SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli, Off International Airport Road
Bengaluru - 562157

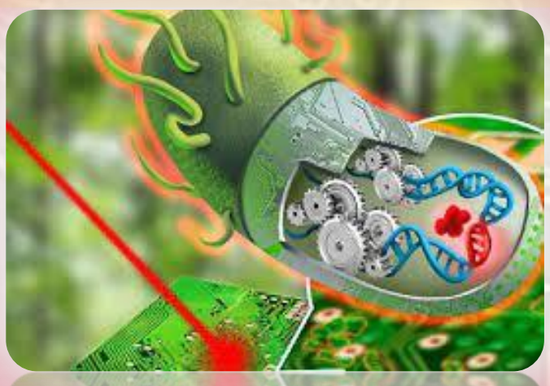
AICTE Training and Learning (ATAL) Academy
Sponsored

FACULTY DEVELOPMENT PROGRAMME

ON

"Synthetic Biology and Biomimetic Applications"

ORGANIZED BY
DEPARTMENT OF BIOTECHNOLOGY
&
DEPARTMENT OF MECHANICAL ENGINEERING
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY



Date : January 08th to 13th, 2024

Resource persons : Subject experts from reputed Industries/Institutes

Who can apply: Faculty from AICTE recognized Institutions

REGISTRATION:

Registration has to be done only through https://atalacademy.aicte-india.org/

For more information, kindly visit https://aicte-india.org/sites/default/files/ATAL/FAQ%20participants.pdf

Last date for registration : 31st December 2023

Important instructions:

- ✓ There is no registration fee for the FDP
- ✓ Maximum number of faculty Participants is limited to 50
- ✓ A maximum of TWO faculty from each University / College can register
- ✓ The selection is on first come first serve basis (with aligned relevance of research/teaching)
- ✓ TA for the selected participants would be disbursed as per ATAL FDP norms
- ✓ Accommodation will be provided for outstation participants upon prior request, on a nominal rental basis

PATRONS

AICTE TRAINING AND LEARNING (ATAL) ACADEMY
&
SRI KRISHNADEVARAYA EDUCATIONAL TRUST
BENGALURU - 560080

EVENT COORDINATORS

Dr. HARIHARAN P.
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ABOUT ATAL ACADEMY

AICTE Training and Learning (ATAL) Academy is established with the vision "To empower faculty to achieve goals of Higher Education such as access, equity and quality". ATAL academy regularly conducts workshops in thrust areas identified by AICTE.

The objectives of AICTE-ATAL Academy are: To set up an Academy which will plan and help in imparting quality technical education in the country, To support technical institutions in fostering research. innovation and entrepreneurship through training, To stress upon empowering technical teachers & technicians using Information & Communication Technology, To utilize SWAYAM platform and other resource for the delivery of trainings, To provide a variety of opportunities for training and exchange of experiences, such as workshops, Orientations, learning communities, peer mentoring and other faculty development programmes, To support policy makers for incorporating training as per requirements.

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Sir M. Visvesvaraya Institute of Technology (Sir MVIT) is an Institute of repute in the State of Karnataka, founded by Sri Krishnadevaraya Educational Trust in 1986. Sri Krishnadevaraya Educational Trust was founded in 1985 by a group of 19 philanthropists, mainly builders belonging to the Raju Kshatriya community with the sole objective of establishing educational institutions with all-round quality perspective. Sir MVIT offers 10 B.E. degree programs in Artificial Intelligence & Machine Learning, Biotechnology Engineering, Computer Science & Engineering, Computer Science & Engg.(Internet of Things & Cyber Security including Block Chain Technology), Electronics & Communication Engineering, Electrical & Electronics Engineering, Electronics & Telecommunication Engineering, Information Science & Engineering, Civil Engineering, and Mechanical Engineering. Masters Programs in Master of Business Administration (MBA), Master of Computer Applications (MCA), M.Tech. in Mechanical Engineering (Computer Integrated Manufacturing), M.Tech. in Electronics and Communication Engineering (Electronics), M.Tech. in Biotechnology & Biochemical Engg., are also offered. The Institute is affiliated to Visvesvaraya Technological University and is approved by All India Council for Technical Education, New Delhi and is accredited by National Board of Accreditation, New Delhi and NAAC. The institute is also certified by Scientific & Industrial Research Organizations (SIRO).

DEPARTMENT OF BIOTECHNOLOGY

The Department of Biotechnology was started in the year 2002, as a 4 year BE program with a humble intake of 30 students. Being the first institution under the Visvesvaraya Technology University (VTU) to perceive the requirement for an undergraduate technical program in Biotechnology, Sir MVIT played a pioneering roles in the formulation of the curriculum, starting with the preparation of draft syllabus, organization of seminars/conferences/workshops, initiating industry-institute interactions etc. Today, the department is entrenched with a talented group of faculties drawn from diverse fields such as, Bioinformatics, Plant biotechnology, Microbial biotechnology, Protein chemistry, Environmental Engineering, Bioprocess technology, Chemical Engineering etc. Apart from bestowing quality training, the department has distinguished itself in the spheres of R & D activities too. The department obtained recognition as an R & D centre by VTU in 2006, and in 2011, an M. Tech Program in Biotechnology and Biochemical Engineering was started as well. Thus, it offers M. Tech., M. Sc., (Engg..) by Research and Ph.D. programs.

DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering was established in 1986. The Department has been recognized as R & D Centre by Visvesvaraya Technological University, Belgaum, for carrying out Research activities leading to M. Sc.(Engg.,) and Ph.D. Degrees. The department offers UG program B.E. (Mechanical Engineering) and PG program M.Tech. (Computer Integrated Manufacturing, started in 2002). The sanctioned students' strengths of B.E. Mechanical Engineering is 120 and M.Tech. CIM is 18. At present, the department has Ph.D scholars, working on nanomaterials, composites, alternative fuels etc.

PATRONS

Dr. A. C. Chandrashekar Raju - President, Sri KET.

Sri K. V. Sekhar Raju - Vice President, Sri KET.

Sri K. Syama Raju - Secretary, Sri KET.

Sri M. Venkataramana Raju - Treasurer, Sri KET.

Sri Prabhakar Raju - Academic chairman, Sri KET.

ADVISORY COMMITTEE

Dr. Nagasuma Chandra., Professor, IISc

Dr. Pushker Ravindra., Bayer Crop Science

Dr. Kavyashree M., Apratima BioSolutions

Dr. Balasubramanya S., General Manager, ABLE

CONTACT DETAILS:

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OBJECTIVES OF FDP

Synthetic Biology and Biomimetics is a field of science that involves redesigning organisms for useful purposes, by engineering them to have novel abilities. It is a branch of science that encompasses a broad range of methodologies from various disciplines, such as biotechnology, biomaterials, genetic engineering, molecular biology, molecular engineering, systems biology, membrane science, biophysics, chemical and biological engineering, electrical and computer engineering, control engineering and evolutionary biology. Biomimetic is an interdisciplinary field in which principles from engineering, chemistry and biology are applied to the synthesis of materials, systems or machines that acquire functions which mimic biological processes. This workshop would bring the academicians, researchers and industry experts from Life Sciences, Engineering and Technology backgrounds, to disseminate their inter-disciplinary knowledge and share their valuable experiences to the participants. We welcome you to this challenging field, which offers exciting opportunities in learning about redesigning systems, to solve the current problems in healthcare, food and agriculture.

The objectives of the events are:

- To create awareness about the diverse strategies and approaches of Synthetic Biology and Biomimetics in research and development.
- To recognize the classical applications of Synthetic Biology and Biomimetics in Biomolecular Structure modelling, Genomics, Drug development/repurposing, Disease diagnostics, Biomedical imaging, etc.
- To explore the unique advantages of Synthetic Biology and Biomimetics in knowledge discovery processes, specifically in the domains related to Cognitive Science, Healthcare, Medicine, Food, Agriculture, Environment etc.

RESOURSE PERSONS

1) Dr. K.R. Mahendran., Scientist EI, RGCB, Trivandrum.
2) Dr. Arumugam Rajavelu., Associate Professor, IIT Madras.
3) Dr. Sreenivas Chavali., Associate Professor, IISER Tirupati.
4) Dr. Arunkumar Dhayalan., Associate Professor, Pondicherry University.
5) Dr. Jagadeesha Kumar., Associate Professor, Sir M VIT.
6) Dr. Rajendra Singh C., Associate Professor, Sir M VIT.

Topics of the FDP

- Introduction about Synthetic Biology and Biomimetics
- Redesigning of Organisms through Genetic Engineering
- Production of Genetically Modified Organisms
- Tissue Engineering
- New Biological Systems to Produce Drug Molecules
- Synthesis of Potential Molecules and Characterization Methods
- Drug Delivery Platforms: Synthetic Biology
- Nature-Bioinspired Materials and Mechanisms
- Natural Product Synthesis and Immune system
- Engineered Microbes to Produce Enzymes
- Trends in Bioengineering
- Biological Computers and Biosensors
- Solving Problems in Medicine, Food And Agriculture via Biomimetics

ORGANIZING COMMITTEE

CHAIRPERSON

Prof. Rakesh S.G.
Principal, Sir M.VIT, Bengaluru-562157

CONVENORS

Dr. H. G. Nagendra
Professor and Head
Department of Biotechnology

Dr. K. S. Shanmukharadhya
Professor and Head
Department of Mechanical Engineering

COORDINATORS

- Dr. HARIHARAN P., Sir M.VIT Programme Coordinator
- Dr. PRASHANT S. H., Sir M.VIT, Programme Co-coordinator

MEMBERS

- Dr. Priya Narayan., Member
- Dr. Mrinalini Menon., Member
- Ms. Niveditha A., Member
- Dr. Rashmi K. V., Member
- Dr. Sudevi Basu., Member
- Mr. Manjunath R., Member
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- Dr. Ishwar Chandra., Member
- Mr. S. B. Halesh., Member
- Dr. Sampath Kumar L., Member
- Dr. Janardhan., Member
- Dr. Hanamantraygouda M. B., Member
- Dr. H. S. Yeshvantha., Member
- Mr. Chandrasekhar B., Member