pioneering work in partnership with Tech Mahindra Ltd., the Department of Biosciences has developed AI/ML-based technology that predicts extended-spectrum beta-lactamase-producing Enterobacteriaceae, offering invaluable insights into urinary tract infections. This has gained recognition from the Ministry of Health, Medicine, and Family Welfare, Govt. of Andhra Pradesh, India.

The Department of Mathematics and Computer Science has forged collaborations that illuminate critical areas. Our partnership with ACTREC-Mumbai in cancer research, with CLTRI-Tamil Nadu in leprosy research, and with the National Tuberculosis Institute, Bangalore, in TB research showcases our dedication to interdisciplinary and industry collaboration for societal benefit.

The Department of Physics has harnessed nanotechnology to pioneer solutions for water remediation, offering hope for sustainable water purification.

The Department of Chemistry's pursuit of novel compounds has opened avenues for enhanced therapies and eco-friendly solutions.

Our commitment to excellence is reflected in our state-of-the-art research facilities: The Central Research Instruments Facility (CRIF) and the Central Research Laboratory (CRL).

These centres of innovation, coupled with solid academic infrastructure, yield impactful research that addresses societal needs. In addition, it has helped our research pursuits to grow exponentially over the years.

In the current academic year, we present 19 ongoing research projects with a total value of ₹6.90 crores, accompanied by the conferment of 26 doctoral degrees. Our faculty and doctoral research scholars authored 89 research papers in peer-reviewed journals and presented 53 conference papers, enriching the global academic discourse.

Despite the challenges of COVID-19, the academic year 2021/22 witnessed a prolific exchange of knowledge with over thirty e-conferences, workshops, webinars, and 110 guest lectures across our campuses. Our faculty members and research scholars participated in 150 events, whilst undergraduate and postgraduate students completed 295 projects and dissertations.

With immense pride, I share the news of global academic recognition – the coveted CAS University Award 2022. Presented by the prestigious Casualty Actuarial Society (CAS) in the United States, this accolade—which carries a cash prize of USD 5,000—celebrates universities that foster the development of the next generation of property and casualty actuaries. It was bestowed upon SSSIHL for its innovative and exemplary approach in preparing nearly 50 students skilled in Actuarial Sciences over the years. SSSIHL was one of only four worldwide universities (from a pool of 43 applicants) to be selected for this distinction and the only one from India.

As you delve into the pages of this annual report, you will see the impressive accomplishments of our faculty, doctoral research scholars and staff. Their contributions reflect our unwavering commitment to scholarly pursuits, societal impact, and holistic growth.

I extend my heartfelt congratulations to our students and staff and my gratitude to the alumni, donors and members of the Sri Sathya Sai Seva Organisations for their unwavering support. I place on record my deep appreciation to the Sri Sathya Sai Central Trust for its steadfast encouragement of the growth of SSSIHL.

As we present the SSSIHL Annual Report 2022, I invoke the blessings of our Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba, to continue to guide us on this significant and sacred journey of transformation and enlightenment through education, knowledge, and wisdom.

Prof. (Dr.) C B Sanjeevi
Vice-Chancellor



Annual Report 2022

1 July 2021 to 30 June 2022



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Sri Sathya Sai Values-based Integral Education

Sri Sathya Sai Institute of Higher Learning (Deemed to be University), Prasanthi Nilayam, Andhra Pradesh, India, is a visible manifestation of Bhagawan Sri Sathya Sai Baba's vision of education for human transformation.

Bhagawan Baba designed Sri Sathya Sai Values-based Integral Education to ensure deep inner transformation of students during their time at SSSIHL. This concept is unique at the university level of education.

The Institute hosts students from across the country at its four campuses located in Andhra Pradesh and Karnataka, India, and provides quality education free of cost for all programmes of study.

For Women:

- Anantapur Campus at Anantapur, Andhra Pradesh

For Men:

- Prasanthi Nilayam Campus at Puttaparthi, Andhra Pradesh
- Brindavan Campus at Kadugudi, Bangalore, Karnataka
- Muddenahalli Campus at Muddenahalli, Karnataka

Programmes offered include:

- Undergraduate: B.A., B.A. (Hons.), B.Com. (Hons.), B.Sc. & B.Sc. (Hons.), B.B.A., B.P.A.
- Postgraduate: M.A., M.Sc.
- Professional: B.Ed., M.B.A., M.Tech.
- Research: Ph.D.

A Modern Gurukula

Sri Sathya Sai Institute of Higher Learning (SSSIHL) was founded to inculcate ethical and moral values in students, along with secular education. This transformation (of students, teachers, and staff) has been the guiding principle right from its inception when it integrated ethics and values as the undercurrent of every subject taught at the Institute. Combined with academic and research excellence, the Institute provides its students with a holistic framework of interpersonal development. Its residential character trains the student's mind, body, and spirit in an environment similar to the ancient Indian 'gurukula' system of education in the most modern context.

Teachers and students live and grow together in an atmosphere of mutual trust and unity. This helps students develop a wholesome and balanced personality, where academic competence is intertwined with value systems.

Distinctive Features

Admissions

- Merit-based open admissions policy for all, irrespective of income, religion or region
- Free, high-quality education for all students

Residential Character

- A residential character where all doctoral research scholars, students, and select teaching faculty reside together in the hostel, which enables the translation of lessons learned into practical skills through experiential learning
- Spiritual ambience in an environment of discipline and love
- Cultivation of the spirit of self-reliance, brotherhood and sacrifice through mentoring and personal example

Infrastructure

- Campuses set in spacious and peaceful surroundings
- Well-equipped, modern science laboratories and a cutting-edge Research Instruments Facility
- Automated Library using an Integrated Library Management System (ILMS) with a digitisation facility accessed through the online Public Access Catalogue (OPAC) within the campus premises
- Libraries across campuses with over 1,90,000 volumes
- Connected to the National Knowledge Network (NKN)
- Computer and Multimedia learning centres with ultra-high-speed internet connectivity
- International Centre for Sports at the Prasanthi Nilayam Campus and multiple sports facilities at other campuses

Academics & Research

- Student-teacher ratio 8:1
- Integrated five-year programmes combining undergraduate and postgraduate studies for a systematic and graduated learning process
- Research collaborations with premier Indian and International Institutions and Industry
- Interdisciplinary / multidisciplinary research for societal benefit
- Awareness Programmes and Moral Classes reinforcing human values

Integral Education

- Life lessons learned through the message of the Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba
- Integrating human values with secular knowledge
- Inculcating the spirit of self-reliance and service to society
- Synthesis of science and spirituality for societal benefit
- The concept of integral education that SSSIHL imparts is pursued by all teachers, staff, and students

The Process

Sri Sathya Sai Values-based Integral Education is a modern, rational, scientific education system rooted in Indian ethos. It takes the best of both ancient and contemporary learning techniques.

As depicted in the diagram, the base is the concept of a modern Gurukula that sustains all relationships and activities at SSSIHL. It is responsible for creating and sustaining the congenial environment necessary for the teacher-student interaction to grow and develop.

Adherence to discipline and appropriate behaviour are the two important aspects that encompass all interactions. The five human values of Truth, Right Conduct, Peace, Love and Non-violence form the undercurrent of the integral education's dimensions.

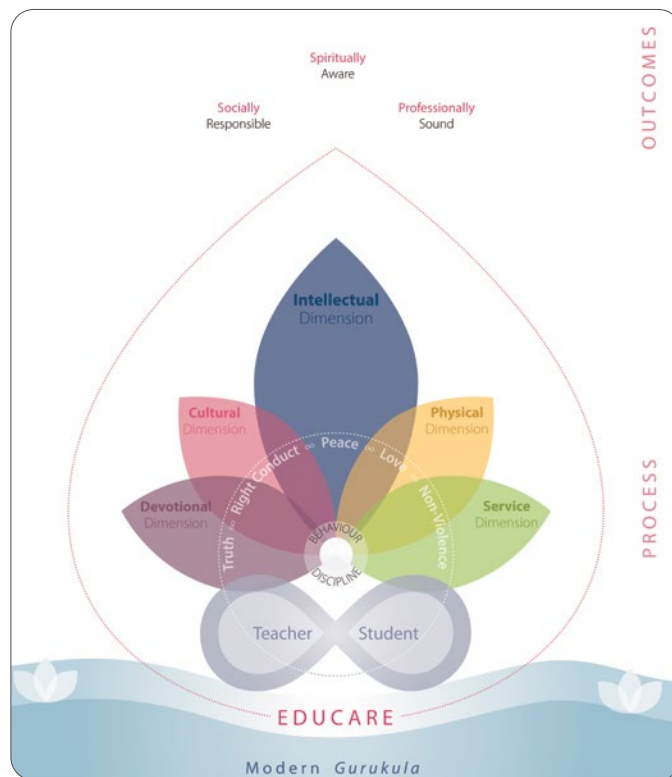
These dimensions are Intellectual, Physical, Cultural, Devotional and Service. The key activities for each dimension form the basis of most of a student's time at SSSIHL.

Bhagawan Baba purposefully designed the system of Integral Education so that students spend their time on academics (intellectual capacities) and developing other qualities. See the Integral Education Activities for further details.

The Daily Routine

This is a crucial component of this process. Each student's day starts at 5:00 a.m., with a couple of hours spent in prayer, exercise and other vocational pursuits (such as practice sessions for music, band, traditional Indian music, etc.).

Classes commence at 9:00 a.m. After college ends at around 4:00 p.m., students move to the Sports Field / Mandir / Prayer Hall for participation in sports and games / congregational chanting (Veda), devotional singing (bhajans), and other spiritual activities. These also include talks by eminent speakers on a variety of spiritual topics. Post dinner, students continue to concentrate on their studies.



Sri Sathya Sai Values-based Integral Education

The Outcome

The outcomes of the system of Values-based Integral Education at SSSIHL are threefold. It prepares all graduates to be:

- Spiritually aware
- Socially responsible and
- Professionally sound

It helps develop a strong character and positive qualities in students and nurtures virtues like adaptability, tolerance and sacrifice, shaping them into noble and responsible citizens.

I have established these institutions to impart spiritual education as a main component and worldly education as a secondary one. Education should enable one to cultivate good qualities, character and devotion. The teaching of the University curricula is only the means employed for the end, namely, spiritual uplift, self-discovery and social service through love and detachment.

Sri Sathya Sai Baba
Revered Founder Chancellor, SSSIHL

Integral Education Activities

All students at SSSIHL spend 60% of their time on intellectual activities (primarily on their studies). The rest of the 40% of the time is spent almost equally on activities related to the Integral education dimensions of Devotional, Cultural, Physical, and Service. These are highlighted below.

Devotional Dimension

- Bhajans (Sankirtan)
- Vedic chants and stotrams
- Meditation & Silent sitting
- Suprabhatam (prayer at dawn)
- Assembly (college prayer)
- Brahmaarpanam (food prayer)
- Kshama Prarthana (night prayer)

The activities of the devotional dimension enable a student to connect to his/her Divine inner Self. This inner connection opens the heart and brings forth the feeling of love, compassion and empathy for fellow human beings.



Cultural Dimension

- Celebration of festivals: Guru Poornima, Ganesh Chaturthi Ugadi, Republic Day, Independence Day, Eid-al-Fitr, Christmas Sri Krishna Janmashtami, Sri Ramanavami, Buddha Jayanti, etc.
- Brass Band
- Nadaswaram & Panchavadyam ensemble
- Annual Sports & Cultural Meet
- Performing Arts: Music programmes, Drama & Dance
- Fine Arts: Rangoli, Cardmaking, Photography, Altar making
- Public Speaking
- Debates and Elocution

The cultural dimension is designed to give students wide opportunities to find an avenue for their individual artistic expression.

The University makes every effort to provide the best possible material and human resources so that students excel at their chosen activities.

Festivals of major world religions are celebrated, reinforcing the unity among all faiths. Every student is involved in one way or another in the celebration of these festivals.

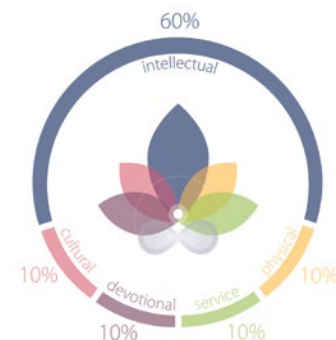


Physical Dimension

- Sports
- Games
- Jogging
- Exercises and Yogasanas
- Annual Sports & Cultural Meet

Sports and games are a part of the daily routine of all students. From yoga classes to fitness training, team sports to individual sports, students are encouraged to overcome their limitations and excel in these activities. SSSIHL has excellent sports facilities.





Service Dimension

- Self-reliance departments:
Electricals, Plumbing (water supply), Audiovisual, General store, Dispensary, Dietary services, Hostel mess, Arts & Crafts, costumes & props, etc.
- Community living
- Social work
- Voluntary work
- Grama Seva (Annual Village Service)
- Prasadam distribution

The service philosophy at SSSIHL is based on the concept that divinity pervades all of humanity; hence, when you serve others, you are serving the Divine. Students learn to serve without expecting anything in return, other than the deep inner satisfaction of serving others.

The compulsory residential system, where students live in dormitory-styled accommodation with other students from totally different backgrounds (for a minimum of two years and up to five years or more), provides an excellent foundation for the service dimension.



Intellectual Dimension

Apart from academics and research, the activities in this dimension include:

Awareness Courses

These mandatory courses are designed to cultivate a broad view of the human condition in students. The course content (e.g. the Unity of Religions and Faiths, Study of the Indian Epics, etc.) helps trigger self-reflection and enquiry and sensitises students to the concerns of society, and gets them to think about practical solutions to these problems.

Moral Class (Thursday)

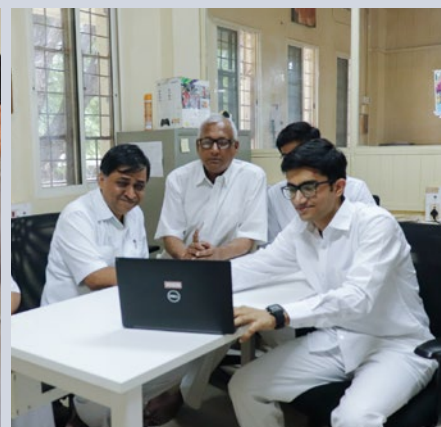
At each campus, Thursday mornings begin with an hour of inspiring and ennobling talks by speakers focusing on their personal spiritual experiences, messages from sacred scriptures and other elevated and socially relevant themes. It also highlights students' talents in music, dramatics, elocution, debates, quizzes, etc.

In 2021/22, some of the topics included: Cancer Prevention, Cancer Screening and Early Detection and Myth-busting of Cancer, Tips from Ayurveda for a Healthy Life, Nobel Prize in Medicine, Nobel prize - Gandhiji, Jeevana Vidya, The infectious Disease Forecasting, Yoga for Happiness, Leadership, and Innovation, SSSIHL - Pride of Sai & Priceless Reward for Lifetimes, Connecting with Sai - The 5G way, Dhincharya, Modern Management Principles from Sathya Sai Educational Systems, Relevance of Ramayana, Where am I: A Panel Discussion, Sai - The Pole Star, and Saranagathi - Lessons Learnt at His Lotus Feet.

Prayer Talks

Every morning before classes commence at the college, all students and teachers gather for the morning assembly. Prayers, Veda chanting, Bhajans and a few minutes of silent sitting are sometimes followed by a talk by students, faculty members or invited guests on topics related to morals and values.

In 2021/22, some of the topics included: Super Heroes and Self-compassion, Public Speaking, Time Management, Self-Confidence, Being Human, Emotions: How We React to Them?, How Hostel Changed My Life, The Path to Happiness, Fighting with Yourself, Chaotic Ignorance, How to Deal with Failures, Inner Joy, Diversity of Culture, Circular Economy, Live in the Present, Life and Living in COVID-19, Being Humble is Being Strong, Importance of Time and the Efficient use of Time, Perseverance.



Governance & Structure

Sri Sathya Sai Institute of Higher Learning (Deemed to be University) is an independent and self-governing institution. It was established by the Sri Sathya Sai Institute of Higher Learning (Public Charitable Trust), which in turn has been established by the Sri Sathya Sai Central Trust. Bhagawan Sri Sathya Sai Baba is the founder of these Trusts.

The Trust

The Sri Sathya Sai Institute of Higher Learning (Public Charitable Trust) was founded to foster the culture of India and promote in the students and teachers an awareness and understanding of the social needs of the country; with special focus to the needs of the rural population. It is aimed to inculcate in students a world perspective - an international outlook imbibing human values along with a spiritual and secular education. Its members for 2021/22 were:

- **Sri R J Rathnakar**
Managing Trustee, Sri Sathya Sai Central Trust, Active Social Worker, Alumnus, Sri Sathya Sai Institute of Higher Learning
- **Sri T K K Bhagavat**
Member, Sri Sathya Sai Central Trust, Former Chairman, Indian Overseas Bank and Former Advisor, International Monetary Fund
- **Sri S S Naganand**
Member, Sri Sathya Sai Central Trust, Senior Partner, Just Law Advocates, Senior Advocate, High Court of Karnataka and the Supreme Court of India, Former President, Karnataka section, International Commission of Jurists
- **Dr. V Mohan**
Member, Sri Sathya Sai Central Trust, Chairman and Chief of Diabetology, Dr. Mohan's Diabetes Specialities Centre, President & Director, Madras Diabetes Research Foundation, Chennai. Awarded Padma Shri by Govt. of India in 2012.
- **Prof. S P Thyagarajan**
Former Vice-Chancellor, University of Madras, Professor of Eminence & Dean (Research), Sri Ramachandra University, Eminent Microbiologist and Inventor
- **Prof. K B R Varma**
Former Vice-Chancellor (Sri Sathya Sai Institute of Higher Learning), Former Chairman and Professor, Materials Research Centre, Indian Institute of Science, Bengaluru

The Principal Bodies

The administrative and academic functioning of SSSIHL is carried out by the following two principal bodies:

- The Board of Management
- The Academic Council

The Board of Management

The Board of Management is the principal authority of the University, responsible for its general management and administration. Its members for 2020/21 were:

- Prof. (Dr.) C B Sanjeevi, Vice-Chancellor, SSSIHL (Chairman)
- Sri S S Naganand, Member, Sri Sathya Sai Central Trust Nominee, SSSIHL (Public Charitable Trust)
- Dr. (Ms.) Renu Swarup, Secretary, Dept. of Biotechnology, Ministry of Science & Technology, Govt. of India
- Prof. D Narasimha Rao, Professor, Dept. of Biochemistry, Indian Institute of Science, Bangalore
- Prof. B Raghavendra Prasad, Senior Professor, Indian Institute of Astrophysics, Bangalore
- Prof. G Nageswara Rao, Head, Dept of Chemistry, SSSIHL
- Prof. R Prabhakara Rao, Professor, Dept. of Economics, SSSIHL
- Prof. C N Sundaresan, Dean of Research, SSSIHL
- Dr. (Mrs.) M Praphulla, Dean of Education, SSSIHL
- Prof. B Sai Giridhar, Registrar, SSSIHL (Member Secretary)

The Academic Council

The Academic Council is the principal academic body of the University. It has general control over and is responsible for maintaining standards of teaching, research and training, approval of syllabus, coordination of research activities, and examinations and tests within the University. Its external members for 2021/22 were:

- Prof. V Nagaraja, Dept. of Microbiology and Cell Biology, Indian Institute of Science, Bangalore
- Prof. S Ramasesha, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore
- Prof. V Nagadevara, Former Professor and Dean, Indian Institute of Management, Bangalore
- Prof. A Ramanan, Dept. of Chemistry, Indian Institute of Technology, Delhi
- Dr. Kamini Walia, Scientist F, Indian Council of Medical Research, New Delhi
- Dr. Anil Dutt Semwal, Scientist G, Director, Defence Food Research Laboratory, Ministry of Defence, Mysore
- Prof. Ratnamala Chatterjee, Dept. of Physics, Indian Institute of Technology, Delhi
- Dr. M Venkateshwar, Former Professor and Head, Department of Hindi & India Studies, The English and Foreign Languages University, Hyderabad

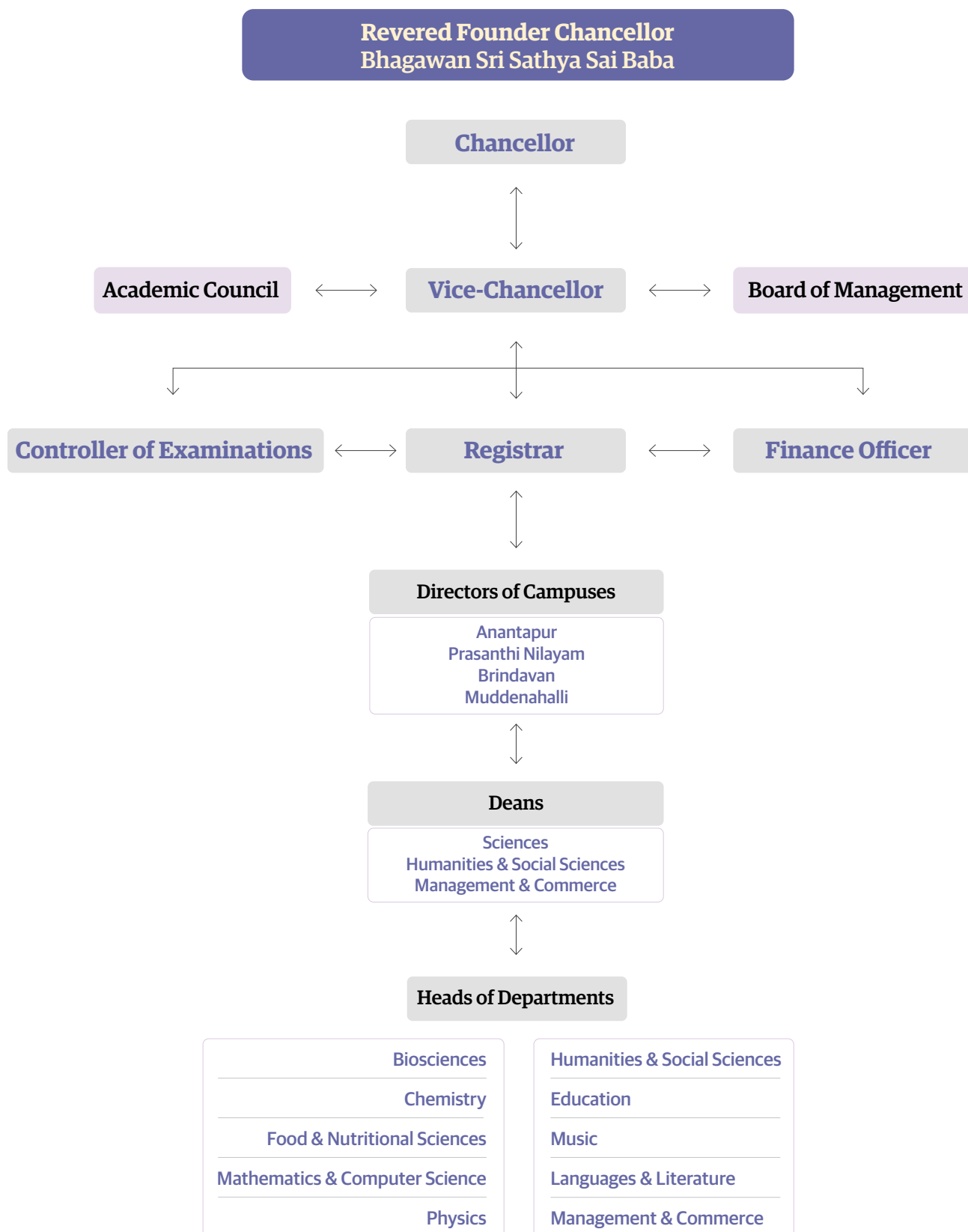
Committees

These are set up to ensure the high academic, research, and administrative standards that SSSIHL has striven to consistently maintain. They include:

Important: The Finance Committee, Planning and Monitoring Board, Research Advisory Board, Internal Quality Assurance Cell (IQAC), The Boards of Studies, Institutional Ethics Committee, Institutional Biosafety Committee, Research Conferment Cell, Building and Works Committee and Campus-Hostel Management Committee.

Mandatory/Essential: The Anti-Ragging Committee, Anti-Discrimination/ Minority/OBC Cell, Committees for SC/ST, Internal Complaints Committee, Intellectual Property Rights Cell and Innovation Cell, Social Media Cell, Student Counsellors, Internal Committee for students with disabilities, Ombudsman and Institute Industry Interface Cell.

Sri Sathya Sai Institute of Higher Learning (Deemed to be University) has been established by the Sri Sathya Sai Institute of Higher Learning (Public Charitable Trust), which in turn has been established by the Sri Sathya Sai Central Trust. Bhagawan Sri Sathya Sai Baba is the founder of these Trusts.

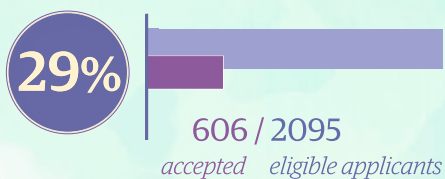


SSSIHL Statistics 2021/22

Admissions

606 Total Admissions

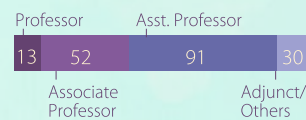
Acceptance Rates



Staff Profile

186

Teacher Designations



73%

PhD

*24 pursuing

66

Administrative

19

Technical

6

Library & Sports

120

Visiting Faculty & Guest Lecturers

Student Profile

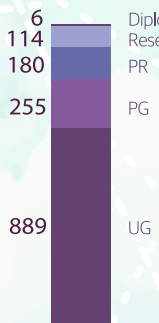
1444



904



540



By Programme



Research Scholars



By Campus

Graduates

488



303



185



12



5

Gold Medallists



21



5

Ph.D. Awardees

Expenditure

₹ **4.51** crore

Expenditure on
Equipment & Infrastructure

₹ **3.38** crore

Research & Teaching Grants



₹ **2.24** lakh

Expenditure per Student / per year

8:1



Student Teacher Ratio

2:1



Student Computer Ratio

89



Research Publications
(in Peer-reviewed Journals)

53



Conference Presentations &
Proceedings

31%

National Exams (Combined)

44/143

*This data pertains to final year postgraduate
students who attempted these exams*

GATE: 31% | CSIR-UGC NET (JRF): 40% |
CSIR-UGC NET (LS): 14% | UGC-NET (JRF): 29% |
UGC-NET (LS): 18% | IAI: 29% | CTET: 40% |
JEST: 17% | IIT JAM: 20% | AP SET: 100%

80%

Undergraduate
Programmes

93%

Postgraduate & Professional
Programmes

Examinations Pass Rates

Academic Events

To facilitate wider exposure to the developments in academia and industry and enable the exchange of ideas, the University hosted several academic events during the academic year 2021/22. Most events were conducted online to meet the challenges of the COVID-19 pandemic. A few of these are highlighted below.

Food & Nutritional Sciences

Our Actions are Our Future - Better Production, Better Nutrition, Better Environment and a Better Life

28 February 2022

This online event centred around emerging farming techniques such as organic farming, hydroponics and healthy dietary patterns to commemorate National Science Day. The current trends in food waste management, like biodegradable packaging and edible cutlery, were also highlighted. Based on the theme, a meme contest was conducted for the students of all departments. The winners were awarded certificates.

National Nutrition Week Celebrations - Feeding Smart Right from the Start

4 September 2021

The presentations threw light on the importance of right feeding from an early stage of a child's development and government nutrition policies and schemes like Poshan Abhiyan, ICDS, Zero Hunger and Quality Education, Pradhan Mantri Matru Vandana Yojana, Anemia Mukh Bharat and Mid-Day Meal.



Mathematics & Computer Science

Actuarial Science

26 March 2022

The workshop - led by Dr. Sathya Sai Mudigonda & Dr. Pallav Kumar Baruah - was a precursor to the subject for third-year B.Sc. (Hons.) in Mathematics students, as it is now available at the M.Sc. level. They learnt about the pathway to becoming an Actuary, what an Actuary does on a day-to-day basis and explored topics in Actuarial Sciences and research.

National Science Day

28 February 2022

An ode to Sir C V Raman, the annual event exposes students and scholars to experts in the frontier of scientific breakthroughs. The three keynote talks this year were:

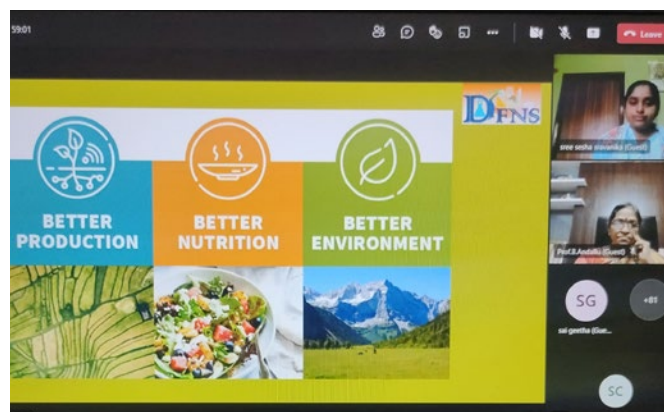
Evolution of Resistance in Pathogens by Dr. Vinay K Nandicoori, Director, CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad.

Seeing into the Future through the Lens of Modelling of Complex Systems by Dr. Anuj Mubayi, a distinguished IBA fellow at the Centre for Collaborative Studies in Mathematical Biology, Illinois State University, USA. He is a research scientist and the lead for the infectious disease forecasting group at The Public Health Company.

India's Space Science Missions by Padma Sri A S Kiran Kumar, Former Chairman, Indian Space Research Organization (ISRO).

The programme also included short presentations on various research activities by the Science departments of SSSIHL, Divine Excerpts on Science and Spirituality from a discourse of Bhagawan Sri Sathya Sai Baba and prize distribution for various competitions.

External experts: CCMB, Illinois State University, ISRO



Acceleration Program in Data Science

3 January – 11 February 2022

A sixty-hour online training program designed to accelerate Data Science skills that covered the following topics:

Statistics: Descriptive Statistics, Elements of Probability, Probability Distributions, Central Limit Theorem, Sampling Distributions, Estimation and Confidence Intervals, Correlation and Covariance, Testing Hypothesis, Statistical tests: z-test, t-test, chi-square test, Goodness of Fit, Regression, confusion matrix, and p-value.

Python: Elements of Python: Python Objects: Strings, List, Tuple, Loops, Functions, Dictionary and Sets, Python modules: NumPy, Matplotlib, Pandas; Machine Learning

Algorithms: Association, Clustering, Regression, and Classification; Simple Linear regression, Multiple Regression, Logistic Regression, Decision Trees, Random Forest, SVM, kNN, k-means algorithm

Capstone Project

External experts: Sri S V S Sarma, Sri Raghu Raj, and freelance experts from Industry

Indo-US conference on The Science of Mathematical Modelling and Decision Making: A Changing Trajectory into The Future, From Past to Post COVID-19 Pandemic

28-30 October 2021

A conference series initiated in 2018 by SSSIHL and the National Science Foundation (NSF), USA, the 2022 edition focused on the challenges and opportunities in mathematical modelling following the COVID-19 pandemic.

Thirty keynote speakers from India, USA, Spain, Canada and Peru interacted with 150 participants across India. The published Book of Abstracts and Conference Report has further details. Dr. Krishna Kiran Vamsi Dasu, Associate

Professor, Dept. of Mathematics & Computer Science, SSSIHL, was the Convenor, and Dr. Anuj Mubayi, Associate Director, Advanced Modelling Group, PRECISIONheor was the Co-Convenor of the event.

Hands-On in Natural Language Processing

9-30 October 2021

A bi-weekly, three-week virtual program that covered several topics in Natural Language Processing (NLP), from basic concepts to different word representations, advanced sequential models, and language models like Transformers and BERT architectures and their implementation.

External expert: Sri P V S Prakash, Senior Data Scientist, Amazon, Bangalore

Hands-On in Deep Learning

14 July – 14 August 2021

The bi-weekly virtual workshop explored several topics in Deep Learning from fundamental concepts to Advanced (DL) architectures. Students learnt the basics in PyTorch and the implementation of different models through a variety of case studies.

External expert: Sri P V S Prakash, Senior Data Scientist, Amazon, Bangalore

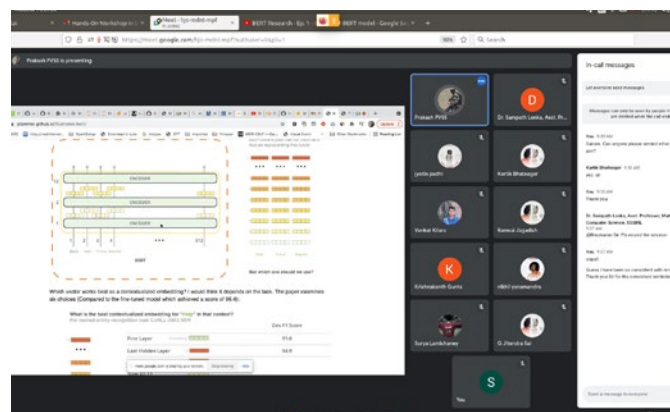
Physics

Optical Designing Using Zemax Software - OpticStudio

25-26 February 2022

An in-house, online skill development workshop geared towards undergraduate and postgraduate students and doctoral research scholars.

External experts: Dr. Ramgopal, Scientific Officer E, TIFR Hyderabad, Dr. Vandana Sharma, Associate Professor, Dept. of Physics, IIT Hyderabad and their team members.



3D printing for Physicists: Concepts, Applications, and a Practical Guide to Printing Prototypes

4 December 2021

Postgraduate students, doctoral research scholars and faculty attended an online workshop led by Dr. Anshuman Jyoti Das and Prof. Gowrishankar R, Professor and Head, Dept. of Physics, SSSIHL, that covered concepts, applications, and a practical guide to printing prototypes.

A new 3D printing facility was set up at the Dept. of Physics, SSSIHL, as a culmination of this effort, which is available for graduate students and researchers to design and prototype their optomechanical components for dissertation and research work.

External experts: Dr. Anshuman Jyoti Das, Labby Inc., USA

Fundamentals of Automation Using LabVIEW

11-12 October 2021

A hands-on online workshop that benefitted third-year students of the B.Sc. in Physics programme.

External experts: Prof. Krishna Kumar, Former Scientist, CSIR-CECRI, Professor, and Retired Dean of R&D, Nagarjuna College of Engineering and Technology, Bangalore.

Quantum Physics Simulations Using Gnumeric Worksheets and Scilab Programs

5-11 July 2021

An online faculty development programme on Gnumeric software specifically focused on performing Quantum Physics Simulations that involved instruction and hands-on sessions. Gnumeric is an open-source spreadsheet programme (part of the GNOME Free Software Desktop Project) that can be used to develop simulations in Quantum Physics, Statistical Physics, and other topics.

The workshop sessions focused on theory and GNUMERIC programming aspects for teaching Quantum Physics effectively at the undergraduate and postgraduate levels. Quantum Mechanics Lab simulation experiments at both levels were also discussed.

Prof. O S K S Sastri was the resource person. He trained faculty members of the Dept. of Physics on teaching quantum mechanics and related subjects.

External experts: Prof. O S K S Sastri, Professor, Dept. of Physics and Astronomical Sciences, Central University of Himachal Pradesh, former faculty member, Dept. of Physics, SSSIHL.

Science Departments

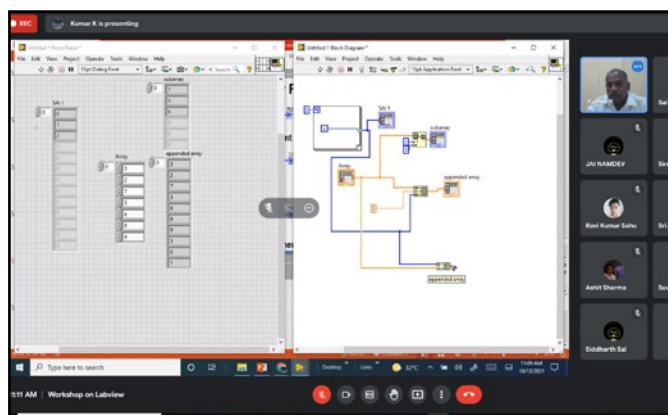
JAIST-SSSIHL Sakura Science Online Programme 2021

29 November 2021

As part of the prestigious SAKURA Science Exchange Programme organized by the Japan Government, SSSIHL teachers and doctoral research scholars from various Science departments interacted with researchers from Japan Advanced Institute of Science and Technology (JAIST), Japan.

Led by Prof. C N Sundaresan, Dean of Research, SSSIHL, presentation topics ranged from Design of Li-ion batteries and JAIST student life to Materials Science & Orthopedics and Bacterial Activity in Wastewater.

External experts (JAIST): Prof. Noriyoshi Matsumi, Ms. Sumala Patnaik, Dr. Agman Gupta, Dr. Rajashekar Badam, Dr. G Krishna Prasad, Dr. Anusha Pradhan and Mr. Bharat Sri Mitra



Humanities & Social Sciences

Education

International Women's Day 2022

8 March 2022

A focal point in the women's rights movement, the programme celebrated women and womanhood with a display of lovely crafts and training attendees in specific self-defence methods. The event ended with a thought-provoking drama about the improvements women in society need to see.

National Science Day 2022

28 February 2022

Students presented a drama that highlighted the application of science in daily life. They enacted the role of scientists and discussed their discoveries. Additionally, they demonstrated how to make manure through composting and the use of eco-bricks to advance environmental sustainability. The conclusion emphasised the value of both science and spirituality.

National Girl Child Day

24 January 2022

An initiative by the Ministry of Women and Child Development and the Government of India to spread public awareness about girls' inequities in Indian society. This was emphasised in an instructive, enjoyable, and educational programme put up by the students that included various motivational stories of numerous successful women, sharing multiple government schemes available for girls and a performance based on a poem.

Languages & Literature

English

Lit-Treat (Edition 2): A Webinar on Life, Language & Literature - Exploring Authorpreneurship

1 November 2021

The second edition of the series included writers from various arenas who shared their first-hand experience as a writer and as a self-publisher. The webinar included interactions of the faculty members with the writers and presentations by the students and scholars of DELL on the literary works of the invited authors.

External experts: Sri Shiv Aroor, journalist and author, Ms. Usha K R, Indian English novelist, Ms. Anushka Ravishankar, Children's Writer, Ms. Sai Swaroopa Iyer, Mythological Fiction writer.

Hindi

Hindi Diwas

14 September 2021

Hindi Diwas or Hindi Day is celebrated in India to commemorate the date 14 September 1949, on which a compromise was reached—during the drafting of the Constitution of India—on the languages that were to have official status in the Republic of India.

First and second-year Hindi students celebrated the event's historical significance with poems, videos and talks, all of which highlighted the key features of this most scientific language and the script of the world. A quiz based on Hindi Language and Literature was organised. Students sang various songs, poems, slogans, shayari, and couplets, arousing patriotism and expressing their thoughts and love towards the language.

Telugu

Matrubhasha Diwas

21 February 2022

Matrubhasha Diwas or International Mother Language Day, a UNESCO initiative, is a worldwide annual observance to promote awareness of linguistic and cultural diversity and multilingualism.

Students studying Telugu highlighted the linguistic diversity of our country on this day. They encouraged the use of not only our respective mother tongues but other Indian languages as well. This helped participants respect and understand the



diverse cultures in India and the various forms of literature, craft, performing arts, scripts, and other avenues of creative expression.

Students and faculty of the Dept. of Music presented 'Bharateeya Saaraswatam' and performed songs and bhajans in different languages. Keynote addresses by faculty members expounded on the significance of the day and the glory of Telugu Language and Literature.

Management & Commerce

Annual Innovation and Entrepreneurship Contest

18 April 2022

This year's contest theme was based on the food, hygiene, and education sectors. Teams of students pitched their ideas through a business plan. A panel of jury members ranked the best pitches and the first, second and third prizes of ₹12,500, ₹7,500 and ₹5,000, respectively.

Capacity Enhancement Program: R Language Programming

29 January, 12 February, 16, 23 April 2022

Twenty-six students of the III Year B.Com. (Hons.) programme participated as a part of the Data Analytics Computer Practical. Students were trained in using the R language for select data analytics exercises.

Review of Management Literature - Capacity Enhancement Programme

4, 11, 18 February, 4, 11 March 2022

As part of a Commerce workshop for students of the II Year B.Com. (Hons.) programme, batches of six students presented their reviews on select management books they chose. An extensive Q&A session followed each presentation. The objective was to encourage the students to develop the art of book reading and making and presenting critical reviews, enhancing their faculty of critical and logical thinking.



Capacity Enhancement Programme: Introduction to Emotional Intelligence - Survey to Determine Domain Scores

28 January 2022

Another exercise for the students of the II Year B.Com. (Hons.) programme as part of their Commerce Workshop. Students were introduced to Daniel Goleman's Emotional Intelligence Quadrant. They took a survey (an Emotional Intelligence Test) that helped them understand and interpret their domain scores to enhance their emotional intelligence.

Capacity Enhancement Programme: Poster-making competition

28 January 2022

This team exercise for the students of the II Year B.Com. (Hons.) programme involved preparing posters on contemporary themes such as Environment, Friendship, Education, Technology, Corruption, etc. The objectives were to train the students in group thinking and enhance their creative and innovative skills, such as ideation, articulation, and time management. The posters were evaluated and scored based on predetermined criteria.

Capacity Enhancement Programme: Individual vs. Group Decision Making - A Case of the Plane Crash Survival

21 January 2022

The group exercise honed the logical reasoning and critical thinking of the students of the II Year B.Com. (Hons.) programme in times of crisis. A plane crash exercise prepared by Mark Wanvig, a former instructor in survival training for the Reconnaissance School of the 101st Division of the US Army, helped students learn the art of prioritisation, managing stress and developing individual and group decision-making skills.



Excellence @ the Workplace - The Indian Ethos Way

4 December 2021

The workshop - conducted for twenty Agastya International Foundation country managers - focused on three modules:

- Koham: What is Excellence
- Arthashastra: Excellence in a Team
- Karma Yoga: Ladder of Excellence

The Great Indian Tech IPO Frenzy

15 November 2021

The team presentation was made by V Sai Govinda, III B.Com. (Hons.), Aravind Narayanan, II B.Com. (Hons.) and Adithya S, I B.Com. (Hons.). The presentation was about the current frenzy of new-age IPOs hitting the market, such as Nykaa and Zomato. A Q&A session followed the presentation.

Sarvonnathi Workshop on Soft Skills

5-6 November 2021

The program for B.B.A. students focused on improving communication and soft skills among the students as they play a major part in their future careers.

Standup, Startup, Scaleup - Discussing the Dimensions of Entrepreneurship in the Post-COVID era

4-5 September 2021

This e-conference on entrepreneurship and innovation provided a platform for start-up enthusiasts, innovators, students, and doctoral research scholars to learn and discover various aspects of the making of an entrepreneur, the journey, challenges and opportunities offered by the ecosystem and understand the role of innovation in addressing social challenges, especially in the post-COVID era.

Led by eminent experts and corporate veterans from India and abroad, the event saw engaging discussions and talks by young entrepreneurs, innovation leaders, and top academicians designed to help young minds unearth a whole new world of possibilities, challenging preconceptions and ideas while disclosing the best execution practices.

The talks and the interactive Q&A session helped clarify their attendees' doubts. They built an understanding that entrepreneurs' skills and dispositions affect and power the decisions and actions of businesses. Through the success and failure stories of various entrepreneurs, dimensions of entrepreneurship, briefing on the supportive ecosystem available for budding entrepreneurs in India, and the various avenues to turn business ideas into strategic actions, they better understood how entrepreneurial zeal can be translated into vision and action.

Zero Coding

Weekly, Academic year 2021/22

As part of a Skill Development Programme, the 'Zero Coding' or 'Low Coding' platform was introduced to the III B.B.A. programme during the academic year 2021/22.

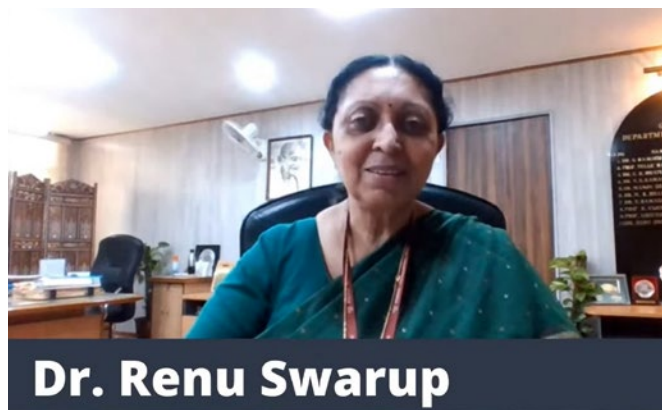
External expert: Sri Neelakandan, Chennai.

MBA Coaching

Academic year 2021/22

A Life Skills Training Programme designed for the graduating III B.B.A. programme students to excel in numerical aptitude tests.

External expert: Sri Sankar Narayanan, alumnus, SSSIHL.



Faculty Achievements & Recognitions

Biosciences

Recognitions

Dr. B E Pradeep was appointed Review Editor in Frontiers in Microbiology (26 February 2022).

Dr. B E Pradeep was a Resource Person for the Indian Science Academies Lecture Workshop on Microbial Interactions - Opportunities and Challenges, and shared a lecture on Emerging Bacterial Pathogens and their Anti-Microbial Resistance, organised by the Dept. of Microbiology at Hindustan College of Arts and Science, Coimbatore (11 December 2021).

Dr. S Venketesh was appointed Review Editor for Frontiers in Physiology (14 October 2021).

Chemistry

Recognitions

Dr. A Sunil was a Reviewer for the Journal of Pharmaceutical Research International (January 2022).

Dr. A Sunil was a Reviewer for the journal, Analytical Letters, Taylor and Francis (December 2021).

Dr. V N Ravi Kishore Vutukuri was a team member for poster evaluators, 44th Annual Macro Symposium - Design and Applications of Functional Polymeric Materials, Michigan University Engineering Macromolecular Science and Engineering Program (20-21 October 2021).

Food & Nutritional Sciences

Achievements

Ms. Soumyaparna Nath, Ms. Ashrita C Haldipur and Prof. (Miss) N Srividya won the Best Poster Award for their poster, Anti-inflammatory Index of Roselle and French Basil Microgreens Metabolome, International Conference on Clinical Nutrition & Dietary Lifestyle, Universal Society of Food & Nutrition (USFN), Bangalore (20-21 May 2022).

Ms. Beesetti Lohita and Prof. (Miss) N Srividya won the Best Poster Award for their poster, Assessing the Awareness Levels of Dieticians with Respect to Diet During Oral Anticoagulant Therapy: An Exploratory Survey, International Conference on Clinical Nutrition & Dietary Lifestyle organised by Universal Society of Food & Nutrition (USFN), Bangalore (20-21 May 2022).

Ms. K Chaitanya Bhagavathi, Ms. V Dharani, Ms. M Sai Veena, Ms. S Sai Dharshini and Dr. (Ms.) M Meera won the Best Poster Award for their poster, Study to Elicit Food Consumption Pattern in India with Special Reference to Breakfast and Nutrition during COVID-19 Pandemic, International Conference on Clinical Nutrition & Dietary Lifestyle, Universal

Society of Food & Nutrition (USFN), Bangalore (20-21 May 2022).

Ms. K Avanthika and Dr. (Ms.) M Meera won the Best Performer Award for their presentation, Development and Shelf-life Studies of Quinoa Flour Enriched Gluten Free Cookies, International Virtual Conference in Innovation in Food Processing and Nutritional Science, Dept. of Food Processing Technology, Academy of Maritime Education and Training (29 June 2021).

Recognitions

Prof. (Mrs.) B Andallu was a Resource Person and delivered an Invited Talk on the Functional Role of Spices for Health Promotion and Disease Prevention at the Foods 22 - Our Actions are Our Future, National Virtual Conference addressing Sustainable Development Goals towards Zero Hunger and Good Health, Dept. of Food Science, M. O. P. Vaishnav College for Women, Chennai (25-26 March 2022).

Prof. (Miss) N Srividya delivered an Invited Talk on Microgreens: A Novel Superfood, national webinar, Hindustan Institute of Technology and Science, Chennai (29-30 September 2021).

Prof. (Miss) N Srividya delivered an Invited Talk on Rice is Right! A Fair Story of Coloured Rice Varieties of South India - Generating Scientific Evidence, national webinar, Dhanabagiyam Krishnaswamy Mudaliar College for Women, Vellore (25 September 2021).

Prof. (Miss) N Srividya was nominated as a member of the Board of Studies, Andhra University, Vishakhapatnam, Andhra Pradesh (September 2021-2023).

Prof. (Miss) N Srividya reviewed the journal, Frontiers in Food Science and Technology (January 2022).

Prof. (Miss) N Srividya an Editor for the Journal of Nutrition and Agriculture Research, International Journal of Nutrition and Agriculture Research, India (2021).

Prof. (Mrs.) B Andallu was a Resource Person and delivered an Invited Talk on A Review on the Role of Foods in the Fight Against Cancer (special reference to spices) at the webinar series, The Food Story, Kanoria P G Mahila Mahavidyalaya, Jaipur (17 November 2021).

Dr. (Mrs.) M Srijaya delivered an Invited talk on Foetal Programming, National e-seminar on Holistic Nutrition for Healthy Nation, Bhavan's Vivekananda College & University College for Women, Hyderabad (23-24 September 2021).

Dr. (Mrs.) Jhinuk Gupta was invited to review a manuscript for the Journal Environmental Progress & Sustainable Energy (28 August 2021).

Ms. K Avanthika and Dr. (Ms.) M Meera won the Best Performer Award for their presentation, Development and Shelf-life

Studies of Quinoa Flour Enriched Gluten Free Cookies, International Virtual Conference in Innovation in Food Processing and Nutritional Science, Dept. of Food Processing Technology, Academy of Maritime Education and Training (29 June 2021).

Dr. (Mrs.) A Sumana was a Resource Person and delivered an Invited Talk on Food Safety Issues and Concerns in Child Care Institutions, Online Orientation Training on Nutrition and Health Care of Children for Functionaries, National Institute of Public Cooperation and Child Development, Regional Centre, Bengaluru (22-23 June 2021).

Dr. (Mrs.) A Sumana was nominated as a member of the Board of Studies, Dept. of Home Science and Dept. of Clinical Nutrition and Dietetics, Jamshedpur Women's College, Jharkhand (2020-2022).

Dr. (Mrs.) A Sumana was Nominated as a member of the Board of Studies, Dept. of Home Science, K V R Government College (Women), Kurnool, Andhra Pradesh (2019-2022).

Mathematics & Computer Science

Achievements

Prof. Pallav Kumar Baruah and Sri Satya Sai Mudigonda led the Actuarial Data Science Research team of SSSIHL that was awarded the CAS Individual Grant 2022 of \$18,000 for the research project, Insurance Fraud Classifier for Health Insurance.

Recognitions

Dr. N Uday Kiran delivered three Invited talks on Bayesian Teaching for Data Science and Bayesian Learning for Data Science, Part I & II, Faculty Development Programme (FDP) on Mathematics in Data Science, Acharya Institute of Technology, Bangalore, India (9-13 May 2022).

Dr. Sampath Lonka was a Resource Person and delivered an Invited Talk on The Role of Linear Algebra for Data Science, Faculty Development Programme (FDP) on Mathematics in Data Science, Acharya Institute of Technology, Bangalore, India (9-13 May 2022).

Dr. D K K Vamsi was a Guest Editor for a special issue, Modeling for COVID-19 Decision Making in Health Policy Evaluation, Computational and Mathematical Biophysics journal (2022).

Dr. Sampath Lonka delivered an Invited talk on Classification Models in Machine Learning, AICTE Sponsored Online Short-Term Training Programme on Role of Statistics in Machine Learning and Data Science, UGC Human Resource Development Centre, JNTUH, Kukatpally, Hyderabad (29 November - 4 December 2021)

Dr. N Uday Kiran delivered three Invited talks on Hyperbolic Operators with Discontinuous Coefficients and Colombeau Algebra, Inverse Problem Seminar, Inverse Problem Seminar,

TIFR Centre for Applicable Mathematics, Tata Institute of Fundamental Research, Bangalore, Bangalore (September 2021).

Dr. D K K Vamsi was a Guest Editor for a special issue, COVID-19 and Dynamics of Infectious Diseases, Computational and Mathematical Biophysics Journal (June 2021).

Dr. R Raghunatha Sarma delivered an Invited talk on The Problem of Image Registration and its Applications, in the lecture series on Data Science: Industrial Perspectives, Dept. of Applied Mathematics, DIAT, Pune, for the benefit of the students of M.Tech. (Data Science), M.Tech. (Modelling & Simulation), Ph.D. and other interdisciplinary programmes (8 April 2021).

Dr. D K K Vamsi received a Letter of Recognition from the University of Hamburg for his guidance for a master's thesis of Mr. K D S S Murari on the topic, Mathematical Modelling of the food intake dynamics and the effects of Leptin and Insulin (2021-2022).

Physics

Recognitions

Dr. C Prathibha was an External Examiner and conducted practical examinations for M.Sc. Material Science and Nanotechnology, Dept. of Material Science and Nanotechnology, Yogi Vemana University, Kadapa, Andhra Pradesh (May 2022).

Dr. Murali Ravi was the Chief Guest, National Level Symposium (VIHAAN 2022) at Sanskrithi School of Engineering, Puttaparthi, Andhra Pradesh (29 April 2022).

Dr. K Vijay Sai delivered an Invited talk on Nuclear Applications in Medical and Radiation Shielding, Online International Conference on Recent Trends in Nuclear Physics, Dept. of Physics and Astronomical Sciences (DPAS), School of Physical & Material Sciences (SoPMS) and Central University of Himachal Pradesh (CUHP), Dharamshala (16-18 February 2022).

Dr. (Mrs.) Vedavathi Aluri was the Chief Guest and delivered an Invited Talk on The Importance of Science in the Present World, National Science Day 2022 celebrations, India Beech Tree School, Piler, Chittoor Dist., Andhra Pradesh (28 February 2022).

Dr. Paramesh Gadige delivered an Invited talk on Radiation Shielding Glasses: Dense and Lead-free, Online International Conference on Recent Trends in Nuclear Physics, Dept. of Physics and Astronomical Sciences (DPAS), School of Physical & Material Sciences (SoPMS) and Central University of Himachal Pradesh (CUHP), Dharamshala (16-18 February 2022).

Dr. (Mrs.) Vedavathi Aluri and Ms. Mounika Choppali, III B. Sc. (Hons.) in Physics, received the Best Paper Presentation

award for their paper, Simulation of LR, CR Circuits with Python Codes, International Conference of Undergraduate Students (ICUS 2021), Soft Computing Research Society, New Delhi (27-28 November 2021).

Dr. (Miss) Deepa Seetharaman and Dr. Gadige Paramesh won a two-year Network Grant - Swedish Research Links representing the Biomaterials group, Sri Sathya Sai Institute of Higher Learning from the Swedish Medical Research Council in collaboration with Uppsala University, Sweden (November 2021).

Dr. K Vijay Sai was a Resource Person and delivered an Invited Talk on Quantum Physics Simulations Using Gnumeric Worksheets, online Faculty Development Programme (FDP), Dept. of Physics and Astronomical Sciences, Central University of Himachal Pradesh (CUHP) and Indian Association of Physics Teachers-Regional Council (IAPT-RC3) (1-7 August 2021).

Humanities & Social Sciences

Education

Achievements

Prof. (Miss) Madhu Kapani was a Resource Person and delivered an Invited Talk on Empowering Women, Empowering Humanity, and Paper presentation on Redefining Womanhood - Good Mothers are a Nation's Pride, Gujarat Law Society (WILPF) - India Section, Ahmedabad (26-27 March 2022).

Economics

Recognitions

Dr. (Miss) M R Geetha Bala was felicitated for providing Nutrition kits every month to HIV Positive Children, Indian Medical Association (IMA) and District Medical and Health Office (DMHO), Anantapur, Andhra Pradesh (1 December 2021).

Dr. (Miss) M R Geetha Bala was felicitated for services rendered during the second phase of COVID-19, Indian Medical Association (IMA), Anantapur, Andhra Pradesh (27 June 2021).

Dr. Siva Kiran Guptha K was a Reviewer for the Journal, SN Business, and Economics, Springer Publications (2021-2022).

Music

Achievements

Sri M Suryanarayana Murthy was awarded a Certificate of Achievement and First Prize in Sitar, Music Competition, Pt. Rupak Kulkarni Flute Academy, Mumbai (19 April 2022).

Sri Raghvendra K Badasheshi qualified in the UGC NET (LS) (Music) National exam (19 February 2022).

Sri R Mahesh Varma was felicitated with the M S Subbulakshmi

Sangeet Samman for a recorded song and a speech on Music Education imparted to Boost Musical Intelligence, ReTHINK India (11 December 2021).

Recognitions

Sri S Sai Ram was awarded a Certificate of Excellence for reviewing a paper, Bandiś-S in Khayāl of Indian Classical Music: A Study of Selected Song-Texts with Special Reference to the Bandiś-S of Sadārang in Hindustani Music, ShodhKosh: Journal of Visual and Performing Arts (6 May 2022).

Languages & Literature

English

Achievements

Miss Sai Archana M was awarded the 21st Century Emily Dickinson Award, Writeathon, BookLeaf Publishing, India (February 2022).

Miss Sai Archana M was awarded an Outstanding Entry Prize in Creative Writing for Poetry and a Consolation Prize in Creative Writing for Short Story, International Creative Writing Contest, Monomousumi, an Indian Edutech Platform (December 2021).

Recognitions

Dr. Aruna Kumar Behera designed and created content for Introduction to Pronunciation and Vocabulary, RIE-NCERT, Bhopal (2022).

Dr. Aruna Kumar Behera delivered a Guest Lecture on Principals' Meet, Dayanand Sagar University, Bengaluru (15 December 2021).

Dr. Siddhartha R delivered an Invited Book Talk for an online book review celebrating Read an Ebook a Day, curated by the Library Clubmasters of Rajagiri College of Management and Applied Sciences, Cochin (12 November 2021).

Dr. (Miss) P L Rani delivered an Invited Book Talk for an online book review celebrating Read an Ebook a Day, curated by the Library Clubmasters of Rajagiri College of Management and Applied Sciences, Cochin (23 September 2021).

Dr. (Miss) P L Rani delivered an Invited Talk on Man's Search for Meaning by Viktor E. Frankl, Talk the Book show, Andhra Pradesh State Council of Higher Education (APSCHE), Mangalagiri, Andhra Pradesh (3 September 2021).

Dr. Aruna Kumar Behera delivered a Guest Lecture on MAEG-04, Odisha State Open University (18, 25 July 2021).

Dr. (Miss) P L Rani was a Moderator for paper presentation sessions and a Jury Member for the best paper, national-level

student virtual conference, Modern Narratives in Literature, Cinema, Culture, and Society, St. Claret College, Bengaluru (7 July 2021).

Dr. Aruna Kumar Behera was the Chief Guest, Contextualised Speaking and English Skills webinars, MSE, Bargarh, Odisha (4 July 2021).

Dr. Aruna Kumar Behera delivered a Guest Lecture on How Not to Miscommunicate, Siddhartha College, Odisha (4 July 2021).

Dr. Aruna Kumar Behera was a Guest of Honour, Professional & Proficiency Development webinar, English Support Mission, Odisha (27 June 2021).

Dr. Aruna Kumar Behera delivered a Guest Lecture on Let's Speak in English, Dunggripali College, Odisha (26 June 2021).

Dr. Aruna Kumar Behera was the Chief Guest, Vocabulary Enrichment webinar, MSE, Bargarh, Odisha (13 June 2021).

Sanskrit

Achievements

Dr. M B S S Narayana was awarded the Pravachana Prabhakara for the Excellent talks on Sundara Kanda Saptaham, WAM Global Convention, World Arya Vysya Mahasabha (10 July 2021).

Telugu

Recognitions

Dr. Rambhatla Parvatheeswara Sarma was honoured with a position as an IB Educator (Examiner Responsible for DP Telugu A Literature), Diploma Program, Telugu Literature Course, International Baccalaureate (IB), UK (17 May 2022).

Dr. Rambhatla Parvatheeswara Sarma delivered an Invited Talk on Adi Sankaracharya Jayanthi Mahotsavam, Srungeri Sankaramatam, Hyderabad (2 May 2022).

Management & Commerce

Achievements

Prof. N Niranjana was awarded the Life Time Golden Achievement Award 2021 by The Bharat Ratna Publishing House, the world's leading Biographical Specialists.

Recognitions

Sri Vivek Kapoor conceptualised, designed & led a workshop, Agri-Preneurship - Transforming an Idea into a New Business, AgriBusiness Management & Rural Management Chaudhary Charan Singh Haryana Agricultural University Hisar (CCS HAU), Hisar, Haryana (29 March 2022).

Dr. (Mrs.) Swetha Thiruchanuru was the Chief Guest and

addressed the students at the Women Empowerment Cell, Sri Sai Baba National Degree College, Anantapur, Andhra Pradesh (2 February 2022).

Dr. (Mrs.) Swetha Thiruchanuru was a member of the Advisory Board, Yuva IncubateD (29 November 2021).

Dr. U Suma was a Resource Person and delivered an Invited Talk on Values in Higher Education, CMR College of Engineering & Technology, Hyderabad (5 October 2021).

Dr. (Mrs.) Swetha Thiruchanuru was a Guest Speaker at the National webinar on Role of Women in Aatmanirbhar Bharat, Yuva IncubateD and K.I.T.E.S. Education (15 August 2021).

Dr. (Mrs.) N Jayaprada was a Resource Person and delivered an Invited Talk on Empowerment through Service, Online Yoga and Pranayam Abhiyan, Anniversary Celebrations YOGAM (18 July 2021).

Dr. (Mrs.) N Jayaprada was Resource Person at the National webinar on Enhancement of Employability Skills for Youth for Sustainable Growth, World Youth Skill Day, Gates Institute of Technology, Gooty, Andhra Pradesh (15 July 2021).

Dr. Sanjay Mahalingam is a member, Happiness Committee, Bangalore Chapter, Della Leaders Club.



Doctoral Research Scholars Achievements & Recognitions

Biosciences

Achievements

Sri Balaram Khamari was featured on the TV show OMG! Yeh Mera India, Season 8, Episode 7, History TV18, for his extraordinary and unusual art form, Agar Art (7 March 2022).

View: <https://www.youtube.com/watch?v=TwDmi57zCGO>

Chemistry

Achievements

Miss Amitananda Dash won the Augmenting Writing Skills for Articulating Research (AWSAR) Award 2021 (Prize money of ₹10,000), for her story, Cancer - The Nemesis (28 March 2022).

Food & Nutritional Sciences

Achievements

Ms. K K Sai Sruthi Shree, Prof. (Miss) N Srividya, and Ms. Ashrita C Haldipur received an appreciation award for the presentation, Designing and Evaluation of a Low-GI Pigmented Rice-based Vegan Gluten-free Protein Formulation Suitable for Malnutrition Modulated and Lean T2-diabetes Mellitus, 6th International Diabetes Summit, Chellaram's Diabetes Institute, Pune (4-6 March 2022).

Ms. N Saiharini and Dr. (Mrs.) A Padmaja won the 2nd prize for the oral presentation, Assessment of Nutritional and Functional Properties of Watermelon Fruit By-products and Study on Extraction and Characterization of Pectin from By-products, International Conference on Global Trends in Food Processing & Food Safety, Tamil Nadu Agricultural University (Agricultural Engineering College and Research Institute), Coimbatore (11-12 October 2021).

Mathematics & Computer Science

Recognitions

Sri Rahul Raju Pattar delivered an Invited Talk, Global Wellposedness and Regularity Issues Associated with Singular Hyperbolic Cauchy Problem, Analysis and PDE Seminar, Ghent University, Belgium (April 2022).

Sri Rahul Poddar upgraded to CSIR-UGC Senior Research Fellow (17 February 2022).

Sri Rahul Raju Pattar delivered three Invited Talks on Loss Operator Associated to a Class of Strictly Hyperbolic Cauchy Problems, Inverse Problem Seminar, TIFR Centre for Applicable Mathematics, Tata Institute of Fundamental Research, Bangalore (16, 23 August & 6 September 2021).



Faculty Participation

Biosciences

Dr. (Mrs.) Pallavi C attended the Lead Auditor Course on Environment Management System, Green Campus, Energy, and Hygiene Audits to Educational Institutions and Industrial Sectors, Nature Science Foundation, Coimbatore (9-13 May 2022).

Dr. Sutanuka Chakraborty participated as a Young Investigator, 14th Young Investigators Meeting (YIM) 2022, IndiaBioscience, sponsored by DBT, Govt. of India and Cactus Communications (4-6 May 2022).

Mrs. B Anusha attended an Online Faculty Development Program (FDP), Outcome-based education, Internal Quality Assurance Cell (IQAC), St. Joseph Degree and PG College, Hyderabad and IPSR Solutions Limited (25-30 April 2022).

Dr. (Mrs.) Ramya E M attended a workshop, Writing Research Proposal, Grant Proposal & Funding Agencies, Lavender Literary Club, India, and Malaysian Industrial Relations & Human Resource Association (MIRHA), Malaysia (10-12 April 2022).

Dr. (Mrs.) Ramya E M, Dr. P (Miss) Jyothikumari and Mrs. B Anusha attended an International Online Workshop, Literature Review: Narrative and Systematic, NSS Hindu College, Changanacherry, Kottayam, Kerala in Association with Lore & Ed Research Associates, Kerala (6-14 May 2022).

Mrs. B Anusha completed and certified in the course, MCB80.1x: Fundamentals of Neuroscience, Part I: Electrical Properties of Neuron, Harvard University (12 April - 16 May 2022).

Mrs. B Anusha completed a training programme, Role of Innovative Primary Health Care for Sustainable Development, IITM Chennai, AARDO and IIT Madras (22-25 March 2022).

Dr. (Mrs.) Pallavi C attended a webinar, Quality Improvement in Research Writing Using Grammarly, Bridge People Technology Solutions (16 March 2022).

Mrs. B Anusha attended a Faculty Development Programme (FDP) and was certified as Elite + Silver, Introduction to Professional Scientific Communication, NPTEL-AICTE (24 January - 18 February 2022).

Dr. (Mrs.) Pallavi C attended a Faculty Development Programme (FDP) and was certified as Elite, Effective Writing, NPTEL-AICTE (24 January - 18 February 2022).

Dr. (Mrs.) Pallavi C attended a Faculty Development Programme (FDP) and was certified as Elite, Biostatistics and Design of Experiments, NPTEL-AICTE (24 January - 18 February 2022).

Mrs. B Anusha completed an online Refresher Course in Lifesciences, UGC Human Resource Development Centre (HRDC), Osmania University, Hyderabad (3-18 January 2022).

Dr. Sutanuka Chakraborty participated in the 1st National Conference, CRISPR/Cas: From Biology to Technology, SRM University, Andhra Pradesh and IBAB, Bengaluru (25-27 November 2021).

Dr. (Mrs.) Pallavi C attended a workshop, Document Preparation using LaTeX, A2Z Edu-LearningHub, Udumbannoor, Kerala (19-21 November 2021).

Mrs. B Anusha participated in a workshop, Hands-on Training on CRISPR/Cas 9 Mediated Gene Editing in Plants, University of Hyderabad (3-10 October 2021).

Chemistry

Dr. V N Ravi Kishore Vutukuri attended a conference and inauguration, Perovskite Society of India, IIT Roorkee (17 January 2022).

Dr. J Krishna Kiran Kumar and Dr. A Sunil attended a training program, IP Awareness, National Intellectual Property Awareness Mission, Intellectual Property Office, India (7 January 2022).

Dr. V N Ravi Kishore Vutukuri attended the National Workshop on Fluorescence and Raman Spectroscopy (FCS-2013), IISER and RGCB, Thiruvananthapuram (29 November - 2 December 2021).

Dr. V N Ravi Kishore Vutukuri attended and was part of the team of poster evaluators, 44th Annual Macro Symposium, Design and Applications of Functional Polymeric Materials, Engineering Macromolecular Science and Engineering Program, University of Michigan (20-21 October 2021).

Dr. V N Ravi Kishore Vutukuri attended the ACS Seminar, Advances in Polymer Nanocomposites, American Chemical Society and Indian Institute of Technology, Roorkee (18-19 October 2021).

Dr. J Krishna Kiran Kumar attended a workshop, Computational Structure-based Screening and Explicit Molecular Dynamics, Schrödinger (21-22 September 2021).

Dr. Kumar Sai Smaran attended a workshop, DST and ACS virtual workshop: Master the Publishing Process, DST and the American Chemical Society (11 August 2021).

Dr. Kumar Sai Smaran attended a webinar, Importance of Data Visualization, Guru Angad Dev Teaching Learning Centre, SGTB College, University of Delhi (10 August 2021).

Dr. Kumar Sai Smaran attended a Faculty Development

Programme (FDP), Consulting: Building a Vibrant Industry - Academia Ecosystem, AICTE Training and Learning (ATAL) Academy, New Delhi (26-30 July 2021).

Dr. Kumar Sai Smaran attended a Faculty Development Programme (FDP), Emotional Intelligence and Freedom from Stress for Vitality Living, AICTE Training and Learning (ATAL) Academy, New Delhi (12-16 July 2021).

Food & Nutritional Sciences

Dr. (Mrs.) Ambati Padmaja attended a Faculty Development Programme (FDP), FSSAI Initiatives, in association with NetProFaN, Salem Chapter Dept. of Food Science and Nutrition, Periyar University, Salem (24 March - 7 April 2022).

Dr. (Mrs.) Jhinuk Gupta attended the 6th International Diabetes Summit 2022, Chellaram Diabetes Institute (4-6 March 2022).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, Reference Management and Good Citation Behaviour (Author's role), Clarivate Web of Science Training and Certification (21 January 2022).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, Selecting the Right Journal for Publication and Avoiding Predatory Journals, Clarivate Web of Science Training and Certification (19 January 2022).

Prof. (Miss) N Srividya attended a workshop, 3D & 4D Food Printing, National Institute of Food Technology, Entrepreneurship and Management - Thanjavur (NIFTEM-T), Tamil Nadu (6 January 2022).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, A Guide to Implement Healthy Eating to Optimize Well, Nutrition on the Road to Recovery, Dhanabhagyan Krishnaswami Mudaliar College for Women, Vellore, Tamil Nadu (25 September 2021).

Dr. (Mrs.) Jhinuk Gupta attended the Education Innovation Conference 2021, Post Pandemic World of Education - What Next?, ISBR, India (24 September 2021).

Dr. Meera Manikkavachakan attended a webinar, Mastering the Craft of Academic Writing: A Systematic Approach, Turnip Innovations Pvt. Ltd., Mumbai (31 August 2021).

Dr. Meera Manikkavachakan attended a masterclass, Patent Drafting, Turnip Innovations Pvt. Ltd., Mumbai (28 August 2021).

Dr. Meera Manikkavachakan attended a webinar, Maternal Nutrition E-Dialogue 8: The Role of Social Marketing in Maternal Health and Nutrition, ICMR-National Institute of Nutrition (27 August 2021).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, International

Science and Technology Cooperation, Reva University, Bengaluru (17 August 2021).

Dr. Meera Manikkavachakan attended a webinar, IPR: Key to India's Future Journey, by Mr. Munish Sudan, Turnip Innovations Pvt. Ltd., Mumbai (14 August 2021).

Dr. Meera Manikkavachakan attended a webinar, Climbing the Cognitive Ladder using Bloom's Taxonomy, EngageIndia.Biz, Bengaluru (6 August 2021).

Prof. (Mrs.) B Andallu attended a webinar, Anticancer Drug Discovery for Future, JournoMed and MedPiper Technologies Pvt. Ltd., Bengaluru (6 August 2021).

Prof. (Mrs.) B Andallu attended a webinar, Post COVID-19 Syndrome or Long COVID, JournoMed and MedPiper Technologies Pvt. Ltd., Bengaluru (4 August 2021).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, Maternal Nutrition Technical E-Dialogue 7: FIGO the Nutrition Checklist, ICMR-National Institute of Nutrition (30 July 2021).

Prof. (Mrs.) B Andallu attended a webinar, Elimination of Viral Hepatitis, Hep Can't Wait, JournoMed and MedPiper Technologies Pvt. Ltd., Bengaluru (24 July 2021).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, Divergence of Food Science, Kasturba Health Society Medical Research Centre (20 July 2021).

Dr. Meera Manikkavachakan and Dr. (Mrs.) Jhinuk Gupta attended a webinar series, Qualitative Research in Public Health Nutrition, Nutrition Society of India, Mumbai Chapter (10-26 July 2021).

Prof. (Mrs.) B Andallu attended a webinar, Underestimated Bacterial Infections in COVID-19 Patients & Diagnosing Pneumonia, JournoMed and MedPiper Technologies Pvt. Ltd., Bengaluru (9 July 2021).

Dr. Meera Manikkavachakan attended an online training programme, Processing of Millet Based RTE and RTC Foods and its Marketing Feasibility, Food Processing Business Incubation Centre (FPBIC), Indian Institute of Food Processing Technology (IIFPT) (9 July 2021).

Dr. (Ms.) Tapasya Anand attended a webinar, Food Safety: Everyone's Business, JSS Academy for Higher Education and Research, Mysuru, Karnataka (28-29 June 2021).

Prof. (Mrs.) B Andallu attended a webinar, How India Should be Prepared for COVID-19 3rd Wave, Latest Research, Thoughts, and Insights on COVID Medicines & Injections, JournoMed and MedPiper Technologies Pvt. Ltd., Bengaluru (25 June 2021).

Dr. (Mrs.) Jhinuk Gupta attended a webinar, Maternal Nutrition

E-Dialogue 6: Maternal Anaemia Confirmation, ICMR-National Institute of Nutrition (25 June 2021).

Prof. (Miss) N Srividya attended a webinar, Turnitin Virtual Conclave: Leveraging Technology for Enhancing Education, Turnitin, India (24 June 2021).

Prof. (Miss) N Srividya attended a webinar, Digestion SOS Docuseries: Rescue and Relief Docu Summit, Health Talks Online, Florida (21-29 June 2021).

Dr. Meera Manikkavachakan and Dr. (Mrs.) Jhinuk Gupta attended a workshop, Innovations and Sustainability in Food Processing, Amity Institute of Food Technology, Noida (21-29 June 2021).

Prof. (Miss) N Srividya attended an international conference, Nutrition Live Online 2021, American Society for Nutrition (7-10 June 2021).

Mathematics & Computer Science

Dr. Srinath M S attended a Faculty Development Programme (FDP), The LNM Institute of Information Technology, Jaipur, Rajasthan (3-8 January 2022).

Dr. Srinath M S attended a Faculty Development Programme (FDP), Inculcating Universal Human Values in Technical Education, All India Council of Technical Education (AICTE) (20-24 December 2021).

Sri Sapan Gupta attended a workshop, Statistical Modeling in Python, A2Z Edu-LearningHub, Udumbannoor, Kerala (21-23 October 2021).

Sri Sapan Gupta attended the International Workshop on Graphs from Algebraic Structures (IWGAS-21), Dept. of Mathematics, Manonmaniam Sundaranar University, Tirunelveli and the Academy of Discrete Mathematics and Applications (7-9 October 2021).

Dr. (Mrs.) Sreerangavani K attended a webinar, Recent Advances in Mathematical Sciences Mathematical Sciences, Dept. of Mathematics, Maharaja Bir Bikram University, Agartala, Tripura (29-30 September 2021).

Dr. (Mrs.) Sreerangavani K attended a Faculty Development Programme (FDP), Application of Mathematics in Science and Technology, Dept. of Science and Humanities, Narasu's Sarathy Institute of Technology, Salem, Tamil Nadu (21-26 June 2021).

Physics

Dr. C Prathibha attended a Faculty Development Programme (FDP), Advances in Characterization Techniques and Applications: A Material Science Perspective, Dept. of Bio-Technology and Chemistry, Ramaiah Institute of Technology,

Bengaluru, Karnataka, India in association with Shriram Institute of Industrial Research, Bengaluru (7-12 March 2022).

Dr. K Vijay Sai attended the Online International Conference on Recent Trends in Nuclear Physics, Dept. of Physics and Astronomical Sciences (DPAS), School of Physical & Material Sciences (SoPMS) and Central University of Himachal Pradesh (CUHP), Dharamshala (16-18 February 2022).

Dr. Muralikrishna Molli attended the 1st Distinguished Lecture Series in Physics, 2022, by Prof. D D Sarma, Dept. of Physics, School of Basic and Applied Sciences, Adamas University, Kolkata (12 February 2022).

Dr. (Miss) Deepa Seetharaman and Dr. K Vijay Sai attended the Theme Meeting on Nuclear Lifetimes, Transitions and Moments (NLTM2022), Variable Energy Cyclotron Centre, DAE, Kolkata (1-3 February 2022).

Dr. V Sai Muthukumar attended a training program, IP Awareness, National Intellectual Property Awareness Mission, Intellectual Property Office, India (7 January 2022).

Dr. V Sai Muthukumar attended a masterclass, International Patent Filing, Turnip Innovations Pvt. Ltd., Mumbai (21 November 2021).

Dr. C Prathibha presented her research work, Ce (IV) Intercalated and Nano Ceria Incorporated Titanate Nanotubes for Treatment of Anionic and Cationic Contaminants in Water, 65th DAE Solid State Physics Symposium, Bhabha Atomic Research Centre (BARC), Mumbai (15-19 December 2021).

Dr. K Vijay Sai attended and presented the papers, Compilation and Evaluation of Experimental values of pure E2 transitions in the light of existing theoretical calculations, and Structure of ^{24}Mg (g.s.) and the $^{12}\text{C}(\text{g.s.})$ - $^{12}\text{C}(\text{g.s.})$ potential using oblate $^{12}\text{C}(\text{g.s.})$, 65th DAE BRNS Symposium on Nuclear Physics, Bhabha Atomic Research Centre (BARC), Mumbai (1-5 December 2021).

Dr. K Vijay Sai attended the orientation program, Nuclear Isomerism: Commemorating the Centenary of Discovery, 65th DAE Solid State Physics Symposium, Bhabha Atomic Research Centre (BARC), Mumbai (30 November 2021).

Dr. V Sai Muthukumar attended a workshop, Statistical Modeling in Python, A2Z Edu-LearningHub, Udumbannoor, Kerala (21-23 October 2021).

Dr. (Miss) Deepa Seetharaman and Dr. (Miss) Lavanya Rathi P attended the International Workshop on Flexible Hybrid Electronics - Manufacturing Processes and Applications, KL University, Andhra Pradesh (4-8 October 2021).

Dr. C Prathibha attended a workshop, Online Experiments for Classical Mechanics Lab using Tracker Software, Indian

Association of Physics Teachers (IAPT)-RC3 (17 July 2021).

Dr. Paramesh Gadige attended the National Online Workshop on Ancient Indian Science & Technology (AIST-2021), Office of Dean (Student Welfare), National Institute of Technology, Jamshedpur (5-10 July 2021).

Dr. Swarup Kundu attended a Faculty Development Programme (FDP), Energy Conversion and Storage Devices, AICTE Training and Learning (ATAL) Academy Online Elementary, Indian Institute of Technology, Hyderabad (1-5 July 2021).

Humanities & Social Sciences

Economics

Dr. K U Gopakumar delivered an Invited Talk on Time Series Forecasting: ARCH-GARCH Models, School of Social Sciences, Christ University, Bengaluru (28 September 2021).

Education

Mrs. P Padmambika attended a Faculty Development Programme (FDP), Technology Management in Education, Scrollwell, Noida (6-12 May 2022).

Dr. (Mrs.) P Lavanya attended a Faculty Development Programme (FDP), Education 4.0, Teaching Learning Centre, Ramanujan College (Ministry of Education), University of Delhi (2-8 December 2021).

Dr. (Mrs.) P Lavanya attended a workshop, Document Preparation using LaTeX, A2Z Edu-LearningHub, Udumbannoor, Kerala (19-21 November 2021).

Dr. (Mrs.) P Lavanya attended a workshop, Digital Tools for Quality Education, Dept. of Education, Aligarh Muslim University, Uttar Pradesh (16-18 November 2021).

Music

Sri Prafulla Kumar Meher attended a symposium, Law and Music, Shankarrao Chavan Law College, Pune (17-18 January 2022).

Languages & Literature

English

Dr. (Ms.) Vijaya Lekshmi R attended a workshop, Gender and Translation in India: A Multilingual and Multicultural Approach, Centre for Applied Linguistics and Translation Studies, University of Hyderabad (12-14 May 2022).

Dr. (Miss) P L Rani attended a workshop, Writing Research

Proposal, Grant Proposal & Funding Agencies, Lavender Literary Club, India, and Malaysian Industrial Relations & Human Resource Association (MIRHA), Malaysia (10-12 April 2022).

Mrs. Aarthi R M attended a workshop, Research Writing, Editing & Publishing, Lavender Literary Club, India, and Malaysian Industrial Relations & Human Resource Association (MIRHA), Malaysia (25-29 March 2022).

Dr. (Ms.) Vijaya Lekshmi R attended a conference, Writer-Translator Discourse, PG & Research Dept. of English, Holy Cross College, Tiruchirappalli, Tamil Nadu (4 March 2022).

Miss Sai Archana M attended a seminar and workshop, Multi-Disciplinary Research in Humanities and Social Sciences, Vellore Institute of Technology (VIT), Chennai (21-22 February 2022).

Miss Sai Archana M attended a conference, Research Methodologies of Contemporary Times: Exploring English Language, Literature and Teaching, SRR & CVR Govt. Degree College, Vijayawada, Andhra Pradesh (5 February 2022).

Miss Sai Archana M attended a Faculty Development Programme (FDP), Literary Theory, PSGR Krishnammal College for Women, Coimbatore, Tamil Nadu (5-11 January 2022).

Miss Sai Archana M attended a Faculty Development Programme (FDP), Academic Research Writing, Ramanujan College, University of Delhi (31 December 2021 - 6 January 2022).

Miss Sai Archana M attended a webinar, Effective Writing Skills for Promoting Research - What Do We Need to Know?, ICMR-Elsevier Publishing Workshop Series (13 December 2021).

Miss Sai Archana M attended a Faculty Development Programme (FDP), A Confluence of Changes & Incentives: Language, Literature & Research, PSG College of Arts & Science, Coimbatore, Tamil Nadu (6-11 December 2021).

Miss Sai Archana M and Ms. S Lakshmi Menon attended the 34th CA Sheppard Memorial Lecture 2021 by Prof. Noam Chomsky on Reflections on Language and Thought, St. Berchman's College, Changanassery, Kerala (6 December 2021).

Miss Sai Archana M attended a Faculty Development Programme (FDP), Advanced Pedagogical Techniques, Teaching Learning Centre, Ramanujan College, University of Delhi (28 November - 4 December 2021).

Dr. Aruna Kumar Behera conducted a Faculty Development Programme (FDP), Phonetics for Teachers of Professional Courses, Sambhram Academy of Management Studies, Bangalore (16 November 2021).

Dr. (Miss) P L Rani attended a Faculty Development Programme (FDP), Technology Management in Education, Scrollwell, Noida (3 November – 6 December 2021).

Dr. Aruna Kumar Behera attended a conference and presented a paper, How Much of Phonetics in Communication?, International Conference on Global Issues in Multidisciplinary Academic Research, Indian Academicians and Researchers Association (IARA) and Rajbhat Maha Sarakham University, Thailand (31 October 2021).

Dr. Aruna Kumar Behera conducted a Faculty Development Programme (FDP), Phonetics in Communication, KKR Institute of Engineering & Technology, Coimbatore (26 October 2021).

Dr. (Mrs.) Maitali Khanna, Mrs. Aarthi R M, Miss Sai Archana M and Ms. S Lakshmi Menon attended a Faculty Development Programme (FDP), Literature and Environmental Humanities: Ecology, Ecocriticism, and Environmental Studies, NIT, Calicut (25-30 October 2021).

Miss Sai Archana M attended a conference, Contemporary Trends in World Literatures, Language and Cultural Studies in English, The Bhopal School of Social Sciences, Madhya Pradesh and Christ College Irinjalakuda, Kerala (29-30 September 2021).

Dr. (Mrs.) Maitali Khanna attended a webinar, Cultural Studies: A New Approach to Explore Cultures, Cultural Texts, and Artifacts, Dept. of English, Mudhoji College and English Language Teachers' Association of India (ELTAI), Satara Chapter (27 September 2021).

Dr. (Mrs.) Maitali Khanna, Dr. (Miss) Nelli Vani Sri and Mrs. Aarthi R M attended the Online UGC Subject Refresher Course on English, UGC Human Resource Development Centre, Aligarh Muslim University, Uttar Pradesh (12-27 August 2021).

Miss Sai Archana M attended a webinar, Basic to Advanced Guide on Systematic Literature Review and Meta-Analysis, Research Graduate (8 August 2021).

Dr. Aruna Kumar Behera attended the Online UGC Refresher Course on English Language Studies, University of Hyderabad (2-14 August 2021).

Miss Sai Archana M attended a workshop-cum-certificate course, Research Methodology, Academic Writing, Publishing in English, All India Forum for English Students Scholars and Trainers (AIFEST) (1-31 August 2021).

Dr. Aruna Kumar Behera participated in a panel discussion, Why Arts?, Genius Group of Institutions, Rajkot, Gujarat (11 July 2021).

Dr. Aruna Kumar Behera attended webinars, Contextualised Speaking and English Skills, MSE, Bargarh (4 July 2021).

Dr. Aruna Kumar Behera attended a webinar, Professional and Proficiency Development, English Support Mission (ESM), Odisha (27 June 2021).

Dr. Aruna Kumar Behera conducted a webinar and Resource Person, Tackling Competitive Exams, Genius Group of Institutions, Rajkot, Gujarat (18 June 2021).

Dr. Aruna Kumar Behera attended a webinar, Vocabulary Enrichment, MSE, Bargarh (13 June 2021).

Dr. (Miss) P L Rani completed an online training course, Introduction to Digital Journalism, Reuters (25 June 2021).

Miss Sai Archana M attended a webinar, Basic to Advanced Guide for Review Paper Writing, Research Graduate (13 June 2021).

Mrs. Aarthi R M attended a conference, Contemporary Perspectives in English Language, Literature & Culture Studies, University Institute of Liberal Arts & Humanities, Chandigarh University (11-12 June 2021).

Sanskrit

Dr. M B S S Narayana attended the Samskruta Sloka Pathanam, Karnataka Samskruta Viswa Vidyalaya, Bangalore (28-30 September 2021).

Telugu

Mrs. G Yamuna Rani attended a webinar and submitted a paper, Sri Sri Mahaprashtanam - Abhyudaya Drusti at Sri Sri Kalavedika, Sri Krishnadevaraya University Wing, Anantapur, Andhra Pradesh (9-10 May 2022).

Dr. (Mrs.) M Praphulla R was a Resource Person and submitted a paper, Kandukuri Vari Rajasekhara Charitra - Sameeksha, webinar on Kandukuri Veeresalingam-Literary Perspectives, Dept. of Telugu, Faculty of Arts, Banaras Hindu University, Varanasi (16-17 April 2022).

Dr. P Sarma Rambhatla was a Resource Person and submitted a paper, Kandukuri vari Sakuntala Natakanuvadam, webinar on Kandukuri Veeresalingam-Literary Perspectives, Dept. of Telugu, Faculty of Arts, Banaras Hindu University, Varanasi (16-17 April 2022).

Dr. P Sarma Rambhatla attended a workshop, Writing Research Proposal, Grant Proposal & Funding Agencies, Lavender Literary Club, India, and Malaysian Industrial Relations & Human Resource Association (MIRHA), Malaysia (10-12 April 2022).

Mrs. G Yamuna Rani presented a paper, Tholi Charitrakarini-Bandaru Achamamba, International Telugu Women

Development & Awareness Programme, Dept. of Telugu, KVR Govt. College for Women, Kurnool (4-5 March 2022)

Mrs. G Yamuna Rani attended a webinar and submitted the papers, Vemanna Vaadam - Maanavatha Vaadam and Siddha Prasiddhulu - Kurthalam Jagadguruvulu, Kalagnanulu at Avadhuthalu & Siddhulu in Telugu & Kannada Languages, Dept. of Languages, Madras Christian College, East Tambaram, Chennai, Tamil Nadu (10-11 February 2022).

Management & Commerce

Dr. (Mrs.) Swetha Thiruchanuru attended a workshop, Redefining Business Innovation Ethos of Management, Global Institute of Business Studies (5 March 2022).

Dr. N Sivakumar attended a workshop, Doing Business in India: Swede's Experience, Navjivan Center for Development (NCD), Gujarat, India (3 March 2022).

Dr. N Sivakumar attended a workshop, Marketing Skills for Non-Marketing Professionals, Navjivan Center for Development (NCD), Gujarat, India (24 February 2022).

Dr. N Sivakumar attended a training program, IP Awareness, National Intellectual Property Awareness Mission, Intellectual Property Office, India (17 February 2022).

Dr. (Mrs.) C Jayashree attended a masterclass, Investment Planning and Retirement Planning, Scrollwell, Noida (8 January 2022).

Dr. (Mrs.) G Padmavathy attended a series of webinars, Scientific Writing in Health Research, ICMR (13 December 2021 - 10 March 2022)

Mrs. Akanksha Aggarwal attended a Faculty Development Programme (FDP), Advanced Research Methods, School of Management and Commerce, Brainware University, West Bengal, India (2-22 January 2022).

Mrs. Akanksha Aggarwal and Sri M S Sai Vinod attended the Circular Economy Training of Trainers Programme in a nationwide capacity-building project on the Implementation of Circular Economy in Educational Institutions, Global Institute of Circular Economy & Sustainable Development Goals (ICE & SDGs) and Mobius Foundation (20 December 2021).

Dr. N Sivakumar attended a webinar, Design Thinking for Social Sector Leader, Navjivan Center for Development (NCD), Gujarat, India (7 December 2022).

Sri M S Sai Vinod completed the Indicators of an Inclusive Green Economy: Advanced Course, United Nations Institute of

Training and Research (UNITAR) and Partnership for Action on Green Economy (PAGE) (6 December 2021).

Dr. (Mrs.) C Jayashree attended an online course, Digital Teaching Techniques, organised by ICAR - National Academy of Agriculture Research Management (NAARM) (1-31 December 2021).

Mrs. Akanksha Aggarwal completed and qualified a Massive Open Online Course (MOOC), Digital Teaching Techniques, ICAR-National Academy of Agricultural Research Management, Hyderabad (1-31 December 2021).

Sri L K Prasad Rayaprolu attended and submitted a paper, 6th International e-Conference on Economic Growth and Sustainable Development, Shri Dharmasthala Manjunatheshwara Institute for Management Development (SDMIMD), Mysuru (25-26 November 2021).

Sri M S Sai Vinod participated in the Training of Trainers at the Circular Economy programme, a Nationwide Capacity Building Project on Implementation of Circular Economy in Educational Institutions, Global Institute of Circular Economy & Sustainable Development Goals (ICE&SDGs) and Mobius Foundation (26 October 2021).

Dr. (Mrs.) Swetha Thiruchanuru attended a Faculty Development Programme (FDP), Entrepreneurship Development, Indian Institute of Plantation Management (IIPM), Bengaluru. (24 August - 4 September 2021).

Dr. (Mrs.) G Padmavathy attended a webinar, IPR Strategy and Cleantech Innovation', Turnip Innovations Pvt. Ltd., Mumbai (16 July 2021).

Dr. (Mrs.) C Jayashree attended an online workshop, Data Analytics using Python & R, Institute for Statistics and Analytical Research (ISAR), Chennai (5-8 July 2021).

Dr. (Mrs.) C Jayashree attended a Professional Development Programme (PDP), SPSS, PSG College of Arts & Science, Coimbatore, Tamil Nadu (21-27 June 2021).

Dr. (Mrs.) C Jayashree attended a workshop, Success Recipes: Let's Cook our Destiny, Navjivan Center for Development (NCD), Gujarat, India (16 June 2021).

Dr. (Mrs.) C Jayashree attended a training programme, General Orientation Workshop, EBSCO (1 June 2021).

Dr. (Mrs.) C Jayashree attended a Faculty Development Programme (FDP), Pedagogy and Research Methods, Academy of Maritime Education and Training (AMET) (24 May - 6 June 2021).

Doctoral Research Scholars Participation

Biosciences

Sri Sahashransu Satyaajeet Mahapatra delivered an oral presentation, Plant-Based Coagulants for Sustainable Treatment of Domestic Wastewater, National Conference on Chemistry for Sustainable Development - Academia and Industry Perspectives, Dept. of Chemistry, K J Somaiya College of Science and Commerce (in association with Chemistry Division, BARC, Mumbai) (22-23 April 2022).

Sri Piyush Kumar attended a workshop, Post-Molecular Dynamics Simulation Analysis, NyBerMan Bioinformatics Europe (12-13 March 2022).

Sri Bhargava Sai Mukkirla attended a workshop, Machine Learning Using R & Statcraft, Meerashpa Learning Solutions (1-5 February 2022).

Sri Bhargava Sai Mukkirla attended a webinar series, Web of Science Certification Series 2022, Clarivate Analytics Discovery and Writing (17-21 January 2022).

Sri Piyush Kumar attended a hands-on technical training, MD Simulations, GROMACS, NAMD & VMD (10-17 January 2022).

Sri Bhargava Sai Mukkirla attended The Intellectual Property Rights Awareness Programme, National Intellectual Property Awareness Mission (NIPAM) (7 January 2022).

Sri Bhargava Sai Mukkirla attended a workshop, Meta-Sentiment-Bibliometric Analysis Using R, Commacad, New Delhi (27-29 September 2021).

Sri V M Datta Darshan attended a workshop, Advanced Molecular Dynamics Simulation, International School of Photonics, Cochin University of Science And Technology (CUSAT), Kathmandu University and Scidart Academy (6-17 September 2021).

Chemistry

Miss K V Seetarama Mani Chandrika and Miss Amitananda Dash presented their work at a conference, NextGen Therapeutics and Diagnostics: Concept to Commercialization, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, India (20-22 April 2022).

Sri R Siva Kumar, Sri Nitesh Tamang, Sri Prashant Rai, Sri Vijay Sai Krishna Cheerla and Sri Manohar Bhujel presented their work at a conference, NextGen Therapeutics and Diagnostics: Concept to Commercialization, National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, India (20-22 April 2022).

Sri Sai Prasad Nayak delivered a talk, Green Synthesis of a Novel Porous Gold-curcumin Nanocomposite for Efficient Alcohol Oxidation, 3rd Online International Conference on

Biocatalysis and Green Chemistry, Coalesce Research Group, USA (4-5 April 2022).

Miss Amitananda Das visited SVAK Life Sciences, Hyderabad for preliminary bioactivity testing of her samples and carry out essential reactions such as peptide bond synthesis, ester synthesis and hydrolysis, and various other C-N, C-C, and C-O coupling reactions. She also participated in a team project on synthesising novel degradation compounds of Molnupiravir (an anti-COVID drug). (25 November 2021 - 24 February 2022 & 16 May - 15 July 2022).

Sri Undavalli Venkata Gopi attended and presented his poster work, #RSCPoster Twitter Conference, Royal Society of Chemistry, UK (7 September 2021).

Sri Undavalli Venkata Gopi attended a workshop, Master the Publishing Process, American Chemical Society (ACS) and Department of Science & Technology (DST) (11 August 2021).

Sri Undavalli Venkata Gopi presented his work at a conference, Advanced Materials for Better Tomorrow, Indian Institute of Technology (BHU), Varanasi, India (13-17 July 2021).

Sri Ram Murthy attended a conference, 8th Interdisciplinary Symposium on Materials Chemistry, Chemistry Division Society, Bhabha Atomic Research Centre and Society for Materials Chemistry, Mumbai, India (17-29 June 2021).

Sri Undavalli Venkata Gopi attended a conference, 239th ECS Meeting, Electrochemical Society, USA (30 May - 3 June 2021).

Food & Nutritional Sciences

Miss S Sai Dharshini attended a webinar, Let's Talk Healthy Snacks, Bakery & Snacks (26 May 2022).

Miss S Sai Dharshini attended a conference, Clinical Nutrition and Dietary Lifestyle, Universal Society of Food and Nutrition, Bengaluru (20-21 May 2022).

Miss Mounika Pandey attended a webinar, Target Prioritization and Benchmarking, Clarivate (19 May 2022).

Miss Mounika Pandey attended a webinar, Understanding the Molecular Mechanisms of Disease and Target Identification, Clarivate (17 May 2022).

Miss N Saiharini completed a training programme, GC-MS/MS, LC-MS/MS, HPLC, and Pesticide Residue Analysis on Food Products, NAWaL Analytical Laboratories, Hosur, Tamil Nadu (26-30 April 2022).

Miss S Sai Dharshini completed a training programme, Application of Rheology, Texture and Structural Properties in Food Industries, National Institute of Food Technology, Entrepreneurship and Management - Thanjavur (NIFTEM-T), Tamil Nadu (26 April 2022).

Miss Sparsh S attended a workshop, Research Writing, Editing & Publishing, Lavender Literary Club, India, and Malaysian Industrial Relations & Human Resource Association (MIRHA), Malaysia (25-29 March 2022).

Miss Mounika Pandey attended a conference, SDGs Towards Zero Hunger and Good Health, M. O. P. Vaishnav College for Women, Chennai (25-26 March 2022).

Miss Shrijana Rasailey attended a webinar series, Web of Science Certification, Clarivate (23 March 2022).

Miss K K Sai Sruthi Shree attended a hands-on technical training, High-Performance Liquid Chromatography (HPLC), Analytical Technology Laboratory, Coimbatore (19-21 March 2022).

Miss K K Sai Sruthi Shree completed a certification course, Food Fortification, Equinox Training Academy (15 March 2022).

Miss S Sai Dharshini, Miss N Saiharini, Miss Shrijana Rasailey, Miss K K Sai Sruthi Shree and Miss Mounika Pandey attended an online summit, 6th International Diabetes Summit, Chellaram Diabetes Institute, Pune (4-6 March 2022).

Miss Mounika Pandey attended a webinar series, Web of Science Certification, Clarivate (21-23 February 2022).

Miss Alisha Pradhan attended a workshop, Application of Artificial Intelligence in Food Processing, National Institute of Food Technology, Entrepreneurship and Management - Thanjavur (NIFTEM-T), Tamil Nadu (15 February 2022).

Miss Mounika Pandey attended a webinar, Healthy Plant-Based Carbs: Maltodextrins and Glucose Syrup in Developing Healthy Foods, Protein Foods & Nutrition Development Association of India (PFNDAI) (4 February 2022).

Miss Mounika Pandey attended a workshop, 3D & 4D Food Printing, National Institute of Food Technology, Entrepreneurship and Management - Thanjavur (NIFTEM-T), Tamil Nadu (6 January 2022).

Miss Shrijana Rasailey attended a workshop, Fluorescence Activated Cell Sorter (FACS), Dept. of Biotechnology, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu (17-18 December 2021).

Miss Shrijana Rasailey and Miss Sparsh S attended a webinar, Effective Writing Skills for Promoting Research - What Do We Need to Know?, ICMR-Elsevier Publishing Workshop Series (13 December 2021).

Miss S Sai Dharshini attended a summit, Smart Protein Summit, Good Food Institute (GFI) India, (10-12 November 2021).

Miss S Sai Dharshini, Miss Alisha Pradhan and Miss Sparsh S

attended a training workshop, Nutritional Analysis of Foods - Basic and Advanced Techniques, Nutrition Society of India, Mumbai Chapter and Dept. of Foods, Nutrition, and Dietetics, College of Home Science, Nirmala Niketan (22, 25 October 2021).

Miss Sparsh S attended a webinar, Malnutrition and Anemia, M. O. P. Vaishnav College for Women, Chennai (22-23 October 2021).

Miss N Saiharini, Miss S Sai Dharshini and Miss Sparsh S attended a conference, Global Trends in Food Processing and Food Safety, Tamil Nadu Agriculture University, Coimbatore (12 October 2021).

Miss Alisha Pradhan, Miss Shrijana Rasailey, Miss K K Sai Sruthi Shree, Miss Mounika Pandey and Miss S Sparsh attended a webinar series, Integrating Health and Longevity with Super Foods, Hindustan Institute of Technology and Science, Dept. of Food Technology, Chennai (29-30 September 2021).

Miss Sparsh S attended a workshop, Structural Equation Model (SEM) and Confirmatory Factor Analysis (CFA) using Analysis of Moment Structure (AMOS), Institute for Statistics and Analytical Research, Chennai (25-27 September 2021).

Miss Mounika Pandey attended a webinar, A Guide to Implement Healthy Eating to Optimize Well, Nutrition on the Road to Recovery, Dhanabhagyan Krishnaswami Mudaliar College for Women, Vellore (25 September 2021).

Miss Mounika Pandey attended a webinar, Weight Management is More Important than Ever, NutraIngredients (14 September 2021).

Miss Sparsh S attended a workshop, Data Analysis using Business Excel, Institute for Statistics and Analytical Research, Chennai (10-12 September 2021).

Miss Mounika Pandey attended a webinar, National Nutrition Week-Real Culprits in Obesity Epidemic, NITTE University, Mangaluru (1 September 2021).

Miss Mounika Pandey attended a webinar, Craft of Academic Writing, Wiley (31 August 2021).

Miss Mounika Pandey attended a webinar, ADA Primer-Clinical Update in Diabetes - 2021, American Diabetes Association (ADA) (29 August 2021).

Miss Sparsh S attended a workshop, Multivariate Analysis through R-Commander, Institute for Statistics and Analytical Research, Chennai (27-29 August 2021).

Miss S Sai Dharshini attended a workshop, Processing, Storage and Value Addition of Grains, Indian Institute of Food Processing Technology, Thanjavur (22-30 July 2021).

Miss Alisha Pradhan and Miss S Sparsh attended a webinar series, Qualitative Research in Public Health Nutrition, Nutrition Society of India, Mumbai Chapter (10-26 July 2021).

Miss Mounika Pandey attended a workshop, Enhancing Competitiveness in Contemporary Research Methods, National Institute of Technology (NIT), Trichy, Tamil Nadu (5-14 July 2021).

Miss S Sai Dharshini completed a training programme, Processing of Millet Based RTE and RTC Foods and its Market Feasibility, National Institute of Food Technology, Entrepreneurship and Management - Thanjavur (NIFTEM-T), Tamil Nadu (9 July 2021).

Miss Sparsh S attended an online course, Adolescent Nutrition and Anemia, Nutrition International - India (7-12 July 2021).

Miss S Sai Dharshini and Miss Sparsh S attended a conference, Innovation in Food Processing and Nutritional Science, Dept. of Food Processing Technology, Academy of Maritime Education and Training (AMET), Chennai (29 June 2021).

Miss Mounika Pandey attended a webinar, Strengthening Maternal Nutrition Assessment and Services in Antenatal Care in India, Maternal Nutrition E-Dialogue (27 June 2021).

Miss Sparsh S attended a webinar series, Maternal Nutrition E-Dialogue Series, CMR - National Institute of Nutrition, Federation of Obstetrics & Gynecological Societies of India (FOGSI) and UNICEF (25 Jun, 30 July & 27 August 2021).

Miss Alisha Pradhan and Miss S Sai Dharshini attended a workshop, Innovations and Sustainability in Food Processing, Amity Institute of Food Technology, Noida (21-29 June 2021).

Miss Mounika Pandey attended a webinar, Wellness Series on Diabetes Management during COVID-19, The Hindu wellness series, Diahome, and ARH Diabetes Hospitals (12 June 2021).

Miss Mounika Pandey attended a webinar, Microbial Safety in Food: Current Risk and Testing Solutions, Association of Official Agricultural Chemists (AOAC) and ThermoFisher Scientific (7 June 2021).

Mathematics & Computer Science

Sri Rahul Poddar presented his work at a webinar, Classification of Nearly Kaehler Manifolds Admitting a Closed Conformal Vector Field, Recent Advances in Mathematics and its Applications (RAMA-2022), Dept. of Pure Mathematics, University of Calcutta (10-11 March 2022).

Sri Ananth V S delivered a talk, Achieving Pest Management Using Feedback Control for an Additional Food Provided Prey-Predator System with Type III Functional Response, 13th Conference on Dynamical Systems Applied to Biology and Natural Sciences (DSABNS 2022), Mathematical and

Theoretical Biology Group, Basque Center for Applied Mathematics (BCAM), Spain (8-11 February 2022).

Miss Behara Roopa Sri attended a symposium, Mathematical Sciences and their Applications: MSATA-2022, Dept. of Applied Mathematics, Yogi Vemana University, Kadapa, Andhra Pradesh (28-29 January 2022).

Sri Rahul Poddar presented his work at a conference, A Generalized m-Quasi Einstein Manifold Admitting a Closed Conformal Vector Field, 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Recent Advances in Differential Geometry and Topology, Dept. of Mathematics and Statistics, Central University of Punjab, Bathinda, India (26-28 October 2021).

Miss Behara Roopa Sri attended a conference, Graph Theory and Applications (GTA), 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII), School of Physical and Applied Sciences (SPAS), Goa University, Goa (26-28 October 2021).

Miss Behara Roopa Sri attended a webinar, Spectra of Graph Operations Based on Central Graph, Reva University, Bengaluru (14 August 2021).

Sri Rahul Poddar attended the NASI - TMC Summer School on Differential Geometry, Dept. of Mathematics and Statistics, School of Basic Sciences, Central University of Punjab, Bathinda, India (5-24 July 2021).

Sri Rahul Poddar attended the Workshop on Emerging Areas in Mathematics (WEAM - 2021), Calcutta Mathematical Society (10-17 July 2021).

Miss Behara Roopa Sri attended a workshop, Enhancing Competitiveness in Contemporary Research Methods, National Institute of Technology (NIT), Trichy, Tamil Nadu (5-14 July 2021).

Physics

Miss Susshma N presented her work, Decay Studies for Investigating the Ground State Properties of ^{178}Ta , Workshop on Indian National Gamma Array (INGA), UGC DAE CSR and Variable Energy Cyclotron Center (VECC), Kolkata (10-11 March 2022).

Miss Susshma N presented her work, Collective Structure of Even-Even Nuclei in the Vicinity of Doubly-Magic Nuclei, 65th DAE-BRNS Symposium on Solid State Physics, Bhabha Atomic Research Centre (BARC), Mumbai (1-5 December 2021).

Miss Susshma N presented her work, Experimental Investigations on Level Structures of Doubly-Odd Ta Nuclei, African Nuclear Physics School (ANPS), iThemba LABS, Johannesburg, South Africa (8-12 November 2021).

Miss Susshma N attended a webinar, Detector Simulation using GEANT4, Inter-University Accelerator Center (IUAC), Delhi (26-29 October 2021).

Miss Anjana Biswas presented her work, Zirconium Incorporated 1-D Titanate Nanostructures and its Application in Defluoridation of Water, 65th DAE-BRNS Symposium on Solid State Physics, Bhabha Atomic Research Centre (BARC), Mumbai (1-5 December 2021).

Languages & Literature

English

Miss Priyamvada C presented her work, Sanskrit Poetics: Indigenous Trends in Literary Theory, 15th International and 51st Annual Conference, English Language Teachers' Association of India (ELTAI) (21 November 2021).

Miss Sreenidhi S presented her work, Reading A K Ramanujan in the Age of Cognitive Science, Humanities through Literature, Film, and Media, Vellore Institute of Technology, Chennai (19 October 2021).

Miss Megha Santhosh attended a webinar, The Trauma of Surveillance, Nesamony Memorial Christian College, Tamil Nadu (10 July 2021).

Miss Megha Santhosh completed an online course, Trauma and Literature, IIT Madras (July-October 2021).

Management & Commerce

Mrs. Akanksha Aggarwal attended a Faculty Development Programme (FDP), Advanced Research Methods, School of Management and Commerce, Brainware University, West Bengal, India (2-22 January 2022).

Mrs. Akanksha Aggarwal and Sri M S Sai Vinod attended the Circular Economy Training of Trainers Programme in a nationwide capacity-building project on the Implementation of Circular Economy in Educational Institutions, Global Institute of Circular Economy & Sustainable Development Goals (ICE & SDGs) and Mobius Foundation (20 December 2021).

Mrs. Akanksha Aggarwal completed and qualified a Massive Open Online Course (MOOC), Digital Teaching Techniques, ICAR-National Academy of Agricultural Research Management, Hyderabad (1-31 December 2021).

Students Participation

Entrepreneurship and Innovation Contest (2022)

SSSIHL, Anantapur Campus, April 2022

The contest was organised by the 1996/97 batch of Sri Sathya Sai Institute of Higher Learning, Anantapur Campus as part of the silver jubilee year celebrations.

The theme for the contest was: Making available affordable nutrition food packages to address the needs of a growing population of senior citizens; many of whom are living alone.

Students used their entrepreneurship skills and innovative ideas, and from a total of seventeen teams, three teams from the Dept. of Food & Nutritional Sciences secured the first, second, and third prizes. The winning teams were awarded certificates and cash prizes.

First Prize (Cash prize of ₹12,500) for formulating a different flavoured instant soup powder mix with a sweet potato base. Team Members: B R Shreya, Y Harinee and A Priya Shridhar (II B.Sc. Food & Nutritional Sciences).

Second Prize (Cash prize of ₹7,500) for developing a semi customised meal delivery service for senior citizens above 60 years of age. Team Members: P Sai Geetha, M Vandana, and S Mounika (I M.Sc. Food & Nutritional Sciences) and Varshitha, Vineetha and S Gouri (III B.Sc. Food & Nutritional Sciences).

Third Prize (Cash prize of ₹5,000) for formulating a ready to cook frozen moong roti, chutney with cauliflower greens and ragi soup mix. Team Members: K Jahnavi, G Sravanika, K Pallavi, and Adithya Mishra (I M.Sc. in Food & Nutritional Sciences) and Lakshmi Taruni, and P Manogna (III B.Sc. in Food & Nutritional Sciences).



National Examinations

A significant percentage of SSSIHL final year postgraduate students qualified in national examinations in 2021/22.

Examination Types

National examinations

GATE (Graduate Aptitude Test in Engineering) | **CSIR** (Council of Scientific & Industrial Research) | **JRF** (Junior Research Fellowship) | **NET** (National Eligibility Test) | **LS** (Lectureship) | **JEST** (Joint Entrance Screening Test) | **CTET** (Central Teacher Eligibility Test) | **UPSC** (Union Public Service Commission)

Institute of Actuaries of India (IAI) examinations

ACET (Actuarial Common Entrance Test) | **CB3** (Business Management) | **CM2** (Financial Engineering and Loss Reserving) | **CP3** (Communication Practice) | **CP2** (Modelling Practice) | **CS1** (Actuarial Sciences) | **DS1** (Data Concepts and Visualization) | **MAS** (Modern Actuarial Statistics)

Overall Results

This number represents the total number of qualified students divided by the total number of eligible final-year postgraduate students who appeared for these exams.

44/143 = 31%

A breakdown of the examination types and student names are given below. The list includes the national (All-India) rank for each exam, where applicable.

CTET

II-year B.Ed.

4/10 = 40%

Snigdha Mishra (Education)

G S N S Vasanthi (Education)

G S C Krishna Lekha (Education)

Nikita Lote (Education)

UGC-NET (LS)

II-year M.Sc. in Food and Nutritional Sciences, M.A. in Humanities and Social Sciences / English Language & Literature and M.B.A.

2/11 = 18%

Jigme Bhutia (Economics)

Inkollu Leela Phani Krishna (Management)

GATE

II-year M.Sc. in Arts / Science / Mathematics / Statistics / Computer Application

13/42 = 31%

K Devaharsha Shiva Sai (Physics)
163

A V S Bharguav (Physics)
404

Peteti Yogananda (Chemistry)
955

Siva Ratnakar Immadi (Biosciences)
1239

Sai Adarsh Sahu (Biosciences)
1892

Palzar Tamang (Physics)
2024

M Akhil (Physics)
2100

Arpit Awasthi (Chemistry)
2213

Sai Aravind S V (Computer Science)
2799

Mangala Prasad Sahu (Computer Science)
4212

Saish P Marihal (Biosciences)
4562

Sreevaatsava Koaru (Computer Science)
6553

Sai Srujan Pendyala (Computer Science)
7503

UGC-CSIR-NET (LS)

II-year M.Sc. in Chemistry / Biosciences / Mathematical Sciences / Physical Sciences

1/7 = 14%

Siva Ratnakar Immadi (Biosciences)
37

JEST

II-year M.Sc. in Physics and Mathematics

1/6 = 17%

Rinchen Sherpa (Physics)
521

IIT JAM

II-year M.Sc. in Physics and Mathematics

1/5 = 20%

Ravi Kumar Sahu (Physics)
272

UGC-NET (JRF)

II-year M.Sc. in Food and Nutritional Sciences, M.A. in Humanities and Social Sciences / English Language & Literature and M.B.A.

5/17 = 29%

Chandana M (Food and Nutritional Science)
Gedela Sravani (Food and Nutritional Science)
Navyashree Bellana (Food and Nutritional Science)
Tejaswini Nayak (Food and Nutritional Science)
R Sai Naveen (Management)

AP SET

Master's Degree

4/4 = 100%

Anjana Biswas (Physics)
Doctoral Research Scholar
Susshma Nagarajan (Physics)
Doctoral Research Scholar
K V Seetarama Mani Chandrika (Chemistry)
Doctoral Research Scholar
Undavalli Venkata Gopi (Chemistry)
Doctoral Research Scholar

CSIR UGC-NET (JRF)

II-year M.Sc. in Chemistry / Biosciences / Mathematical Sciences / Physical sciences

2/5 = 40%

Undavalli Venkata Gopi (Chemistry)
80
Rinchen Sherpa (Physics)
341

Inspire Scholarship

Government of India (2017-2022)

Sri Arpit Awasthi (M.Sc. in Chemistry)

UPSC, Combined Defence Services (CDS) (I)

Graduation / Engineering

1/1 = 100%

Aditya Mishra (Food and Nutritional Sciences)

Institute of Actuaries of India (IAI) Exams

*II-year M.Sc. in Mathematics & Computer Science
Students from the Dept. of Mathematics & Computer Science who took the Institute of Actuaries of India national and international examinations and qualified*

10/35 = 29%

Abhiishek Chugh
IFM - Investment and Financial Markets
Arnav Dutta
Exam FM - Financial Mathematics, Exam P - Probability, MAS I - Modern Actuarial Statistics 1
Heamchand Bezawada
CS2 - Risk Modelling and Survival Analysis
Hursh Gupta
Exam FM - Financial Mathematics, Exam P - Probability
Mahadev Suresh
CS2 - Risk Modelling and Survival Analysis, CM2 - Loss Reserving and Financial Engineering
Rohan Yashraj Gupta
CP2 - Modelling Practice, CP3 - Communications Practice
Sankar Krishna
CM1 - Actuarial Mathematics, CM2 - Loss Reserving and Financial Engineering, CB1- Business Finance, CB2 - Business Economics, CP3 - Communications Practice
Shashi Kumar
Exam FM - Financial Mathematics, Exam P - Probability, MAS I - Modern Actuarial Statistics 1
Sri Charan
Exam FM - Financial Mathematics, Exam P - Probability
Swayam Kumar Patro
CS1 - Actuarial Statistics, CM2 - Loss Reserving and Financial Engineering, CB3 - Business Management, CS1 - Actuarial Statistics, CS2 - Risk Modelling and Survival Analysis, CB3 - Business Management, CP3 - Communications Practice

Projects & Dissertations

Listed below are the topics / areas of postgraduate and professional programme projects and dissertations for the academic year 2021/22.

Biosciences

M.Sc. in Biosciences

- Genomic Analysis of Colistin Resistance Conferring Genes in *Klebsiella Pneumoniae*
- Genomic Analysis of Carbapenem Resistance Conferring Genes in *Escherichia coli*
- Genomic Analysis of Fosfomycin Resistance Conferring Genes in *Klebsiella pneumoniae*
- Genomic Analysis of Carbapenem Resistance Conferring Genes in *Klebsiella pneumoniae*
- Genomic Analysis of Fosfomycin Resistance Conferring Genes in *Escherichia coli*
- Analysis of Genomic Context and Presence of Colistin Resistance Conferring Genes in *Escherichia coli* Genomes Available in the NCBI GenBank
- Medicinal Plants Associated with Lesser-Known South Indian Home Remedies - An Ethnobotanical Study
- Genomic Characterization of the Electroactive Bacteria *Shewanella* and *Geobacter* spp.
- Biotechnological Applications of Electroactive Bacteria
- In silico Analysis of the Impact of Selective Serotonin Reuptake Inhibitors (SSRIs) on the Human Gut Microbiome
- An Ethnobotanical Survey of the Multifarious Uses of Plants in the Hills of Darjeeling and Kalimpong
- In Silico Mapping of Activator Binding Sites on Hemocyanins Using Molecular Docking Approach
- In Silico Studies to Discover Drug-like Lead Compounds that Potentially Inhibit C-terminal Binding Protein (CtBP-1) - A Therapeutic Target in Cancer Treatment
- Virtual Screening of Natural Products Compound Library to Identify Potential Inhibitors Against GABA Amino Transferase, an Anti-Epileptic Drug Target
- Natural Products from Medicinal Plants as Prospective Inhibitors of Bacterial Multi-Drug Efflux Pump AcrB: A Structure-Based Drug Discovery Approach Using in silico Molecular docking and Molecular Dynamics Simulations
- Screening Secondary Metabolites from Medicinally useful Plants to Detect Probable Inhibitors of Mushroom Tyrosinase through Molecular Docking Approach
- A Review on Emerging Viral Diseases and Paramount Role of Active Compounds from Medicinal Plants as Active Agents.
- A Study on Risk Factors Associated with Diabetic Peripheral Neuropathy
- Impact of Nutrition in the Pathogenesis and Management of Type 2 Diabetes Mellitus
- Insights into the Effects of Mutations of Rhodopsin on Retinal Degeneration
- Effects of Various Mutations of Phosphodiesterase 6 in Triggering Retinal Diseases
- Role of Mutations of Transducin in Leading to Various Retinal Disorders
- Lung Cancer: Epidermal Growth Factor Receptor Mutations
- Androgen Receptor Mutations and Diseases
- Beneficial role of Mushrooms on Obesity
- An Appraisal on the Hypoglycemic Potential of Mushrooms
- Mushroom Immunomodulators - An Appraisal
- Amyloid Precursor Protein: Structure, Function and its Role in Alzheimer

Chemistry

M.Sc. in Chemistry

- Investigation of the Production of Tropospheric Ozone at a Suburban Site Located in the North-West Indo Gangetic Plains Using FOAM Model
- Identification of Potential Inhibitors of β -lactamase Enzymes; A Molecular Docking Approach
- LC-MS Based Profiling of Metabolites in *Annona Squamosa* and *Annona Reticulata* seeds
- The Effect of Annealing Conditions on Microstructural and Charge Storage Properties of LaNiO_{3-6}
- Screening Silicate Based Materials for their Biological and Mechanical Properties
- Graphene-Based Composites for Photocatalytic Water Splitting
- Synthesis and Evaluation of Biological Activities of Nitro and Amino Spirobibenzopyrans
- Model Based Theoretical Calculations of Activity Coefficients and Flash Points of Volatile Organic Mixtures and Software Development
- Molecular Dynamics Simulations of Polymer Nanocomposites
- Comparison of Photocatalytic Degradation of Benzo[a]pyrene Using Various Commercially Available Titanium-Based Nanocomposites
- Synthesis of Chalcone Ibuprofen Esters with the Help of Hydroxy chalcones
- Anti-Cancer Activity of Anthryl Chalcones
- Evaluation of different approaches for synthesizing Silver Nanoparticles from Leaf Extract of *Murraya koengi* (curry leaf)
- Europium Based MOFs for Sensing Applications

Mathematics & Computer Science

M.Sc. in Mathematics

- Pricing in General Insurance Using Machine Learning Techniques
- Frequency domain colour image watermarking using convolutional neural networks
- Speaker Diarization of Swami's discourses
- Pricing Models in Cyber Insurance
- Impulsive boundary value fractional order differential equation involving the Caputo-Hadamard derivative of a particular order
- Impact Analysis of COVID-19 Pandemic on Indian General Insurance Industry
- Assessing Impact of Climate Change on General Insurance Business Using Actuarial Techniques

M.Sc. in Mathematics With specializations in Computer Science / Actuarial Science

- Frequency Domain Colour Image Watermarking Using Convolutional Neural Networks
- Speaker Diarization of Swami's discourses
- Pricing in General Insurance Using Machine Learning Techniques
- Pricing Models in Cyber Insurance
- Assessing the Impact of Climate Change on General Insurance Business Using Actuarial Techniques
- Impulsive Boundary Value Fractional Order Differential Equation Involving the Caputo-Hadamard Derivative of a Particular Order
- Impact Analysis of the COVID-19 Pandemic on the Indian General Insurance Industry

M.Sc. in Data Science & Computing

- Estimation of the Number of Claims Using Poisson and Quasi-Poisson Distribution

- Link Prediction in the Medical Domain using Knowledge Graphs
- Neural Unsupervised Extractive Summarization for Sanskrit Documents
- Estimation of Risk Premium for Longitudinal Data
- Estimation of the Number of IBNR Claims Using Deterministic Methods
- Estimation of Average Claims Cost using Gamma and Log normal distributions
- Enhancing the Explainability of Machine Learning in Insurance
- Automation of Detection of COVID-19 using Graph Neural Networks
- Online KYC: Virtual Verification
- Estimation of Average Claims Cost using Gamma and Tweedie distribution
- Multi-Site Diagnostic Classification of Schizophrenia using Functional Connectivity MRI
- Insurance Valuation: A Forward-Looking View Using Big Data
- Estimation of large claim costs using Extreme Value Theory like Exponential Distribution
- Data Chain: AI as a Service - A Decentralised Application
- Estimation of IBNR Claims
- Estimation of the Number of Claims using Negative Binomial Distribution

M.Tech. in Computer Science

- Design of Log Analytics Framework to Identify Hotspots for Tuning a Database
- Generative Models Towards Superior Quality Reconstructions from FlatCam Lensless Measurements
- Whole Slide Imaging
- Light Weight Architectures for Facial Expression Recognition
- Enhancing Hospital Information Management System for Efficient Crowd Management
- A Feasibility Study to Design and Implementation of a Secure Data Lake with a platform for Privacy-Preserving Analytics

- Blockchain-based framework for combating Deep Fakes and Unauthorized File Sharing
- Multiparty Smart Contract Across Multiple Blockchains
- Computer Vision-based Bowler Action Analysis for Cricket Academies
- A Study on the Detection of DeepFake Images in the Frequency Domain

B.Sc. (Hons.) in Computer Science

- Data Visualization Using Microsoft POWER BI
- Heart Disease Prediction
- Deploying a Containerized Web App Using Kubernetes (K8s)
- Mitra - A Personal Voice Assistant
- Automation of Linear Regression
- Samprati - A News App
- Health4All
- Music Streaming Platform
- Poetic Play
- Social Media App Using React JS
- Brain Tumour detection Using SVM and Google Teachable Machine

Physics

M.Sc. in Physics

- Simulation of Material Properties Using Nanomaterials Simulation Toolkit
- Study on Some Physical Properties of Various Bioactive Glasses
- Modelling the Quantum Finite Square Well Potential Using Gnumeric Worksheets and Scilab Code
- Effect of Sintering Aids on the Conductivity of $\text{Li}_{0.33}\text{La}_{0.46}\text{Y}_{0.01}\text{Ti}_{0.03}$ Solid-electrolyte for Li-ion Battery
- Optical Sensors for Lab-on-a-chip Applications: A Study Using Finite-Difference Time-Domain Simulations
- Thermoelectric Properties of bi-transition Metal Chalcogenide CuTaS_3
- Exploratory Project on Diffused Optical Spectroscopy: Simulations & Experiments

- Fabrication of Novel Glass Ceramics
- Structure of Polymer Nano-particles (Dendrimers) and their Drug Binding Capacity
- Z-scan Nonlinear Optical Measurement Platform: Experimental Automation & Integration
- Application of Deep Learning in Radiological Screening in Renal Disease: Genitourinary Tuberculosis
- Numerical Simulation of Shell Model Single Particle Energy States in ^{56}Ni & ^{100}Sn Using Free and Open Source Software - Gnumeric and Scilab

M.Tech. in Optoelectronics & Communications

- Brownfield OTN+DWDM Network Optimization
- Physical Layer and Filtering Impairment Modeling for Multiband WDM system
- Data Flow and Acquisition Optimization for the Dual Imaging Intraoperative Probe

B.Sc. in Physics

- A Simple Star System Simulation
- Virtual Assistant using Python
- Photo Editor
- The Hangman Game
- Voice Assistant-Based Attendance System
- Pro_Vocab
- Mini Oscillator
- Sudoku Solver
- Snake Game
- Colour Detection using Python
- Mario Based 2D Game
- Game Development using Turtle
- GUI Calculator
- LiSys - Library Management System
- Quantum Tunneling
- Optical Design of Gregorian Telescope using Zemax OpticStudio
- Optical Design of Compound Microscope using Zemax OpticStudio
- Optical Design of Cassegrain telescope

using Zemax OpticStudio

- Optical Design of Hubble's telescope using Zemax OpticStudio
- Interference Pattern using Zemax OpticStudio
- Optical Design of Fabry-Perot Interferometer using Zemax OpticStudio
- Optical Design of Michelson Interferometer using Zemax OpticStudio

Food & Nutritional Sciences

M.Sc. in Food & Nutritional Sciences

- An Exploratory Survey on the Awareness Levels of Dieticians and the Development of Educational Materials about Diet During Anti-Coagulant Therapy
- In Silico Analysis of Phenolic Metabolome and In Vitro Antidiabetic Potential of Roselle and French Basil Microgreens
- Designing and Evaluation of Fortified Low-Gluten Protein Food Supplements to Address Moderate Acute Malnutrition
- In Silico Anti-Inflammatory Evaluation and Prediction of Anti-Inflammatory Index of Roselle and French Basil Microgreens Metabolome
- A Survey on the Impact of COVID-19 on Changing Patterns of Fruit and Vegetable Consumption, Handling, and Supply Chain Management
- Formulation and Development of Millet Incorporated Breakfast Recipes of India with Soy Flour as a Value Addition for the COVID Era
- Development and Evaluation of Processed Food Ingredients on the Nutritional, Physical, and Sensorial Qualities of Texture-Modified Food for the Aged
- A Study on the Impact of Dietary and Lifestyle Factors on Cognitive Health Among Early and Late Middle-Aged Indian Adults

- Survey on Valorization of Industrial Food Wastes and Utilization of Selected Fruit Peels in Developing Value-Added Food Products
- Effect of COVID-19 Pandemic on Food Quality in South India: Consumer Survey and DART (Detect Adulteration with Rapid Test) Analyses

Management & Commerce

M.B.A.

- A Study on Financial Freedom from an Individual's Perspective
- Business Model Innovation of EdTech Start-ups: An Exploratory Study with Respect to the Indian Ecosystem
- A Study on Non-Performing Assets in Indian Public Sector Banks- with Special Reference to Priority Sector Lending.
- A Study on Financial Literacy of Rural Women
- Stock Market Prediction Using Machine Learning and Time Series Analysis
- Stock Market Prediction Using Deep Learning Techniques
- Sustainable Businesses - A Descriptive Study
- Rediscovering India's Electric Vehicles Ambition with Business Model
- A Study of the Factors that Drive the Green Consumer Segment.
- Unusual Buying Behavior during COVID-19 through the RANAS Model approach in the Indian Consumer Market
- Impact of Talent Management Practices in the Contemporary Business Environment
- Millennial Followership - A Study (Exploring the Relationship Between Followers' Typology and Personality Styles)
- Emerging Trends in Leadership During the Pandemic - A Qualitative Study
- The Role of Fintech in Transforming Non-Digital Forms of Payments

- Transformative People Management and Employee Well-being in the Changing Workplace
- A Study on Understanding the Risk Profiling of an Individual Investor
- Entrepreneurship - A Way to Resilient Economies
- Plant-based Meat Substitutes: Good or Bad? - A Thematic Analysis of Consumer Experiences in India
- An Analytical Study on the Performance of Growth Stocks in the Indian Stock Market Based on the Nifty 500
- Artificial Intelligence in Human Resource Management: A Study on its Scope
- A Study of How Human Resource Leaders are Dealing with Job Redundancies Caused by Automation
- To Analyze the Lightweight Concrete Market Among a Select Group of Contractors
- A Study of Waste Management in Kadiyam Village
- Consumer Behaviour towards Risk in Mutual Fund Investing
- To Study the Ecosystem of Sports in India and Develop a Business Model with the Objective of Sports Development
- Developing a Business Model on Contract Farming and Contract Selling of Vegetables
- Leveraging Crowd Culture for Building Brand Traction and Engagement for Sri Sathya Sai Media Center
- A Study on customer satisfaction in Indian retail banking with special reference to ICICI bank
- Study of Rural Development Through Rural Entrepreneurship
- A Study of the Leadership Styles of Select Indian Organizational Leaders Using a Grounded Theory Approach
- Effective Strategies for Personal Branding on Social Media
- Employee Performance Management - A Study on Information Technology Enabled Companies in India
- Creating a Litter-Free Zone in Prasanthi Nilayam: A Lean Six Sigma Intervention
- A Study of Digital Market Linkages for Rural Enterprises. Case Study: Nimmalakunta
- Study of Business Model of Women Entrepreneurship
- Harnessing the Power of Digital Platforms, Social Media, and Experience Economy to Increase the Footfall and Customer
- To Enhance/Improve the Income of Rural Coconut Farmers: Developing a Business Plan for a Rural Entrepreneur in the Coir Industry
- Designing a Digital Business Model Framework
- Loyalty to the Food Restaurants Business
- A Study of the FDA Business Model Connecting the Unorganized Food Sector with Home Food Lovers
- Strategies for Schools in Rural Areas of Madhya Pradesh
- Gig Economy's Impact on the Quality of Life
- Value-Centered Crisis Management- Insights and Lessons from the Epic - Sri Ramayana
- Case study Analysis of select digital start-ups
- A Strategic Analysis of Vritilens, a VR Gaming Developer, using External and Internal Analysis, and Quality Function Deployment
- Changing Role of HRM in Times of COVID-19
- A Study on the 'Phygital' Model of Rural Banking
- The Digital Integration of Mom-and-Pop Stores
- The Study of an Entrepreneur in the Spices Space
- Analyzing Different Battery Technology for Electric Vehicles
- A Study of Successful Blue Ocean Strategy Implementations in the Indian Context
- An Exploratory Study of Select Fintech Start-ups in India
- A Study on Consumer Behaviour in the Luxury Car Segment in India
- Designing Search Engine Optimization and Instagram Marketing strategy for Meira Foods, a Food Processing Company

Economics

M.A. in Economics

- Microfinance in India: An Empirical Analysis on Self-Help Group Bank Linkage Program
- Determinants and Impact of Internal Migration in the State of Bihar
- Impact of Credit Risk on the Profitability of Commercial Banks in India
- Cryptocurrencies: An Analysis of BITCOIN Pricing
- Impact of Cross-Border Acquisitions on Firm Performance: An Empirical Study on Selected Countries
- Human Capital and Economic Growth-India's Experience
- An Analysis on the Relationship between Inflation and Economic Growth in India
- An Analysis of Cross-Selling in the United India Insurance Company
- Examining the Determinants of International Tourist Arrivals in India
- Analysis of Behavioural Aspects of Stock Market Performance during COVID-19
- The Role of Trade and Domestic Investments in the Growth of the Agricultural Economy of India Post 1990
- An Empirical analysis of India's Energy Consumption, Economic Growth on Environmental Degradation
- A Study on the Relationship between Financial Development and Economic Growth
- Empirical Analysis on Synchronization of BRICS Economic Cycles with Reference to India Cycles
- The pass-through of Monetary Policy in Banking Rates in India

English Language & Literature

M.A. in English Language and Literature

- In the Chamber's of Kane's Text Worlds: Exploring Character Fabrication in Sita's Sister and Lanka's Princess
- Smith's Visual Intricacies: An Inquiry into the Verbal Through the Visual

General English Undergraduate

- The Power of Being an "Early Bird"
- Japan - The Future of Technology
- Influence of Music on Mental Health
- Menstrual Health in our Country
- Inventions to Save the Earth
- Digitalisation - Smart Factories
- Green Infrastructure
- Black Holes: Still mystery?
- Armed Forces Special Powers Act (AFSPA)
- Artificial Intelligence
- Plastic Roads
- Characters from Holy Bible
- Sizzling Fever: Innovative India
- The Power of Media
- Anganwadis in India
- Paper Battery
- Water Hyacinth and Environment
- How is Anime Getting Popular in the World?
- Dealing with Adolescent Depression
- Soilless Farming (Hydroponics & Aquaponics)
- Going Vegan
- Cosmetic Surgery Risks
- Equity vs. Equality
- The Mahabharata
- The Effects of Poor Nutrition.
- Sustainability in Fashion
- Wifi vs Lifi
- Time Management Skills
- 3 R (Reduce, Reused, Recycle)
- Skills are More Important than a Degree.
- Social Media and Mental Health
- The Cholas-mysteries Unravelled
- Minimalism
- Astronomy
- Ego Problems with Today's Youth
- Mental Health
- Animal Rights
- Hallyu in India
- Green Technology
- Women
- Netflix - Best OTT Platform
- Generation Gap
- Thrissur Pooram
- Discontinued due to ill-health
- Internet V/s Traditional Mode of Learning
- Is Health, the Real Wealth?
- Art and its Importance in Life
- Childhood Then V/s Childhood Now
- Ajanta Paintings
- Happiness & Its Myths
- Villages: Strength or Weakness for the Nation
- Vedic Mathematics
- Ocean Clean-up
- Stoicism
- Modern Art
- Stress Management Techniques
- Painting - A Therapy
- The Power of Music
- Inverted Thinking
- Dilemma of Social Media
- Shaolin - the Temple of Kung-Fu
- Greek Mythology
- Gender Stereotypes
- Colour Therapy
- Swadeshi vs Videshi Products
- Meditation
- Patanjali Ashtanga Yoga
- Folk Dances of India
- The History of Bees and Their Role in the Nature
- Sanskrit: The Mother of All Languages
- Smiling Therapy
- Attitude is Everything
- Article 370
- Advantages of Blockchain Technology
- Benefits of Yoga
- History of few Indian Festivals
- Time Management Skills
- Stress Management for Students
- Cybercrime, Cyberspace and its Effects
- Birth of the Indian Space Programme
- Benefits of Travelling
- Robotics and Humanoids
- Kirati Khambu Rai: The Ethnic Group of the Himalayas
- Effect of Solar Flares on the Communication System
- Paperless World
- The Parliamentary System of India
- Minimalist Lifestyle - An Overview
- Untapped Potential of Senior Citizens
- Introduction to Bird Watching

Central Research Instruments Facility (CRIF)

SSSIHL Central Research Instruments Facility (CRIF), based at the Prasanthi Nilayam Campus, is one of the few such facilities in the country (and the first in a rural location) that houses advanced Characterization / Analytical tools to carry out Translational Research in various areas of science and technology such as Physical, Biological, Chemical, Materials Science, Food and Computational and Interdisciplinary Areas.

The facility, built with a funding of ₹45 crore with the kind support of Sri Sathya Sai Central Trust, hosts a range of cutting-edge instruments and laboratories. It has significantly strengthened the research facilities at SSSIHL by providing state-of-the-art infrastructural facilities under a single roof.

This has allowed the Institute's faculty and postgraduate and doctoral students to accelerate their research work in all the major research areas of the Faculty of Sciences - Health, Energy and Environment - and stay apace with global scientific developments. As a result, a greater number of research findings are being published in peer-reviewed, high-impact journals. These concerted efforts also help contribute to the needs of society at large.

SSSIHL CRIF facilitates strengthening interdisciplinary health-related research collaborations between SSSIHL and Sri Sathya Sai Institute of Higher Medical Sciences (SSSIHMS). These include Regenerative Medicine & Tissue Engineering, Rapid Detection of Endemic Diseases, Diabetic Retinopathy, Development of Cost Effective Multi-Modal Microscopes, SPCE-based Point of Care Devices, etc.

A Ph.D. is a person who helps others through his research and develops the country.

Sri Sathya Sai Baba
Revered Founder Chancellor, SSSIHL

Core Facilities

The following core facilities at CRIF are shared resources offering a range of services to the SSSIHL research community:

- Femto Fab Facility
- Electron Microscope Facility
- NMR & Mass Spectrometry Facilities
- Materials Characterization Facility
- Thermal and Optical Characterization Facilities
- Liquid Nitrogen Facility
- Central Utilities Facility
- Optical Imaging and Integration

Laboratories

In addition, CRIF hosts the following labs:

- Wet Chemistry Laboratories
- Functional Materials Laboratory
- Water Research and Electrochemistry
- Bio-Safety Laboratories: Level 1 and Level 2
- Functional Glasses and Ceramics Laboratory
- Non-linear Optics Laboratory
- Computational Science and Plasmonics

Full-time technical assistants with specific expertise operate and maintain the instruments and laboratories.

Collaborators

SSSIHL has successfully forged several research collaborations with leading organizations across India and abroad.

Academia & Research

- ICAR-Indian Institute of Horticultural Research, Bangalore
- Indian Institute of Technology, Madras
- Indian Institute of Technology, Kharagpur
- FDA-Center for Biologics Evaluation and Research, USA
- Indian Institute of Science Education and Research, Mohali
- Indira Gandhi Centre for Atomic Research, Kalpakkam

- University of Maryland, USA
- The Institute of Bioinformatics and Applied Biotechnology, Bangalore
- Raman Research Institute, Bangalore
- New Jersey Institute of Technology, USA
- Tata Institute for Fundamental Research, Mumbai
- Madras Diabetes Research Foundation, Chennai
- Clemson University, USA
- Geological Survey of India, Hyderabad
- Indian Institute of Science, Bangalore
- Universidad del Norte, Colombia
- National Institute of Nutrition, Hyderabad
- The Sahlgrenska University Hospital, Sweden
- Baylor College of Medicine, USA
- CSIR-National Chemical Laboratory, Pune
- University of Wollongong, Australia
- University of Colorado, USA
- International Centre for Genetic Engineering and Biotechnology, New Delhi
- National Institute of Pharmaceutical Education & Research, Hyderabad
- Japan Advanced Institute of Science and Technology, Japan
- CSIR-Indian Institute of Chemical Technology, Hyderabad
- Institute for Photonics and Nanotechnologies, Italy
- Dr. Reddy's Institute of Life Sciences, Hyderabad
- Central Leprosy Teaching and Research Institute, Chennai
- Centre for Materials for Electronics Technology, Pune
- CSIR-Central Drug Research Institute, Lucknow
- National Animal Resource Facility for Biomedical Research, Hyderabad
- CSIR-Central ElectroChemical Research Institute, Karaikudi
- Uppsala University, Sweden
- George Mason University, USA
- Oak Ridge National Laboratory (ORNL), USA

- Centre for Incubation Innovation Research and Consultancy, Bangalore
- Macquarie University, Sydney, Australia
- Industrial Research and Consultancy Centre, IIT-B, Mumbai
- LV Prasad Institute, Hyderabad
- BITS, Hyderabad.
- AIIMS, New Delhi.
- NARFBR, Hyderabad.
- University of Leeds, Leeds, UK.
- IISER, Berahampur.
- IBAB, Bangalore.
- College of Science, King Saud University, Riyadh, Saudi Arabia.
- Central Food Technological Research Institute, Mysore
- University of Agricultural Sciences, Bangalore
- Omix Research & Diagnostics Laboratories Pvt. Ltd., Bangalore
- Lab Engineers, Bangalore
- Labby Inc., USA
- Insta Power Ltd., New Delhi
- Symrise Pvt. Ltd., Chennai
- Indras Pvt. Ltd., Hyderabad
- Syngene International Ltd., Bangalore
- Mylan Laboratories, Bangalore
- Xheme Inc, USA



Central Research Laboratory (CRL)

Central Research Laboratory (CRL) is custom-designed to cater to the research needs and aspirations of the faculty, postgraduate and doctoral students of the Anantapur Campus of SSSIHL.

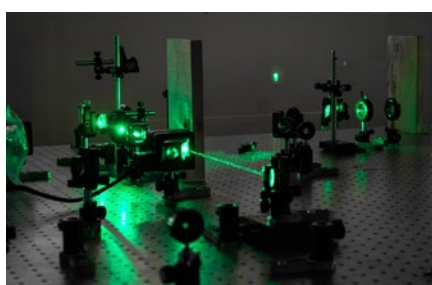
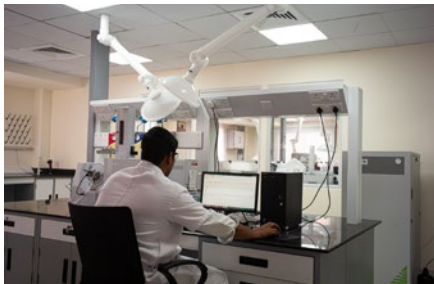
Inaugurated in August 2019, it hosts the following core facilities and laboratories:

- Wet Chemistry Laboratories
- Materials Synthesis Facility
- High Temperature Facility
- Characterization Facility

Researchers also have access to the SSSIHL Central Research Instruments Facility (CRIF), based at the Prasanthi Nilayam Campus.

Industry

- Agilent Technologies India Pvt. Ltd.
- Twastrix, Pune



Research Areas

Biosciences

Antimicrobial Resistance

The AMR laboratory is involved in understanding the fundamental principles involved in the acquisition of antimicrobial resistance determinants and their dissemination among clinically relevant pathogenic bacteria and applying this knowledge in developing tools for rapid, point-of-care diagnostics to support bedside treatment of drug-resistant bacterial infections. Multi-disciplinary and collaborative approaches which include wet lab, whole genome sequencing, Artificial Intelligence (AI), Machine Learning (ML), and bio-statistical tools to understand the emergence of antimicrobial resistance are being fostered. Further, the laboratory is involved in developing prediction models for rapid diagnosis/prediction of bacterial infections.

This laboratory works extensively in collaboration with the Indian Institute of Science, Bengaluru; Infection Control Academy of India, Hyderabad, Sri Sathya Sai Institute of Higher Medical Sciences, Prasanthigram and Bengaluru; NU hospitals, Bengaluru; Sri Ramachandra Medical College & Research Institute, Chennai; Sri Venkateshwara Institute of Medical Sciences, Tirupathi, Panimalar Medical College and Hospital, Chennai; Annapoorna Medical College & Hospitals, Salem, and Vinayaka Missions Kirupananda Variyar Medical College & Hospitals, Salem. Our industrial partners include Omix Research and Diagnostic Laboratories Pvt. Ltd., Bengaluru, and Tech Mahindra Private Ltd., Hyderabad.

Disease Biology

Avascular Necrosis of Femoral Head (AVNFH): Our work was instrumental in demonstrating the association of homocysteine concomitant with decreased B12 and B6 with AVNFH which correlate with histopathology. Systems analysis of AVFH using integrated data analysis and literature mining has conjured pathways that are critical for disease pathogenesis. The study advocates the use of Vitamin B in the management of the disease. Our systems analysis of steroid-induced AVNFH showed a critical role for heme pathway and vitamin D signaling in the disease. We are currently probing the role of iron in AVNFH and Perthes disease.

Glaucoma: In Glaucoma, we have shown activation of purinergic signalling, elevated cytokines, deregulation of tryptophan metabolism, and immuno-metabolism associated with disease progression. Using *in vitro* N9 microglial cell culture techniques, we demonstrated a potential role for microglial inflammation invoked by ATP & TNF α in the disease.

Protein Aggregation Diseases: In Huntington's Disease (HD) using multimodal MRI we have demonstrated that changes in brain volume, fractional anisotropy, apparent diffusion coefficient, metabolic changes, and glucose utilization precede the onset of symptoms.

Further, using metabolomic analysis we have demonstrated the deregulation of metabolic pathways in pre-symptomatic

and symptomatic patients which overlap with deregulated metabolic pathways in the yeast model of HD. Using metabolic addition and gene knock-out experiments we have demonstrated that these pathways modulate mutant aggregation in a yeast model of HD. Our results show that early intervention during the pre-symptomatic stage in genetically susceptible individuals by maintaining metabolic homeostasis might help in better management of the disease. In Amyotrophic Lateral Sclerosis (ALS) using publicly available data sets, we showed oxidative phosphorylation as a common deregulated pathway across data sets. Further, using the yeast model of ALS we demonstrated complex III and IV modulated aggregation of wild-type and mutant FUS and TDP-43 with implications for disease.

Rheumatoid Arthritis (RA): Our data in RA shows a potential role for adenosine deaminase in metabolic and joint remodelling involving the death of cartilage, the proliferation of synoviocytes, osteoclastogenesis, osteoblastogenesis, and their functions. Our analysis has helped to frame a hypothesis that methotrexate could be used as a prophylactic agent in genetically susceptible individuals after infectious diseases are risk factors for RA. Further using systems analysis, we demonstrated molecular signatures associated with disease progression in RA.

Identifying potential Biomarkers for Coronary Artery Disease (CAD)

Circulating micro-RNAs (miRNAs) have been envisaged as potential biomarkers for several human diseases, which include cardiovascular diseases. While several studies are available in the literature there is a need to analyze these studies systematically. We undertook a systematic and critical review of the literature and identified two microRNAs that have the potential to be used as biomarkers for coronary artery disease (CAD). We have performed a meta-analysis and bioinformatics analysis of one of these microRNAs.

Fungi in Health and Environment

Endophytic fungi as sources of Bioactive compounds:

In the last few decades, endophytic fungi have emerged as potential sources of several bioactive compounds suitable for commercial exploitation. With a steep increase in interest and demand for discovering new medicinal molecules, crude extracts of various endophytic fungi are being extensively studied in the hope of discovering novel molecules.

Two endophytic fungi out of the sixteen isolates screened namely, *Nigrospora sphaerica* from *Bauhinia purpurea* and *Alternaria* sp. from *Swietenia macrophylla* exhibited significant antioxidant and alpha-glucosidase inhibition activities. Complete metabolic profiling of crude extracts from these two species was done using LC-MS-QTOF (both positive and negative modes).

Identification of bioactive compounds from extracts of these two species was done by comparing LC-MS data against the information from the metabolic library constructed using PCDL Agilent MassHunter software. This library contained

850 compounds which included metabolites reported from *Nigrospora* sp., and *Alternaria* sp; known inhibitors of alpha-glucosidase of fungal origin as well as important polyphenols. Their structures were either downloaded from the National Centre for Biotechnology Information (NCBI) PubChem database or drawn using ChemBioDraw Ultra 14.0 software. To reconfirm the structures of the identified compounds, MS/MS fragments obtained were analysed using MetFrag *in silico* fragmenter, and subsequently, molecular networking was generated using the GNPS platform to identify the molecular family to which these confirmed compounds belonged. *In-silico* studies employing ensemble docking were also done using the identified compounds to understand their interactions with alpha-glucosidase

Microbes in wastewater: Microbes in wastewater: Wastewater treatment plants house a wide variety of microorganisms that play a pivotal role in breaking down organic pollutants at the biological treatment stage. Taking advantage of their ability to endure physical, chemical, and biological stress, fungal isolates were studied for their bioactivity potential and biodegradation capabilities. Further with the widespread emergence of antibiotic-resistant bacterial strains, there is a need to look for alternate medicines. Employing the use of silver nanoparticles is gaining wide attention. Fungal biosynthesis of silver nanoparticles, characterization, and their bioactivity potential are being investigated.

Wastewater Analysis, Treatment, and Energy Recovery

India is currently facing a shortage of freshwater primarily due to its low availability and incapacity of the existing water management infrastructure to cater to the needs of the growing population. Treated domestic wastewater is gaining importance as a valuable resource for reutilization, especially for secondary applications. Our work involved simplification and standardization of protocols for the characterization of raw domestic wastewater. Dose optimization studies for the application of plant-based coagulants in the treatment of domestic wastewater in Prasanthi Nilayam (Ashram) are in progress. The operational aspects of the wastewater treatment plant are also being streamlined.

Protein Structure and Function

Protein Structure and Function laboratory focuses on understanding the structural and functional dynamics of proteins using *in vitro* and *in silico* experimental methods. Making use of the fundamental knowledge obtained, we also explore using the proteins for various biotechnological applications. Specifically, we focus on revealing the moonlighting enzyme function of oxygen carrier proteins - Hemocyanins and applying the biomacromolecules in the fabrication of enzyme-based biosensors. Further, we also carry out Computer Aided Drug Design and Discovery targeting proteins involved in infectious and non-infectious human diseases. Our efforts involve virtual screening with

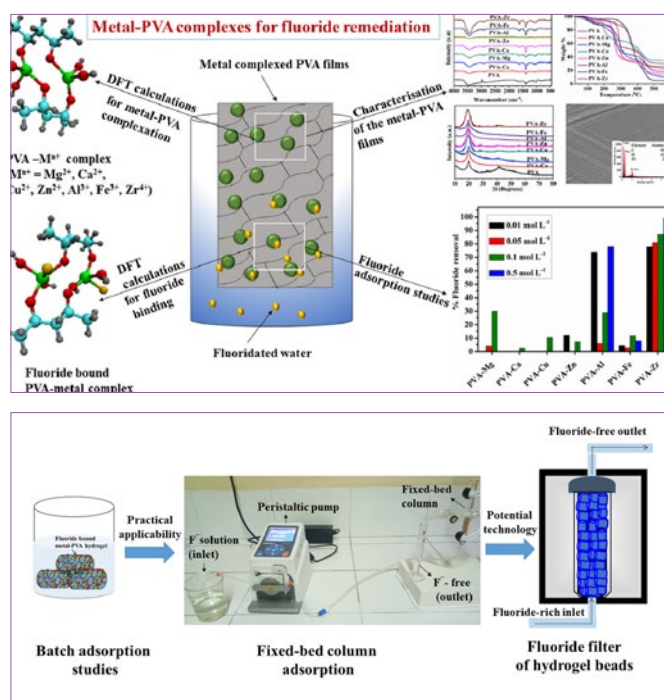
natural product libraries by molecular docking followed by molecular dynamics simulations. After shortlisting the lead compounds, our subsequent aim is to explore their bioactivity through *in vitro* studies. Taken together, research work at the Protein Structure and Function laboratory is both basic as well as applied in nature carried out with interdepartmental collaborations within the Institute and a couple of other institutions.

Chemistry

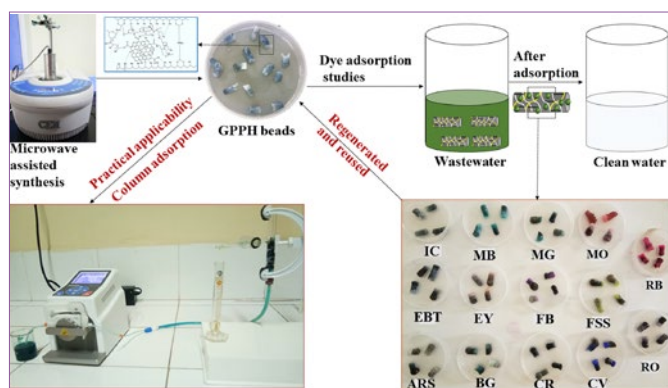
Water Chemistry - Defluoridation, Dye Remediation, Desalination

Three major areas of research towards quality drinking water are finding solutions for high fluoride content, industrial dye pollutants in ground and surface water, and converting salt water into potable drinking water.

Solutions for High Fluoride Content: Fluoride contamination in the groundwater of Andhra Pradesh is a serious problem. Metal-polymer complexes were studied both experimentally and computationally to determine the suitable adsorbents for defluoridation. Zirconium formed the most stable complex with Polyvinyl alcohol and the binding of fluoride to PVA-Zr complex occurred mainly by chemisorption. Further, to improve the practical applicability of the synthesised adsorbents, continuous flow fixed-bed column studies were conducted with metal PVA hydrogel beads. The maximum fluoride removal efficiency of the fixed-bed column was 75%. Therefore, the hydrogel beads could be used as potent filters for the removal of fluoride from groundwater.



Industrial Dye Pollutants in Water: Organic dyes are released into the river water mainly by textile, paper, and tannery industries, etc. The process of dyeing involves the consumption of gallons of water and approximately 15% (~280 kilotonnes) of the dye effluents are released in water, annually. A novel hybrid network of graphene oxide-polyethyleneimine-polyvinyl alcohol hydrogel beads was prepared by microwave synthesis. The adsorbent removed a wide variety of dyes (azo, triarylmethane, xanthene, anthraquinone, indigoid, and thiazine) efficiently from wastewater. Moreover, the column of the adsorbent was reusable which shows that it has good commercial applicability.



Converting Salt Water into Potable Drinking Water:

The availability of fresh water for daily consumption with increasing demand for potable water is a worldwide problem. Desalination of seawater has been explored as a useful alternative to solve the problem of shortage of fresh water. However, there is a current need to develop adsorbents to improve their efficiency and cost performance. This study theoretically investigates the use of biopolymers: cellulose, chitosan, and chitin as potential adsorbents for the removal of Na^+ , K^+ , Mg^{2+} and Ca^{2+} ions, using quantum mechanical calculations, which would inspire the exploration of these biopolymers for desalination. It was observed that cellulose is a good substrate for the adsorption of Ca^{2+} and β -D-glucosamine is suitable for the adsorption of Mg^{2+} ions respectively and adsorption of the metal ions on the substrates takes place via charge transfer from heteroatoms of the substrates to the metal ions.

Biopolymers for Hydrogen Storage

Hydrogen, an ideal energy carrier, has been hailed as the fuel of energy transition, a necessary component to achieve the United Nations 2030 sustainable goals.

We aim to understand the utility of biopolymers: cellulose, chitosan, and chitin for storage of hydrogen based on their gravimetric density and nature of interactions. The most favourable factor for the adsorption of hydrogen on any of the surfaces through physisorption is through the electrostatic interactions accompanied by small amounts of charge transfer.

Hence, a material with stronger electrostatic interactions with the hydrogen molecules during the physisorption would be of utmost importance. It was observed that these biopolymers exhibit a high gravimetric density of ~22% and adsorption takes place by dipole-induced dipole interactions via charge transfer from heteroatoms to the H_2 molecule such that the hydrogen is adsorbed on the biomolecule in its diatomic state.

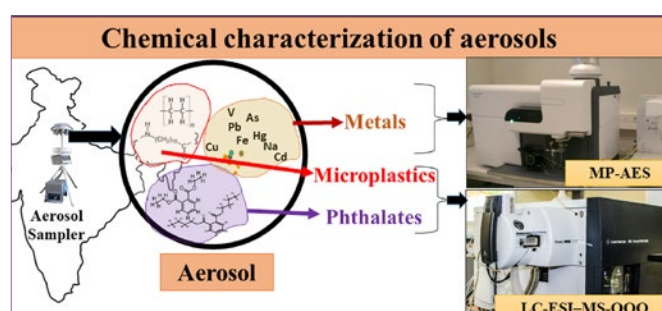
Photophysics of Organic Molecules

This project aims to screen various disubstituted chalcones through a combination of computational and spectroscopic studies and use the knowledge to design new molecules for applications in organic electronics. With this aim, a series of 4'-N, N dimethylamino chalcone derivatives with chloro, methyl, and methoxy substituents on the phenyl ring were selected, and spectroscopic and computational calculations were performed. The studies in solvents of different polarities revealed emission from locally excited (LE) state in nonpolar solvents and emission from charge transfer (CT) state in polar solvents and a model to explain their photophysics was proposed. Using the knowledge and experience from the above studies, four new molecules with different configurations of donor and acceptor namely D-A, D-A-D, and A-D-A were designed, and computational calculations were performed to screen them for potential applications in organic electronics.

Atmospheric Chemistry - Aerosols and Air Pollution

Research in this area is critical to an improved understanding of climate forcing, air quality, and reciprocal interactions between the atmosphere and biosphere.

This research field is thus situated at the intersection of chemistry with physics and biology and includes processes acting on time and spatial scales below seconds and mm to those that occur on decadal and global scales. The field is rapidly evolving due to advances in the fundamental understanding of chemical processes in the atmosphere. The study focuses on the speciation, and source apportionment of organic and inorganic chemical constituents of ambient aerosols using the state-of-the-art instrumentation facility. Cellular and acellular assays are used to calculate the health risk assessment due to long-term exposure to ambient aerosols.



Point-of-Care Biomedical Diagnostics - Translational Research

Aiming toward low-cost, resource-limited settings usable for biomedical diagnostics, our translational research converges interdisciplinary research areas of nanoscience, lab-on-a-chip, and biochemical sensing.

We focused our efforts on locally relevant medical diagnostic requirements such as neonatal jaundice care, perinatal depression, cardiac health, and dengue for which we undertook prototype development, clinical sampling with informed consent, and testing.

The final prototype of the dengue diagnostic device was fabricated, optimized, and demonstrated for four analytes with technology readiness level 5. The final prototype of the neonatal jaundice device developed is being sent to ICMR and deployed at Sri Sathya Sai General Hospital (SSSGH), Prasanthi Nilayam for field trials.

The clinical studies for the indigenously developed, ICMR-approved SAI C19 Ag and Ab Kits, COVID-19 antigen, and antibody rapid test kits have been extended to convert them into self-test kits.

Molecular Dynamics Simulations of Polymer Nanocomposites

Molecular dynamics (MD) simulations provide a valuable approach to studying the structure, dynamics, and stability of different systems. This project involves designing novel polymer nanocomposites as an alternative to the currently used combination of Polyvinyl Chloride (PVC) and DHEP (plasticizer) to increase the shelf-life of blood beyond the current record of 42 days. With this aim, molecular dynamics simulations were performed on PVC polymer and Ceria lattice (100) to evaluate the Interaction strength at the molecular and chain segment levels under different conditions. The simulations were optimized to exclude finite size effects, and the optimized parameters were: PVC polymer with 10 repeating units, box height of 50 Å, and ceria unit cell of size 10, 10, 2.

Flashpoint Calculations - Software Development

Flashpoint is defined as the lowest temperature at which a substance produces enough vapours for the ignition of the substance in the presence of a flame/ ignition source. It can be determined experimentally but is constrained by the availability and accuracy of the equipment and is expensive. So, calculating them theoretically using well-established models is preferred. In this project, the activity coefficients were calculated theoretically using different models like UNIFAC and Modified UNIFAC (Do). Modified UNIFAC (Do) was found to be better than the UNIFAC model. A Python-based software was also developed to calculate the activity coefficients of binary mixtures with 3 and 4 subgroups respectively using the Modified UNIFAC (Do) model. These

activity coefficients in turn were used for the calculation of flashpoints. This work finds applications in the safe storage and transport of complex volatile organic mixtures.

Novel Materials Discovery - Scalable Pseudocapacitors for Future

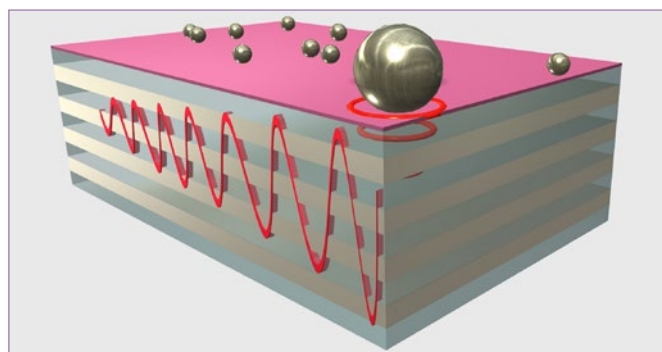
In current times, with fossil resources dwindling at an alarming pace, the focus on energy storage is at an all-time high. In this regard, of course, various battery and supercapacitor technologies are considered viable alternatives.

Since the road from laboratory research to industrial production is determined by multiple variables including the economics and ease of production, research in evaluating multiple materials is essential. In this regard, the research strategies employed include the application of existing or novel materials in pseudocapacitors and their validation against existing materials. Our process involves extensive and in-depth understanding via material and electrochemical characterizations.

Plasmonic Sensors - Nanomaterials and Thin films

STAR laboratory at Central Research Instrumentation Facility (CRIF) has pioneered in this field with the utilization of 1-D & 2-D carbon substrates, cermet magnetic graphene nanocomposites, DNA thin films, palladium-carbon plasmonic nano-cavities, nanovoids, etc. with new elucidations regarding surface plasmon-coupled emission (SPCE) along with mobile-phone based sensing platforms.

To ensure the continuous supplement of materials and innovations with translational potential, we also undertook basic science research in synthesizing novel nano/micro materials such as metal sores, metal-dielectric nanoparticles, and bio-polymers for SPCE and PCCE emission enhancements. Their functionality, upscaling, and translational potentials were studied. The utilization of a few of these materials for sensing applications was published in internationally peer-reviewed journals. One of our multi-national collaborative works on ultrafast oxygen monitoring on post-COVID patients was selected to be represented as the cover art of the internationally acclaimed journal - ACS Sensors. Further translation of these notable outcomes is underway.



Total/Semi Synthesis of Organic Compounds and their Biological Activities

Natural organic compounds show impressive biological activities such as anti-cancer, anti-viral, and anti-malarial properties. We undertake the total synthesis of new organic compounds inspired by natural products and also the semi-synthesis of organic compounds derived from natural sources. Upon synthesis, we evaluate their biological activities.

We have designed, synthesized, characterized, and evaluated the compounds, such as Spirobibenzopyrans, Benzopyrylium salts, Andrographolide derivatives, Arjunolic acid derivatives, and Andrographolide pyrazole derivatives, for their anti-cancer, antimalarial and anti-viral activities. In light of the *in-vitro* anti-cancer studies of the spirobibenzopyrans and benzopyrylium salts, the potent compounds have been identified which were then explored for their anti-cancer activity in the *in-vivo* model, *Drosophila*. Mechanistic studies of the potent andrographolide derivatives as anti-cancer agents have been carried out to understand their mode of action. The anti-cancer and anti-viral studies of arjunolic acid derivatives and andrographolide pyrazole derivatives are in progress. The *in-silico* studies involving molecular docking and molecular dynamics simulations have also been carried out to support our studies.

Food & Nutritional Sciences

Nutritional Biology and Metabolomics Studies for Mitigating Life-Style Disorders

As part of the ongoing doctoral research programme, nutritional biology, and metabolomic studies are being carried out on indigenous pigmented rice varieties related to diabetes. Several rice varieties were found to exhibit good inhibitory activity against carbohydrate-digesting enzymes, and incretin hormone-degrading enzymes, implicated in diabetes. They also inhibited the formation of advanced glycated end products, implicated in the aetiology of diabetes. In vivo, glycaemic response studies in human volunteers revealed Kattuyanam and Karungkuruvai, two Indian red rice varieties, to exhibit low glycaemic index (GI) compared to high GI white rice. An untargeted Q-TOF LC-MS analysis identified over a hundred phenolic metabolites across ten pigmented rice varieties. In silico analysis confirmed the antidiabetic activity of the abundant pigmented rice phenolics. Kattuyanam, a traditional Indian red rice cultivar, exhibited the highest overall antidiabetic potential based on the multi-mechanistic evaluation. Evaluation of the other therapeutic potentials of the selected rice varieties is also being undertaken against certain pathological conditions such as hypertension, inflammation, arthritis, and other related cardiovascular disorders using in vitro enzymatic assays and models. The indigenous rice grain cultivars will be assessed for their various physicochemical and functional qualities using advanced characterization equipment such as a differential scanning calorimeter, visco-analyzer, and X-ray diffraction analyzer.

Metabolomic and in Silico Assessment of Antiviral Activity against SARS-CoV-2

As part of doctoral research on the therapeutic potential of indigenous food crops, a preliminary study was conducted to assess the antiviral activity of three Indian red rice cultivars through a metabolomic and in silico approach. The three indigenous cultivars examined were found to be good sources of different antiviral phenolic metabolites. Among the studied red rice phenolic metabolites, 7,4'-dihydroxyflavone and eriodictyol exhibiting high binding capacity with SARS-CoV-2 main protease were identified as natural inhibitors and as potential candidates for antiviral drug development. The traditional rice variety Kuzhiadichan, abundant in eight antiviral metabolites, was identified as a potential functional food for the dietary management of COVID-19.



Nutritional Epidemiology

The work primarily focuses on a holistic nutritional approach to combat iron deficiency anemia in adolescent girls. The study will encompass nutritional assessment, diagnosis, and nutritional intervention followed by an evaluation of strategies. Computational modeling will be employed for the development and evaluation of probioticated iron-rich foods for preventing iron deficiency anemia among adolescent girls. The developed food products' efficacy will be assessed using in vitro and in vivo models.

Food Processing Waste Utilization for Value Addition

Wastes from the fruit and vegetable processing market contain potential by-products and bioactive components that can be utilized and converted into value-added products. An attempt was made to understand the awareness and practices followed in domestic and industrial utilization of vegetable and fruit waste. The results showed that most of the waste was being disposed of and very few were used for feeding their cattle, vermicomposting, and food preparations. Information was spread to the target population for incorporating the processing waste peels in food preparations and developing value-added products. Dietary fiber and antioxidants were characterized from the waste and studied for their chemical composition and in vitro biological activities. Crackers and soup mixes were developed utilizing extracted fiber from the

vegetable peel and leaf, which were found acceptable and shelf-stable for four months.

Postharvest Technology and Quality Management of Organic Fruits and Vegetables

Organic farming has come to a central focus, as consumers have recognized the impact of synthetic agrochemicals on soil, the environment, and also human health. In India, fresh organic produce especially, fruits and vegetables are in the highest demand among the categories of organic food. Many parts of the country inherited the traditional organic farming methods which are gathered under one umbrella termed 'Jaivik Krishi'. The assessment of the impact of Indian organic farm inputs on the yield and economics of production has been explored very recently. However, studies with respect to the influence of Indian organic farming practices on postharvest quality and safety of the produce are negligible. Fresh organic and conventional tomatoes grown at Anantapur district, Andhra Pradesh were assessed for postharvest quality characteristics. Organic tomatoes grown adopting the Jaivik Krishi technique were found to be superior compared to conventional tomatoes in terms of physicochemical properties, phytochemical content, and antioxidant activities. Further, a novel, cost-effective, and futuristic postharvest technology is being explored for safeguarding the quality of fresh organic produce.

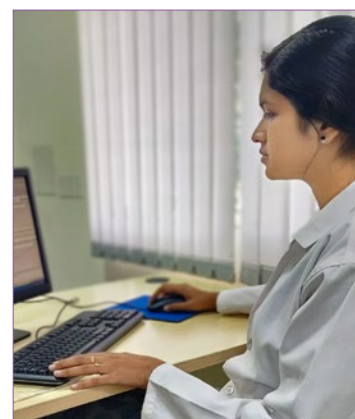
Gluten-Free Multigrain Nutri-Dense Snack Foods

Nutri bars are one of the popular convenient snack foods, nutritionally balanced, and versatile products made up of whole cereals, millets, fruits, nuts, and sweeteners and used as ideal meal replacers to prevent nutrition-related disorders. Nutritionally balanced bars using locally available ingredients were developed and evaluated for their nutritional quality and shelf stability. The developed bars were found to be rich in energy, carbohydrates, protein, fat, minerals, polyphenols, and flavonoids. Sorghum, millet-nut bars were found to be more acceptable and nutritionally dense compared to multigrain-nut bars. The developed products were highly acceptable and shelf-stable. The research intends to provide healthier bite-size snack bars for various therapeutic conditions to help

consumers choose among the alternatives based on their preferences and needs. Also, different millets of Indian origin were used to formulate sweet and savoury traditional snack foods with flax seeds as a value addition. The products were wholesome, and nutritious and added a range of variety to the existing Indian cuisine.

Nutritional Profiling of Food Materials for Combating Mineral Malnutrition

Overcoming micronutrient malnutrition is a prerequisite to ensure holistic development. This project centers on finding a cost-effective dietary measure for preventing and managing mineral malnutrition. As part of the research study, several Indian pigmented rice varieties were analyzed for essential and heavy minerals using the energy-dispersive X-ray fluorescence technique (ED-XRF). The germination conditions and other agronomic bio-fortification parameters were standardized for a few selected pigmented rice varieties and ED-XRF analysis was performed. A significant enhancement of essential mineral content was observed in the bio-fortified varieties of rice. Anti-mineral components such as phytate will be also analysed. An in vitro digestibility protocol that simulates the human gastrointestinal system has been standardized and will be used to determine the bio-accessibility of essential minerals such as iron, zinc, and calcium. Bioavailability studies using cell line models are envisaged.



Mathematics & Computer Science

Chemical Graph Theory

To study the physicochemical properties and bioactivity of chemical compounds, a lot of expensive and time-consuming laboratory equipment is required. To get rid of these constraints, an alternative method has been proposed in chemical graph theory, which is to find the topological indices and perform QSAR/QSPR analysis. Our research is mainly focused on finding a novel topological index and a robust regression model of the chemical graph, a graph in which atoms of the molecule are considered as vertices and bonds between them as edges, to compare them with the existing indices and models. The predicted properties and correlation coefficients will help in designing new antiviral drugs and composite drugs.

Modeling Studies with Reference to COVID-19 Within-host Mathematical Modeling Studies on COVID-19

At the within-host level, we developed a model based on the pathogenesis and course of COVID-19 infection and firstly, studied the natural history of the disease. In the second part of the study at the within-host level, we formulated the optimal control problems and studied the role and efficacies of various antiviral drugs, immunomodulators, and BCG vaccines in treating the COVID-19-infected individual. To account for the side effects or adverse events caused by the administration of antiviral drugs, in the third part of our study at the within-host level, a time-optimal control problem was formulated with antiviral drugs and second-line drugs as the control measures.

Vector-Host Mathematical Modeling Studies on COVID-19

At the between-host level, we developed an age-structured model, formulated an optimal control problem, and studied the spread of COVID-19 infection between two age groups with vaccination and treatment as control measures.

Multi-Scale Mathematical Modeling Studies on COVID-19

We developed a multiscale mathematical model integrating the within-host and between-host submodels and investigated the effects of within-host parameters on community-level infection.

Accelerated Genomic Sequence Analysis in the Compressed Space

Algorithms for local and global DNA sequence alignment are implemented on GPUs and certain aspects of optimization methods for data sharing across memory hierarchy are developed. Resulting in enhanced performance. Pattern matching is an important operation having far-reaching influence in advanced studies like that of snippets-based diagnostics. We have developed efficient accelerated methods

to do multiple pattern matching using data compression and Bloom Filters.

Deep Learning/Machine Learning

Computational Sanskrit Linguistics: The combination of Computer Science and any language is known as Computational Linguistics. We develop Deep learning-based language models for the Sanskrit language to perform various tasks like Text Summarization, generating commentary for given Shloka, and Sentiment Analysis.

Graph Neural Networks for Medical Diagnosis and Analysis: Graph Networks are an emerging area and it has also made a tremendous impact across many technological domains. Many times, the information extracted from disciplines like biology, genetics, chemistry, and healthcare is not suitable to represent in vector form. It requires more complex data structures like Graphs. We develop Graph-based Deep Learning models to perform several tasks like medical image segmentation and medical image classification.

AI as a Service: Marketplace for Data Models Using Blockchain

A platform for sharing and trading Data and Data Models has been developed using Blockchain and Incremental Learning. While Blockchain is used for user identification and authentication Incremental learning algorithms are employed to facilitate the real-time update of the model.

Pricing, Reserving, and Analytics using BigData methods in Motor Vehicle Insurance

Pricing, reserving, claims count, etc. are some of the important business processes in the Insurance sector. Our study includes the development of tools and techniques to handle big data in Motor vehicle Insurance. We used publicly available data sets and developed algorithms using ML, DL, various statistical methods, and PySpark to meet the necessity.

Physics

Investigation of Optical Power Limiting Properties of Metal Selenides, Brownmillerites, and Nanocomposite Materials

Materials whose absorption increases with the intensity of incident optical fields are called optical limiters. They will be very useful for the protection of the human eye and sensors from exposure to high-intensity laser radiation. We are working on novel chalcogenides, brownmillerite compounds, and nanocomposite materials for their nonlinear optical and optical power-limiting applications.

Electronic Structure Calculations Using Density Functional Theory

Density functional theory (DFT) is a quantum mechanical modeling method used in chemistry, physics, and materials science to calculate the ground state properties of atoms, molecules, and crystalline solids. We use DFT codes like Quantum Espresso, ABINIT, and WIEN2k to predict the ground state properties.

Evaluation of Electronic Transport Properties Using Semiclassical Boltzmann Transport Theory

Electronic transport properties like the Seebeck coefficient, electrical conductivity, and thermal conductivity are computed using Boltzmann transport theory for evaluating Heusler compounds for thermoelectric applications.

Radiation Shielding Materials

Exposure of high energy radiation (gamma rays) from the radioactive elements has been increasing in recent times. However, the ionizing nature of the high energy γ -rays is a significant concern as it affects the environment and human wellness. Therefore, radiation shielding materials play an important role in the safe use of radiation. Research in this area involves developing environmentally friendly radiation shielding materials which include glasses, glass-ceramics, ceramics, and polymer composites as shields in radiation environments. To be noted, lead-free highly dense glasses have been developed by our group and glasses have exhibited better shielding properties than commercial shielding glasses.

Materials for Energy Research

The vision of this group is to fabricate new materials related to energy harvesting and storage and to develop a fundamental understanding to create a pathway for future energy technologies. With the increasing need for cost-efficient methods for energy storage and conversion, it has become essential to accelerate the rate at which energy-related materials are developed. Batteries are devices that can convert chemical energy into electric energy. At present, we are focusing on the fabrication and characterization of solid electrolytes for Li-ion batteries. It is very likely that solid lithium-ion batteries, which contain solid electrolyte that conducts lithium ions, will overcome the major safety problems (such as dendrite growth, leakage, and flammability) of the widely used lithium-ion batteries. The introduction of solid electrolytes could enhance gravimetric energy density by 40 percent and volumetric energy density by 70 percent.

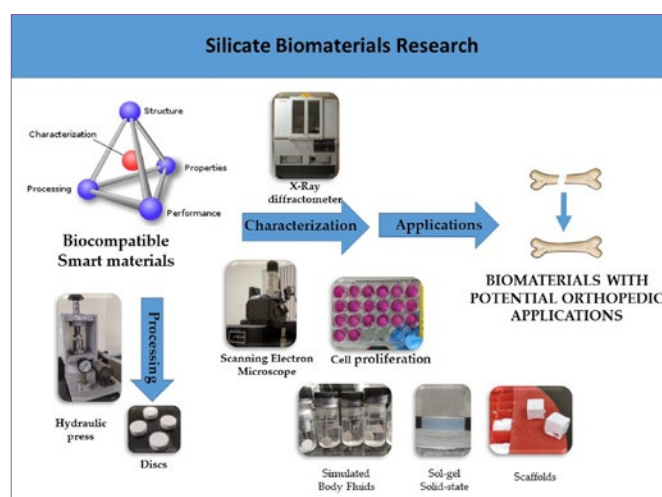
Dendrimer-Drug complexes

Dendrimers are hyper-branched polymer nanoparticles. As they can act as potential carriers for drug delivery, understanding the structure of dendrimers and their drug binding capacity as a function of dendrimer size, hydrophobicity, and pH of the solvent is very important.

Hence, in our present study, we study the structure of amine-terminated generation three PAMAM and generation four PETIM dendrimers at different pH conditions. Later we have seen the drug binding capacity with these dendrimers using molecular dynamics (MD) simulation techniques.

Bioactive Glasses

Bioactive glasses have been actively investigated among the various biomaterials due to their ability to form the bone mineral composition over the surface of the material, which bonds the bone/tooth tissues with the implant material. The research area involves studying the physical properties of different types of bioactive glasses formed by different glass-forming oxides and understanding their physical behaviour/bioactivity due to changes in composition and different doping contents, which helps to develop better bioactive materials.



Nanomaterials for Water Remediation

Water is a vital component of human life. According to a report by WHO, the availability of safe water is denied to 1 in 3 people globally. This is majorly due to the presence of various contaminants in water making it inappropriate for human use. The water thus needs to be treated and purified to meet WHO standards of safe drinking water. For this purpose, we could successfully develop and functionalize titanate nanotubes which could efficiently remove fluoride and heavy metal ionic contaminants from water. These materials developed by us are highly efficient and ultrafast in the removal of contaminants from water. In addition, they are capable of simultaneously adsorbing various contaminants from water. These properties enable them to be used as base materials in commercial water filters.

Functional Materials and Composites for Electromagnetic Interference Shielding

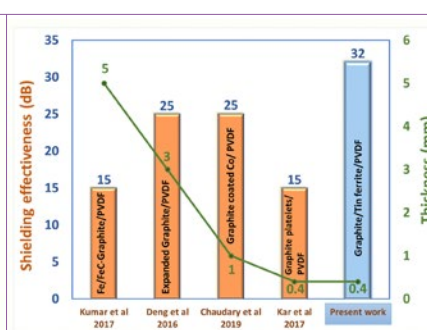
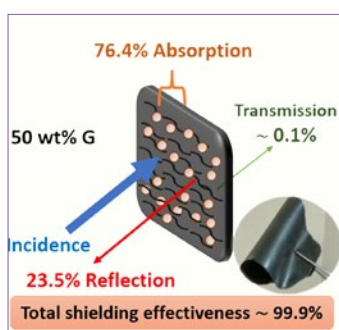
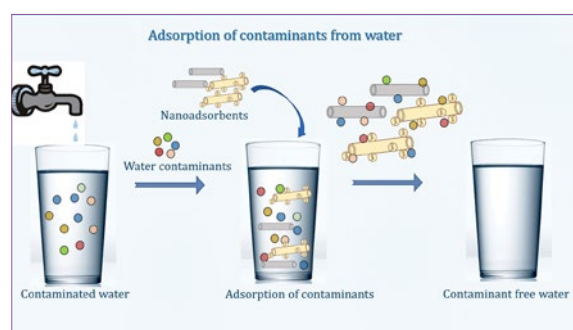
The ever-growing needs of human civilization have triggered an upsurge in the use of electromagnetic waves, in particular microwaves, in modern technologies, right from daily appliances to satellite communication, air traffic control, etc. This expansion in technology has however resulted in an alarming rise in electromagnetic emissions in the atmosphere leading to electromagnetic pollution. Therefore, there is a growing demand for flexible, and absorption-dominant microwave shields to mitigate the effects of electromagnetic pollution and thereby, protect the sensitive electronics in devices. Flexible polymer-based films with superior microwave absorption in the X-band have been developed by the fabrication of ternary nanocomposites constituting conducting filler graphite, and magnetic filler $\text{Sn}_{0.2}\text{Fe}_{2.8}\text{O}_4$, in the PVDF polymer matrix. The hybrid composite films showed excellent shielding effectiveness of 99.9% and high absorption of 76%. These microwave attenuators may be utilized as flexible shields in important applications such as defence tracking, weather monitoring, and satellite communication.

Optical Coherence Tomography

Low-cost tomographic imaging for middle-ear diagnostics: An Affordable B-scan Camera-based Optical Coherence Tomography device (ABC-OCT) is being developed in-house to provide *in vivo* real-time cross-sectional images of the human eardrum, bones in the middle ear as well as perform nano-scale vibrometric measurements. These would prove useful to physicians for the diagnosis of middle ear ailments such as otitis media and otosclerosis.

Sensor Materials for Electrochemical Sensing of Contaminants from Water

The presence of various contaminants in water demands efficient detection/sensing techniques. Electrochemical sensing offers several advantages such as simplicity, low cost, rapid response, ease of operation, good sensitivity and selectivity, and low sample volume requirements. Functionalized nanostructures were fabricated to be used for electrochemical sensing of various contaminants in water. Various potentiometric techniques using three electrode systems are being used to detect the contaminants from the aqueous media. The nanomaterials developed could efficiently sense the picomolar concentration of contaminants in water.



Radiation Shielding Materials: Development of Novel Pb-free, Gamma-ray Shielding Materials

An extensive study on dense and transparent Bismuth Borate (BBO) glasses at different penetration depths as a function of the photon energy is envisaged. The results (in terms of mass-attenuation coefficients, half-value layer, and mean-free path) are expected to be comparable with the lead (Pb) and heavy-metal oxide glasses reported in the literature. The outcome of this work can be an excellent and novel Pb-free radiation shielding material promising for radiological applications.

Nuclear structure and Nuclear spectroscopy (electron-gamma spectroscopy)

The nuclear data on level energies, gamma energies, and intensities for some of the nuclei differ considerably even for the intense gamma transitions and widely differ from the adopted data in nuclear data sheets. The internal conversion spectrum needs to be studied extensively. The assignment of Multipolarities for some of the transitions needs to be looked at. Therefore, an extensive experimental investigation of the gamma and conversion electron spectra to provide precision spectroscopic information has been undertaken. The present conversion electron intensities would be of great use for calibrating electron detectors and electron transporters.

Design and Development of Gamma-Florescence Dual Imaging Sentinel Lymph Node Navigation Surgery Intraoperative Probe

The Dual Imaging Intraoperative probe for imaging the sentinel node is an innovative step towards providing the doctor with ease of access to technology at the operation theatre. The probe consists of two parts. One assesses the functionality (metabolism) of the ROI and the other provides the anatomical details. This equips the surgeon to identify the exact location of the 'sentinel' lymph node located amongst 40 other lymph nodes at the axial region. The convenience of the bedside imaging facility allows the surgeon to perform post-operative validation of the surgery to avoid repeated incisions.

Ultrafast Fiber Lasers

Ever since their invention in the 1960s, LASERs have taken Science and Technology to a whole new level of existence. Among different types of lasers, Ultrafast lasers have been a hot topic of research in the last few decades owing to their myriad advantages. Ultrafast lasers emit a train of ultrashort pulses whose timespan are of the order of pico/femtoseconds. Such ultrashort pulses are extremely useful for applications that require high temporal resolution, high energy, intensity, and power. This Research area involves the development, characterization, and optimization of ultrafast fiber lasers through experiments, mathematical modeling, and simulations. The study of new fiber lasers, novel materials for saturable absorbers, and the development of in-house characterization facilities are important features of this research work. These ultrafast lasers will find applications in areas like OCT, micromachining, microscopy, spectroscopy, and sensing.

Sensor Materials

Glass-ceramics comprising metal oxide semiconducting (viz. TiO_2 , ZnO , Cu_2O , NiO , V_2O_3 , etc.) crystallites and metallic crystals have been investigated for various applications. Our research is focused on understanding their structure-property correlations and developing new glasses and glass ceramics (in bulk, thin film, and polymer composite forms) for sensor applications.

The Femtosecond Micromachining for Lab-on-a-Chip Applications

Optofluidic lab-on-a-chip applications utilize optical waveguides embedded in fused silica alongside micro-channels that provide paths for fluids to flow. These 'lab-on-a-chip' platforms can be used for a variety of biosensing applications through fluorescence-based detection, the interaction of evanescent fields with the analyte in the micro-channels, excitation of surface plasmon polaritons, as well as a variety of interferometric schemes.

Our research aims to fabricate and integrate microchannels, waveguides, substrates for surface-enhanced Raman scattering (SERS), and electrodes in fused silica using femtosecond laser micromachining, customized for constructing specific sensing devices.

Novel Electroceramic Materials for Energy Storage Applications

Dielectric materials with high permittivity are widely employed in energy storage systems. High permittivity helps in the miniaturization of electronic devices. Calcium Copper Titanate $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ (CCTO) is a well-known dielectric material with a high dielectric constant $>10^4$ which is stable even at higher frequencies. It has been extensively used in varistor, Gas sensing, and high dielectric capacitor applications.

CCTO is a technologically important material because of its giant dielectric constant. However, the loss associated with CCTO is relatively high to be used for practical applications. The present investigation attempts to decrease the dielectric loss by controlling the chemistry and structure of interfacial regions, especially at the grain boundaries of CCTO ceramics.

Design and Optimization of collimators for micro-PET and medical imaging simulations

Collaborative work with Prof. C. Rangachary, Dept. of Physics & Engineering Physics, University of Saskatchewan, Saskatoon, Canada

Medical imaging by non-collinear gamma-ray cascade decay may be superior to conventional PET and SPECT. A small animal PET composed of GSO detectors can be adapted to the new modality by retrofitting with a SPECT-like collimator and software modifications. This is an international collaboration work by Prof. Rangachary (University of Saskatchewan, Saskatoon, Canada), Prof. Tomonori Fukuchi (RIKEN Center for Biosystems Dynamics Research, Kobe, Japan), and Leonid Nkuba (University of DSM, Tanzania). The aim is to develop a GATE-based collimated PET model and a custom image reconstruction algorithm.

Humanities & Social Sciences

Economics

The Effect of Value Integrated Constructivist Approach on Academic Achievement and Development of Life Skills Amongst Secondary School Students

Constructivism is a philosophy that emphasizes meaningful learning and places a high value on a child's intrinsic skills. Constructivism with conscious integration of values would improve students' academic vigour as well as their receptivity to scientific ideas and their practical application to skills. The main goal of this research is to connect the uniqueness of the mind with the process of learning and to create a strong value system that will cause it to manifest as talents (life skills).

Role of Family Climate, and School Environment in Promoting Psychological Well-being of Adolescents

The adolescence period of one's life is a critical period marked by several changes in all dimensions of one's personality. It is also a period of stress and strain. School is the most viable place to identify mental health problems and aid in the promotion of psychological well-being among adolescents. The current study aims to study the measures, and methods adopted by various schools to promote psychological well-being. It brings to light all the best practices followed by different schools to develop the mental health and psychological well-being of adolescents.

Languages & Literature

English

Indian Aesthetic Theory of Dhvani in Reading English Literature

The research seeks to expand the scope of Sanskrit poetics and find a wider application for the Indian aesthetic theory of Dhvani in the analysis of works belonging to the tradition of English Literature. The study aims to establish the universality of Sanskrit poetic theories even as it acknowledges the specific cultural and linguistic matrices that conditioned the development of Sanskrit aesthetic approaches. In making Sanskrit poetics available for the scrutiny and appreciation of English poems, the focus is on Anandavardhana's theory of Dhvani, its types, and various facets.

The Traumatic Cycle: A Study on Trauma as Experience and Framework in Kashmiri Literature in English

The research aims to study the issues associated with trauma as an experience, presence, and absence in Kashmiri literature written in English. The impossibility to tell and the imperative to narrate the story to represent the trauma of victims and witnesses of succeeding generations are identified in different literary genres such as memoirs and graphic novels by writers of Kashmiri origin. The project emphasises the singularity of the issue in an attempt to address trauma as a symptom and urges action to put an end to the traumatic cycle.

Cognitive Poetics of Indian Poetry in English

This research seeks to explore the technique of cognitive poetics in Indian Poetry in English. Cognitive Poetics is a multidisciplinary theoretical framework that combines Cognitive Stylistics with Cognitive Sciences. A cognitive literary study of poems will spell out the conceptual processes by which a poem, probably, was constructed, and by which it probably would be most consciously and conscientiously read. It will not only unravel poets' mental space of conceptualisation but also systematically lead the reader towards their experience, culture, and context by relying on their available text corpus. Therefore, in looking at the 'what', i.e., the interpretations of the poems while explicitly stating the 'how', i.e., the process in which such an interpretation was constructed, the study aims to both reveal and enlist the power of poetry to think about thinking.

A Study of Selected Testimonies on the Experience of Trauma and Exile in Palestinian Literature

This research aims to study the catastrophes in the lives of Palestinian people through various facets of trauma, exile, and witnesses. The study is based on the narratives written

after the Palestinian exodus. It tries to analyse how the exiles responded to their new lives and how memory and traumatic experiences helped them in redefining a national identity.

A Study of Space, Place, and Species in Selected Eco-Narratives from the Hills of Northeast India

This research is an attempt to analyse a range of selected eco-narratives from the hills of Northeast India. The work will mainly focus on how such narratives have always been a site of affective engagement with space, place, and species. The study is expected to lead to the formation of ecocultural keystones which will further take into consideration the ethical aspects of the humans residing in such geographical locations.

A Study of Climate Change & Crisis and its Impact on Human Life in the Select Novels of South Asian Writers

Climate Change novel (Cli-fi) is one of the offshoot fields of ecocritical study. It has attempted to highlight the drastic effects of climatic change and its impact on human life. It offers a scientific approach to understanding the crisis that might befall life in the future. The research aims to understand the aspects of Climate Change Fiction in the writings of South Asian writers and to analyse its impact on readers and their response to the crisis. The research seeks to create awareness among the young generation to be conscious of the environmental crisis and will help them in understanding that the crisis brought forth by climate change is not a hoax or just a random theory to be debated upon.

A Phenomenological-Hermeneutic Analysis of the Incidence of Selfhood and its Evolution, in Selected Cross-cultural Romantic Poetry Through a Neo-Vedantic Lens

The Romantic Movement in English literature ushered in a quasi-spiritual dimension to poetry in Europe and America, during the nineteenth century. Recent studies have traced the influence of Indian philosophy on the Romantics, engaged in countering the impact of 'modernity' on the human psyche.

This study will take up one aspect of the cultural impact of Indian (Vedantic) spirituality on Romantic poets - the occurrence of a spiritual Self in selected seminal Romantic works and would hermeneutically analyse this 'Self' through a 'neo-Vedantic' paradigm. Phenomenological hermeneutics is a Western method; a neo-Vedantic analysis brings an Indian spiritual dimension hitherto unexplored.

Developing a Comprehensive Framework for Testing Communicative Competence in Communication-Intensive Sectors in the Indian Workplace

In Applied Linguistics, the theory of communicative competence is a theoretical framework, and several models have been developed since 1972 from Dell Hymes to Celce Murcia. There is a growing need for a shift from the LSRW skill-based assessment of language skills to a linguistic-based assessment of communicative competence

This study aims to design a comprehensive and effective model and develop a testing kit to test communicative competence in communication-intensive sectors in the Indian workplace. The contribution of the study has both academic and social impact in India. The proposed eclectic communicative competence model for workplace communicative competence and the testing kit are novel, as they are designed to include linguistic parameters and not only the LSRW skills.

Management & Commerce

Vulnerability in Leadership

The conventional understanding of vulnerability ascribes a negative connotation to the word: a generalizable weakness, defenceless and dependent nature, open to harm and injury. In contrast to this perspective, current schools of thought uphold a principal understanding of vulnerability, which, in its basic manifestation is a universal characteristic of the human condition, a state of immense potential that makes possible other conditions. Research in leadership has proven that vulnerable leaders build environments that enhance employee satisfaction, exercise organizational citizenship behaviour, and achieve desirable outcomes to propel organizational growth.

The current study embraces the positive definition of vulnerability and focuses on understanding the expression of vulnerability by corporate leaders based on motivations of its importance and relevance in both academic and industry fronts in the Indian sub-continent. This could aid leaders in the espousal of a resourceful state devoid of the fears of making mistakes, embracing change or judgment for communication of their fears or fallibilities to become effective leaders.

Developing a Model to Predict Economic Sustainability of Rural Areas

Rural households adopt livelihood strategies such as diversification and migration to manage these challenges. However, they are not always successful in boosting economic development and keeping sustainability in focus for rural areas. We developed a novel approach using various data analytics and machine learning tools to predict the economic sustainability of rural areas. The approach consists of building

a model based on primary data collected from 120 villages belonging to southern India through a survey.

We have implemented a Decision tree, XG Boost, naive bayes, and GLM as classification models to predict sustainability. The performance of the models was measured using accuracy, sensitivity, and specificity. It was found that the predictive model using the Decision Tree Model is the best among all with an accuracy of up to 81%.

This work was done in collaboration with the Actuarial Science team, Dept. of Mathematics & Computer Science, Prasanthi Nilayam Campus.

Funded Research Projects

SSSIHL continues to pursue needs-based research that will help alleviate problems affecting the poorer sections of society. During the academic year 2021/22, the total value of ongoing projects at the university was ₹6.9 Crore.

Biosciences

Perturbation in Metabolic Pathways Might Drive Avascular Necrosis of Femoral Head by Modulating Bone Biology: Mechanisms, Potential Biomarkers, and Therapeutic Targets

DST - SERB

₹61 Lakh

Mechanism of Resistance Involved in the Emergence of Nitrofurantoin Resistance Among Uropathogenic Enterobacteriaceae

Indian Council of Medical Research (ICMR)

₹60 Lakh

Developing a Prediction Model for Determining Probability of Harboring ESBL Producing Enterobacteriaceae in UTI

BIRAC PACE- CRS

₹137 Lakh

Chemistry

REsCUE: Rapid Estimation of COVID-19 Based on Ultrasensitive Emission Detection

SSSIHL-CSR

₹85 Lakh

RECoVR: Rapid Test Kit-Based Evaluation of Serology and Self-Testing User Experience in COVID-Recovered Individuals

UK-Based NGO

₹3 Lakh

Hand-held Mobile-Based Device for Non-Invasive Monitoring of Bilirubin in Neonates

Indian Council of Medical Research (ICMR)

₹68 Lakh

Mobile Dengue Diagnostic Technology (m-DDT): A Smartphone-Based Point-of-Care Diagnostic Device

Life Sciences Research Board-Defence research and development organization (LSRB-DRDO)

₹43 Lakh

PRATYAGAM: Effective Secondary Prevention Strategies to Reduce the Morbidity and Mortality Risks in Post MI Patients from the Rural South Indian Population

SEVA Heart Foundation, USA.

₹3.5 Lakh

NIRIKSHA: Clinical Study Using Indigenously Developed SAIC-19 Ag Kit and Identification of Risk Factors in Most MI Patients.

SSSIHL-CSR

₹2.4 Lakh

Food & Nutritional Sciences

Antidiabetic Evaluation of Indian Pigmented Rice Varieties: A Mechanistic Metabolomics-Based Approach

Indian Council of Medical Research (ICMR)

₹24 Lakh

Mathematics & Computer Science

Role and Interactions of Biological Markers in Causation of Type1/Type 2 Lepra Reactions: An *In Vivo* Mathematical Modelling with Clinical Validation

CSIR - HRDG

₹16 Lakh

Time-Optimal Control Problems and Bifurcation Analysis of Coupled Nonlinear Dynamical Systems with Application to Pest Eradication

DAE - NBHM

₹15 Lakh

Insurance Fraud Classifier for Health Insurance CAS Individual Grants Competition 2022

Casualty Actuarial Society, USA.

₹14 Lakh

Physics

Experimental Investigations on the Level Structures on Doubly Odd Ta Isotopes

UGC-DAE-CSR

₹7 Lakh

Fabrication of Glass- Ceramics Comprising of Semi Conducting Metal Oxide Crystallites at Different Length Scales and Study Their Gas Sensing Characteristics

UGC-BSR- Start-up

₹10 Lakh

Understanding the Jamming Dynamics and Nonlinear Viscoelasticity of Non-Equilibrium Viscous Liquids with Non-Linear Dielectric and Rheo-Dielectric Studies

SERB

₹37 Lakh*

* The grant money is issued to the PI institute, Raman Research Institute, Bangalore

Development of Dual-Purpose Nanomaterials for Sensing and Adsorbing Heavy Metal Ions from Water

Kurita water and environment foundation, Japan

₹3 Lakh

Design and Development of Gamma-Florescence Dual Imaging Sentinel Lymph Node Navigation Surgery Intraoperative Probe

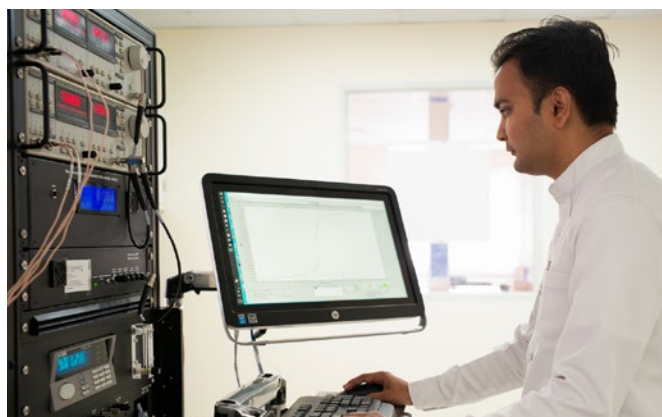
DAE-BRNS

₹94 Lakh

Design and Development of Glass-based Optofluidic Device Platform by Femtosecond Laser Micromachining

DST-TDP- BDTD

₹46 Lakh



Research Publications

in Peer-Reviewed Journals

Biosciences

Chanakya Pachi Pulusu, Bhavani Manivannan, Sai Suguna Raman, Sanjay Singh, Balaram Khamari, Manmath Lama, Arun Sai Kumar Peketi, Chandreyee Datta, Kashi Nath Prasad, Valakunja Nagaraja, Bulagonda Eswarappa Pradeep. (2022). Localized outbreaks of *Pseudomonas aeruginosa* belonging to international high-risk clones in a south Indian hospital. **Journal of Medical Microbiology**, 71 (3). DOI: <https://doi.org/10.1099/jmm.0.001500>

Sai Krishna Srimadh Bhagavatham, Damodaram Potikuri, Venketesh Sivaramakrishnan. (2022). Adenosine deaminase and cytokines associated with infectious diseases as risk factors for inflammatory arthritis and methotrexate as a potential prophylactic agent. **Medical Hypotheses**, 159. DOI: <https://doi.org/10.1016/j.mehy.2021.110751>

Ashwin A Naik and Venketesh Sivaramakrishnan. (2022). Femoral Head Osteonecrosis is associated with thrombosis, fatty acid and cholesterol biosynthesis: A potential role for anti-thrombotics and statins as disease modifying agents. **Medical Hypotheses**, 161, 110808. DOI: <https://doi.org/10.1016/j.mehy.2022.110808>

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Special Annual Events

The special annual events relate to one or more of the five dimensions (spiritual, cultural, intellectual, physical, and service) of Sri Sathya Sai Values-based Integral education. Students participate in these events according to their skills and talents. These events are orchestrated to bring out students' and teachers' latent values and good qualities. A lot of planning and effort goes into each of these events. Students participate in these events according to their skills and talents.

Summer Course in Indian Culture & Spirituality

27-28 August 2021

In Bharat, students acquire sacred education. It begins with the thoughts of God. Even an illiterate driver in Bharat salutes the steering wheel before starting the vehicle. Similarly, a musician offers salutations to the musical instrument before playing it. In fact, all type of learning in Bharat begins with the name of God and prayer to Him and every activity is done as an offering to God without any artificiality and ostentation.

Sri Sathya Sai Baba
Revered Founder Chancellor, SSSIHL
Sathya Sai Speaks, Vol. 39

The Summer Course in Indian Culture & Spirituality serves as an induction programme for all students and teachers of SSSIHL that exposes them to Bharat's rich cultural and spiritual heritage. It orients students into Bhagawan Baba's educational philosophy and gives them deep, first-hand insights into how they can directly benefit from this unique institution. During the academic year 2021/22, the event was held virtually on 27 and 28 August 2021.

Campus Directors introduced the significance of the Summer Course in Indian Culture and Spirituality. This was followed by Bhagawan Baba's Divine Discourse to the students. Highlights of each campus' programme are given below.

Anantapur Campus

DAY 1

- Talk on Stree Dharma with reference to Bhagawan Baba and Mahabharata by Prof. Padmavatamma, visiting faculty, SSSIHL.
- Study circle, Moving Temple based on Bhagawan Baba's discourse.

Day 2

- A talk on Thy Kingdom Come based on the Ramayana by Dr. Lalitha Sharma, alumnus, SSSIHL.

- Panel discussion on Impact Sai Education - Life Choices and Challenges by SSSIHL alumni worldwide.
- Cultural programmes.

Prasanthi Nilayam Campus

Day 1

- Talk on The Uniqueness and Greatness of Indian Culture by Prof. R Gangadhara Sastry, Dept. of Humanities and Social Sciences, SSSIHL.
- Talk on Atma Tattvartha Ramayanam - Saranagathi by Sri P Vijayasarathi, Sr. Administrative Staff, SSSIHL.
- Study Circle for all the students and the faculty.

Day 2

- Talk on Connecting to Swami by Sri H J Bhagia, Visiting Faculty, Dept. of Management & Commerce, SSSIHL.
- Panel Discussion on 'Bharatiya Sanskriti: A World in A Grain of Sand'.
- Musical offering by the Dept. of Music, SSSIHL.

Brindavan Campus

Day 1

- Keynote address by Sri Venkatramana Gosavi, State President, Sri Sathya Sai Seva Organisations.
- Talk on Lessons from the Bhagavad Gita by Dr. Mahesh Narayan, ENT Surgeon, UK.
- Talk on Living Bhagawan's Message by Sri Sanjay Sahni, Controller of Examinations, SSSIHL.
- Panel discussion on Relevance of Bharatiya Sanskruti in Contemporary Times.
- Study Circle and Cultural Programmes.

Day 2

- Talk on Lessons from the Mahabharatha by Sri Tribhuvan Sachdev, Income Tax and Financial, Consultant, Honorary, Secretary, Board of Governors, Sri Sathya Sai Vidya Vihar.
- Talk on India's Pressing Problems: A Bharatiya Solution by Sri Ranganatha Raju, CEO, Sanathana Analytics and Recruitment Services Pvt. Ltd.
- Valedictory Message on appreciating the great blessing of being a Sai student by Sri Venu Srinivasan, Chairman, TVS Motors.

Muddenahalli Campus

Day 1

- Talk on Living with God is True Education by Dr. Sai Giridhar Sairam, Resident Fellow, Sri Sathya Sai Centre for Human Values.
- Talk on Sama Drishti is Shubha Drishti by Sri Vijay Krishnan, an alumnus of SSSIHL, State Spiritual Co-ordinator, Sri Sathya Sai Organisations, Tamil Nadu.
- Talk on Integrating Values in an Indulgent World by Dr. Amey

Deshpande, Resident Fellow, Sri Sathya Sai Centre for Human Values

Day 2

- Talk on Life lessons from the Indian scriptures by Sri Shyam Kumar, HCL Technologies, Chennai and alumnus, SSSIHL.
- Talk on The Importance and Practical benefits of the study of Vedas by Sri Sudheendran N, Microsoft D 365 Consultant, Bangalore and alumnus, SSSIHL.
- Concluding Talk on Life Lessons given by Bhagawan Baba to His Students by Sri T S Balaramachandran from HDFC Bank, Chennai and alumnus, SSSIHL.

Annual Convocation

22 November 2021

Sri Sathya Sai Institute of Higher Learning (SSSIHL) held its 40th Annual Convocation at the Poornachandra Hall, Prasanthi Nilayam, Andhra Pradesh in the Divine Presence on 22 November 2021.

The grand ceremony saw the Honourable Chancellor, Sri K Chakravarthi, IAS (Retd.), admit 488 candidates to their degrees. This included 279 undergraduate, 105 postgraduate, 78 professional, and 26 Ph.D. awardees.

SSSIHL was honoured to have the Chief Justice of India, Hon'ble Mr. Justice N. V. Ramana, as the chief guest for the event.

The format, planning, and execution of the SSSIHL convocation ceremony is second to none. The ceremonial procession was led by the Registrar (who carried the Ceremonial Mace). Other members of the procession included the Chancellor, Vice-Chancellor, Deans, and the Heads of Departments along with the Chief Guest, members of the Sri Sathya Sai Central Trust and the Board of Management.

Following the invocatory Veda chanting, the Vice-Chancellor, Prof. (Dr.) C B Sanjeevi prayed to the Revered Founder Chancellor to declare the convocation open. The Convocation was then declared open in the Divine voice of Bhagawan Baba.

The programme included speeches by the Vice-Chancellor, the Chief Guest, and the Revered Founder Chancellor (video broadcast of a previous Convocation Address).

Watch the broadcast: <https://youtu.be/6PZzA7hz8ow>

Annual Convocation Drama

Wind Beneath My Wings

Each year on the day of the Annual convocation, Sri Sathya Sai Institute of Higher Learning students put together a drama presentation in the Divine Presence. This year, the drama explored the journey of a Sai student from the protective shell of Sai institutions to the real world.

The drama was about metaphorically answering the question: How do we reinforce the teachings of Bhagawan in our lives? The tiny bird, warmed and fed by its mother is now all set to take wings, to fly up above the world so high and sing cheerfully as atop every branch they perch. With one leap of faith, the bird has taken off, spreading its wings wide, into a graceful flight. But will it continue to fly? Who will help it? Ah! No worries at all for He will be the wind beneath those wings!



Ph.D. Awardees

S R Pranav Sai - Actuarial Science

Enhancing the Operational Efficiency of the Non-Life Insurance Business in India by Integrating Actuarial and Data Science Techniques

Rohan Yashraj Gupta - Actuarial Science

Data-driven Fraud Prevention and Detection in Health and Motor Insurance Business using Actuarial and Data Science Techniques

Isha Sai - Biosciences

Investigations on Biochemical and Biological Aspects of Two Wild Edible Mushrooms of Anantapur (A.P.)

Skanda S - Biosciences

Bioactive Potential and Bioremediation Capacity of Soil Derived Fungal Isolates from Puttaparthi, A.P., India

Kottapalli K Jayant - Biosciences

Studies on the biological potential of endophytic micro-fungi associated with medicinal plants - *Ficus religiosa* (L.) & *Phyllanthus emblica* (L.)

Balaram Khamari - Biosciences

Understanding Nitrofurantoin Resistance in Enterobacteriaceae: A Systematic Analysis of the Interplay Between Resistance Acquisition and Fitness

Prasanth Ghanta - Biosciences

Investigation into the anti-inflammatory potential of the alkaloids of *Adhatoda vasica* Nees

Pachi Pulusu Chanakya - Biosciences

Genomic analysis of clinically isolated antibiotic-resistant variants of *Pseudomonas aeruginosa* and *heteroresistant Morganella morganii*

Manmath Lama - Biosciences

Genomic Insights into the Evolutionary Dynamics of Clinically Relevant, Emerging Novel Bacterial Pathogens

Thota Sai Manohar - Biosciences

Metabolic Re-wiring Modulates Mutant Huntingtin Aggregation in Huntington's Disease

Sujith Kumar P - Biosciences

Integrated analysis of clinical data, metabolomics, and cell culture model system to elucidate mechanisms, potential biomarkers, and therapeutic targets in Glaucoma

Mukul Anand - Biosciences

Investigations on Biological and Biotechnological Potential of *Tecoma stans* (L.) Juss. ex Kunth

Bebeto Rai - Chemistry

Monitoring and Management of Myocardial Infarction Patients in Resource-Limited Settings: An Integrated Approach for Bottom of the Pyramid

Aayush Rai - Chemistry

Nano-Assemblies and Nanohybrids: Frugal Synthesis Techniques and Advanced Plasmonic Applications

Seemesh Bhaskar - Chemistry

Disruptive Engineering of Smart Nano-architectures and Photonic Crystal Frameworks for Augmented Fluorescence-based Biosensing Applications

Darshan Gera - Computer Science

Deep Facial Expression Recognition in the Wild



Sayel Basel - Economics

A Study on Some Aspects and Issues of Development in Multidimensional Perspective

Supriya C P - Education

Pedagogical Approaches to Peace Education at the Secondary School Level

Prashant Luthra - English Literature

Reading R. K. Narayan in the Post-Truth Era

Manjula Devi Ghoora - Food Technology

Nutritional quality, metabolomic profile, health potential, sensory characteristics, and postharvest technology of culinary microgreens: A futuristic food crop

Padmalalitha T V - Management

Organisational Learning for Greening Supply Chain Practices: An Empirical Study

Bhabani Shankar Padhy - Management

A Study of Social Entrepreneurs in India: Issues and Challenges

Kaluri Suseela Padma Sowndarya - Mathematics

Domination and Separation Problems on Chessboard Graphs

Abishek H - Physics

Surface Enhanced Raman Spectroscopy of Neurotransmitters

Putrevu Saijagannadha Bharadwaj - Physics

Investigations into the structure-property correlation in trivalent (Sm^{3+} , Gd^{3+} , Nd^{3+}) and tetravalent (Ti^{4+}) doped and co-doped YFeO_3 perovskites

Ranjan Rai - Physics

Investigations into the Nonlinear Optical, Magnetic, and Visible Light Induced Photocatalytic Properties of KBiFe_2O_5

Gold Medallists**Eshitha Sankar Budida**

Bachelor of Arts

Sankar Krishna

Bachelor of Science (Honours) in Mathematics

Sai Prasad Mahapatra

Bachelor of Science (Honours) in Physics

Guggilam Sri Chandana Krishna Lekha

Bachelor of Science (Honours) in Chemistry

Mani Kanta Koppolu

Bachelor of Science (Honours) in Biosciences

Malla Vandana

Bachelor of Science in Food and Nutritional Sciences

Rao Aditya Nagesh

Bachelor of Commerce (Honours)

Deepam Rai

Bachelor of Computer Applications

Bhoini Pavan Kishore

Bachelor of Business Administration

Saiganesh Ramesh

Master of Arts in Economics

Ajit Kumar Sahu

Master of Science in Mathematics

Pendem Sai Vikranth Goud

Master of Science in Physics

Gedela Sravani

Master of Science in Food and Nutritional Sciences

Majeti VSSS Durgesh

Master of Science in Data Science and Computing

Sulochana Paudyal

Bachelor of Education

Boddu Raghu Veera Saikumar

Master of Business Administration

Padala Vishnu Vardhan Reddy

Master of Technology in Computer Science



Community Service

University students and teachers work with local communities around the campuses each academic year. Many of these service activities are initiatives by students themselves. Inspired by the example and precepts of our Revered Founder Chancellor, Bhagawan Sri Sathya Sai Baba, they reflect the impact of the unique blend of secular and spiritual education they receive here. Examples of these from 2021/22 include:

SSSIHL alumni & students serve to soothe the impact of COVID-19

Across India, 2021/22

Students and alumni of SSSIHL put on their masks and rolled up their sleeves to assist, serve and ease the lives of citizens hit badly by the COVID-19 pandemic across the country. The service activities were coordinated with Govt. officials/ bodies, NGOs, and other stakeholders to ensure smooth execution. Some of these included:

- Food and support for over a million migrant workers in Bengaluru.
- Grocery kits served to over 900 families.
- Food and supplies for patients/staff in COVID-19 wards at hospitals.
- Blood, Plasma, Oxygen, etc. were organized to save COVID-19 Patients.
- Over 1,000 SSSIHL alumni and other volunteers joined hands to respond to over 49,500 incoming calls on twelve COVID-19 helplines received in May 2021. In addition, helpline BOTs were also used to quickly respond to people.
- Set up an entire COVID-19 ward in Hyderabad, in collaboration with other NGOs to offer high-quality care to the patients free of cost.
- Set up a complete COVID-19 hospital In Chandigarh and provided free care to patients, including a spiritual routine for the patients to enjoy all-rounded care for their speedy recovery.
- Provision supply by the alumni in Tamil Nadu with the support of Sri Sathya Sai Seva Organisations to serve the needy in a few colonies



Integrated Patient Helpdesk for Sri Sathya Sai Institute of Higher Medical Sciences

SSSIHMS Prasanthigram and Whitefield, January-September 2021

During the peak of the COVID-19 pandemic in India, a virtual team of alumni and their family members comprising members from across the country and overseas came together to start and manage the Patient Helpdesk for SSSIHMS. The team worked closely with the hospital staff to provide the following services:

- General queries related to the availability of department/ specialty.
- Process to avail services of the hospital (OPD Protocol)
- Provide a status update on prior inquiries registered by the patients on the online patient help desk inquiry portal.
- Register and provide appointments for entry into the Hospital Main Gate

The number of calls handled (incoming and outgoing) from January to September 2021 was over 88,000.

Volunteers didn't have to physically sit at a telephone desk at the hospital. Using cloud telephony technology, they offered their services remotely from various parts of the country. Most importantly, all volunteers were provided with necessary training during the onboarding sessions to ensure that they were well prepared to handle the activity seamlessly. Call monitoring for quality check and a feedback system was set in place along with weekly reviews of the activity and process that contributed to its overall success.

SSSIHL Students on 'Each One Reach One' COVID-19 Mission

Prasanthi Nilayam Campus

As part of the Each One Reach One COVID Mission drive conducted by Mahatma Gandhi National Council of Rural Education (MGNCRE), Ministry of Human Resource Development, Government of India, students of the Prasanthi



Other Events

Nilayam Campus participated in several service activities in over five states across India serving the needy from their respective locations. A summary of the activities is as follows:

- Packing and supply of food for COVID patients in home isolation in Bhubaneswar, Odisha.
- Volunteered for a Vaccine Drive in Mumbai by providing registration assistance and helping over 200 patients reach the vaccine center.
- Distribution of Essential Commodities: Students in Darjeeling, West Bengal planned and executed a drive to distribute essential household items to COVID-affected families
- Distribution of over 500 Food Packets and clothes to needy families and an orphanage in Bengaluru
- Helpline in Hyderabad: Trained to aid orphans, widows, widowers, elderly and wrecked families.

Championing the Cause of Sustainable Practices in Colleges

Prasanthi Nilayam Campus, 8-14 March 2022

Recognised by the Mahatma Gandhi National Council of Rural Education (MGNCRE), Ministry of Human Resource Development, Government of India as the 'District Green Champion' for 2020/21, SSSIHL took the lead in championing the cause for sustainability in neighbouring colleges in and around Puttaparthi.

Nominated by the institute, Dr. Piyush Kumar Srivastava, Associate Professor, Hindi, SSSIHL, visited colleges around Puttaparthi and shared best practices in the areas of Sanitation, Hygiene, Waste Management, Water Management, Energy Management and Greenery Management.

Colleges visited included Sri Sathya Sai Degree College, Penukonda, Government Degree College, Peukonda, SSS Govt. Degree College, Bukkapatnam, Kasetty Haridasulu Govt. Degree College, Dharmavaram, Sanskrithi School of Business, Puttaparthi, and Mangalakara Degree College, Puttaparthi.



In addition to academics and research, SSSIHL has a rich heritage of hosting a wide array of events.

From international speakers to alumni connects, in addition to academics and research, students are privy to a wide-ranging array of events. Some of these during the academic year 2021/22 included:

Alumnae Meet: Silver Jubilee Reunion - Batch of '96

30 April 2022

120 Alumnae from the 1996 batch of SSSIHL, Anantapur Campus celebrated its Silver Jubilee Reunion with its Alma Mater. The celebrations coincided with yet another milestone that was being commemorated on the same day - the Golden Jubilee of the College Building of the Sri Sathya Sai Institute of Higher Learning, Anantapur Campus. In light of the COVID-19 restrictions, both events were celebrated a year later.

They launched two projects - A knowledge-sharing series where SMEs from the batch would deliver lectures on academic subjects, and an Entrepreneurship Innovation contest to give students an opportunity to discover and hone their entrepreneurial skills. A corpus fund was set up for the future execution of these projects.

S G Sundaraswamy Memorial Lecture

22 September 2021

Dr. Sudha Seshayyan, Vice-Chancellor, The Tamil Nadu Dr. M.G.R. Medical University, Chennai addressed the SSSIHL fraternity on the topic, Science of Spirituality at the 2021 S G Sundaraswamy Memorial Lecture, on 22nd September 2021.

The S G Sundaraswamy Memorial Lecture is an annual endowment lecture at SSSIHL instituted in honour of late Sri S G Sundaraswamy—a doyen of the legal profession in Bengaluru and an ardent devotee of Bhagawan Baba—by his son, Sri S S Naganand, Trustee, Sri Sathya Sai Central Trust, Sri Sathya Sai Institute of Higher Learning (Public Charitable Trust), Sri Sathya Sai Sadhana Trust and Sri Sathya Sai Media Foundation.

Watch the broadcast: <https://youtu.be/OssFtuF5WMM>

New Healthcare Facility, SSSIHL Brindavan Campus

22 September 2021

A new Healthcare facility was inaugurated at the Brindavan Campus of SSSIHL, Whitefield, Bengaluru on 4 September 2021. The facility, which houses a doctor's consultation room, a furnished medical ward with beds and a pharmacy to meet the day-to-day healthcare needs of the staff, students and ashram residents, is supported by SSSIHL alumni.

Watch the broadcast: https://youtu.be/2uv_46O8R7M

Doctor of Science Awarded to Eminent Scientists

24 August 2021

Two eminent scientists, Padma Shri, Professor G Venkataraman, and Dr. Sethuraman Panchanathan were conferred the degree of 'Doctor of Science' (Honoris Causa) for their outstanding contributions in the field of science by the Honourable Chancellor, Shri K. Chakravarthi, I.A.S., (Retd.) in the presence of the Vice-Chancellor, Prof. (Dr.) C B Sanjeevi and other senior officials of SSSIHL.

Padma Shri, Professor G. Venkataraman is the former Vice-chancellor, SSSIHL, and an eminent and celebrated scientist, scholar and educationist who was conferred the degree for his outstanding contributions in the field of Nuclear Science, the use of technology in the service of society and inculcating values-based education in young minds.

Dr. Sethuraman Panchanathan, a renowned computer scientist and engineer, currently Director of The U.S. National Science Foundation, was conferred the degree for his achievements and outstanding contributions in the field of Computer Science and Engineering in the service of society.

SSSIHL celebrates 75th Independence Day

15 August 2021

India's 75th Independence Day was celebrated by students and staff at each SSSIHL campus. Activities included flag hoisting, the national anthem, patriotic songs and speeches.

Chief Guests, such as Sri Tej Dhar, Former Director of Human Resources at Hindustan Aeronautics Ltd., addressed students, urging them to cultivate a sense of patriotism essential for the country's development.

Azadi Ka Amrut Mahotsav - Dekho Apna Desh Quiz & Rashtragaan

14-15 August 2021

Launched on 12 March 2021 by the Hon'ble Prime Minister of India, Azadi Ka Amrut Mahotsav, was a 75-week-long celebration commemorating the 75th Independence Day of India. The programme aimed to reach out to the student community across India with an aim to expose them to the richness of Indian history, its diverse culture and instil a sense of pride in being Indian.

Over 100 students and 160 staff members from all four campuses of SSSIHL participated in a Quiz (Dekho Apna Desh) and Rashtragaan (Let us sing the National Anthem) activity on 14 and 15 August 2021. In addition, students also participated in the 75 crore Surya namaskar to promote a healthy lifestyle for all, as a token of gratitude to our beloved motherland, India.

Fit India Freedom Run 2.0

13 August 2021

As the name suggests, this Govt. of India initiative was organised at SSSIHL, Anantapur Campus.

Teaching and non-teaching staff members, the contingent staff (both men and women) and doctoral research scholars participated. The Campus Director stressed the importance of spending at least 30 minutes every day on physical activity/exercise. The Run concluded on the sports ground of the campus, with a resounding 'Bharat Mata Ki Jai' from the participants.

50 Golden Years of Educare for Women

8 July 2021

On July 8, 1971, Bhagawan Sri Sathya Sai Baba inaugurated the College Building of Sri Sathya Sai Arts and Science College (for Women), Anantapur, Andhra Pradesh. It was directed towards the empowerment of women. He said that through higher education, women serve as ideal role models and the entire family benefits from their knowledge and wisdom.

While inaugurating the College Building, Bhagawan Baba declared that the college would soon be transformed into a Deemed to be University. He said, "Sri Sathya Sai Institute of Higher Learning (SSSIHL) will have to undertake the task of revitalising India's ancient culture and training the rising generation on the path of love and service to humanity."

The founding philosophy of Values-based Integral Education was forever ingrained in SSSIHL that day.

Owing to the difficulties of the COVID-19 pandemic in July 2021, the celebrations of 50 years of Anantapur Campus took place on a later date in April 2022.

Video footage of Bhagawan Baba inaugurating Anantapur College: <https://youtu.be/WKd92UBHFGGE>

International Yoga Day

21 June 2021

SSSIHL students and teachers celebrated International Yoga Day by connecting virtually and participating with great enthusiasm and interest. Students performed special Yogasanas, Pranayama and Asanas, and a presentation of Surya Namaskar on the chair (for the elderly people), highlighting the benefit of flexibility that can be attained even by those who have limited mobility.



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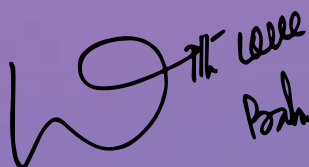
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My Dears,

Accept my Blessings and Love. The fruit is sweet even if the rind can be bitter. For, after all, it is the juice of the orange and the sugar content of the sugarcane that counts. Remove the rind of anger, malice, envy and greed and assimilate the goodness of virtues so that its sweetness can develop within you.

Be like the Lotus. Even though it emerges from slime and mud, it rises above the water and remains untouched by it and does not allow itself to get wet. Be like the Lotus or the lily of the pond and remain unattached.



SRI SATHYA SAI BABA
Revered Founder Chancellor, SSSIHL

Prema Dhaara Vol. 1



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The end of education is character
SRI SATHYA SAI BABA