VOLUME 11 ISSUE 02

KSRCT IEEE-EMBS STUDENT BRANCH CHAPTER NEWS LETTER

K. S. RANGASAMY COLLEGE OF TECHNOLOGY
(Autonomous), Tiruchengode, Tamil Nadu- 637 215
DEPARTMENT OF BIOTECHNOLOGY

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KSRCT IEEE-EMBS STUDENT BRANCH CHAPTER NEWSLETTER

Volume 11- Issue 02 **26/06/2020**

VISION OF THE DEPARTMENT

To produce competent Scientists, Technologists, Entrepreneurs and Researchers in Biotechnology through quality education.

MISSION OF THE DEPARTMENT

- **To be recognized as a place of excellence in teaching-learning through continual improvement process**
- **To work in close liaison with the industry to achieve socio-economic development through biotechnological ventures**
- **To facilitate students to perform as competent professional Biotechnologists**

The PEOs of the B.Tech., Biotechnology Program are:

PEO1: Technical Knowledge: Graduates are professionally competent in Biotechnology to solve problems in environmental, food, biochemical and biomedical engineering and technology

PEO2: Career Growth: Graduates demonstrate proficiency in theory and practice of biotechniques through life-long learning

PEO3: Professional Practices: Graduates perform as an individual and / or member of a team with professional and ethical behaviour.

ENGINEERING GRADUATES WILL BE ABLE TO:

1. **Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.**
2. **Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.**
3. **Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.**
4. **Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.**
5. **Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.**
6. **The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.**
7. **Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.**
8. **Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.**
9. **Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.**
10. **Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.**
11. **Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.**
12. **Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.**

(A) PROGRAM SPECIFIC OUTCOMES (PSOs)

1. **Developing Technocrats: Design and execute industry oriented experiments in biotechnology using modern tools and techniques.**
2. **Research and Technology Transfer: Apply the knowledge of bioengineering and Technology to demonstrate research skills and develop technology for commercialization**

KSRCT IEEE-EMBS STUDENT BRANCH CHAPTER NEWSLETTER

Editorial Executives

A warm welcome...!

We the Editorial Board Member of KSRCT IEEE-EMBS student Branch Chapter feel happy and privileged to release the Newsletter-Volume 11 Issue 2, the measure of progress in the Department of Biotechnology. Biotechnology is the patenting of innovations, technology transfer to industries and close interactions with them. With the pristine purpose of presenting all that transpired in a marked period of time, we are coming-forth with our half-yearly Newsletter. The small initiatives that we take to go a long way in building upon the edifice of knowledge that empowers us, is the publishing of this Newsletter which is coverlet of the verdant landscape of scientific, technical and literary outpourings. A heartfelt thanks to Dr. J. Philip Robinson Branch mentor and Ms. S. Poornima, Staff Advisor of KSRCT IEEE-EMBS Student Branch chapter for their support. We are thankful to Mr. G. Manoj, Chair and Mr. E. Srithar, Vice chair of KSRCT IEEE-EMBS Student Branch chapter for supporting the Editorial Board Members in making the Newsletter come alive in a successful manner.

1.Neomutant Association Of Department Of Biotechnology ,K.S.RANGASAMY COLLEGE OF TECHNOLOGY Had Conducted The "DBT STAR SPONSORED "SAARTHI PROGRAMME "(Scientific Aptitude Augmentation And Refinement Through Alumini Interaction) At Biotech Seminar Hall,KSRCT On 25/01/2020.

2.The members of the CARE club have taken initiative to conduct the "PUZZLE STORM". The invitation for the participation in the game is only limited to B. Tech, biotechnology students. Rather than conducting the quizzes, a new initiative has been taken to make students participate actively

3.The IEEE Engineering in Medical and Biology Society is pleased to announce the 42nd Annual International conference of the IEEE Engineering in Medicine and Biology Society, to be offered virtually via the EMBS Learning Academy, July 20th - 24th , 2020. the theme of the conference is "Enabling Innovative Technologies for Global Healthcare".

4.The IEEE Engineering in Medical and Biology Society Fellow a distinction reserved for select IEEE members whose extraordinary accomplishments in any of the IEEE fields of interest are deemed fitting of this prestigious grade elevation.

"Move out of your comfort zone. You can only grow if you are willing to feel awkward and uncomfortable when you try something new."
-Brian Tracy

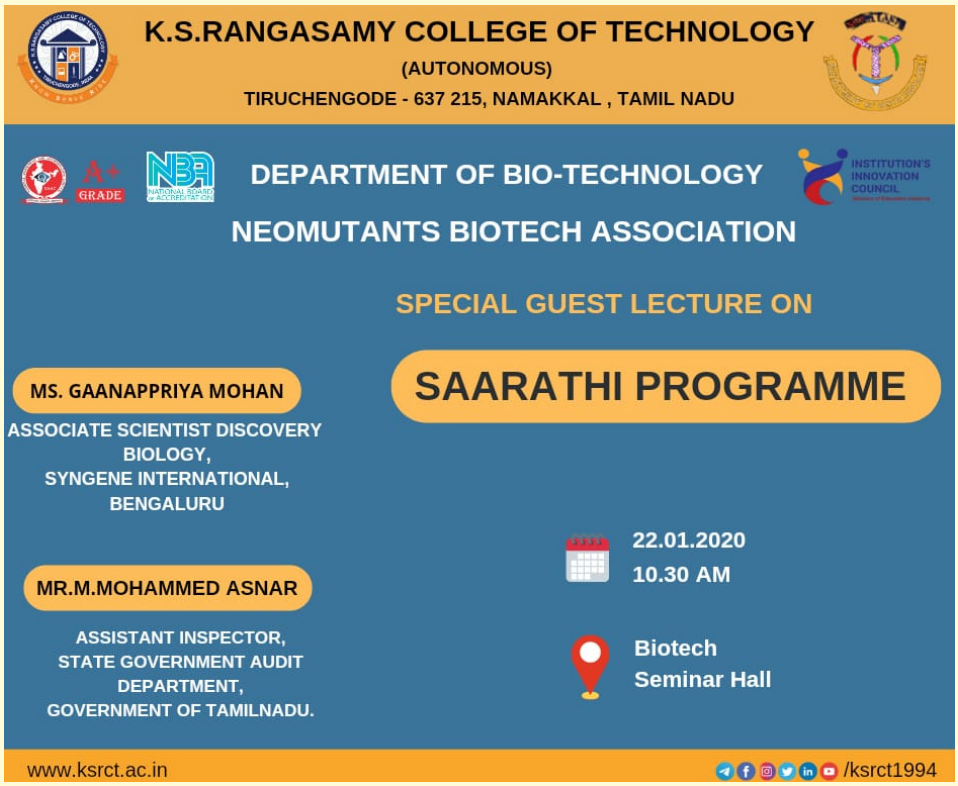
SAARATHI PROGRAMME

Neomutant Association Of Department Of Biotechnology ,K.S.RANGASAMY COLLEGE OF TECHNOLOGY Had Conducted The "DBT STAR SPONSORED "SAARTHI PROGRAMME " (Scientific Aptitude Augmentation And Refinement Through Alumini Interaction) At Biotech Seminar Hall,KSRCT On 25/01/2020.

The Programme Was Conducted To Inculcate Knowledge On Intellectual Property Rights And Filing A Patent On A New Invention. The Programme Also Added Additional Knowledge On How To Face Government Examinations.

The Event Went Intrested By The Presence And Lecture Given By Two Esteemed Chief Guests And Alumini Of Our Department, Ms. Gaanapriya Mohan Yogesh Associate Scientist - Discovery Biology, Syngene International ,Bengaluru And Mr.M.Mohammed Asanar, Assistant Inspector, State Government ,Government Of Tamil Nadu. Audit Department

Ms. Gaanapriya Mohan Yogesh Presented A Guest Lecture On INTELLECTUAL PROPERTY RIGHTS And Mr.Mohammed Asanar Mentored On Preparation Of Government Examination and crack the challenges in it which was found useful for the students.t of body text



PUZZLE STORM

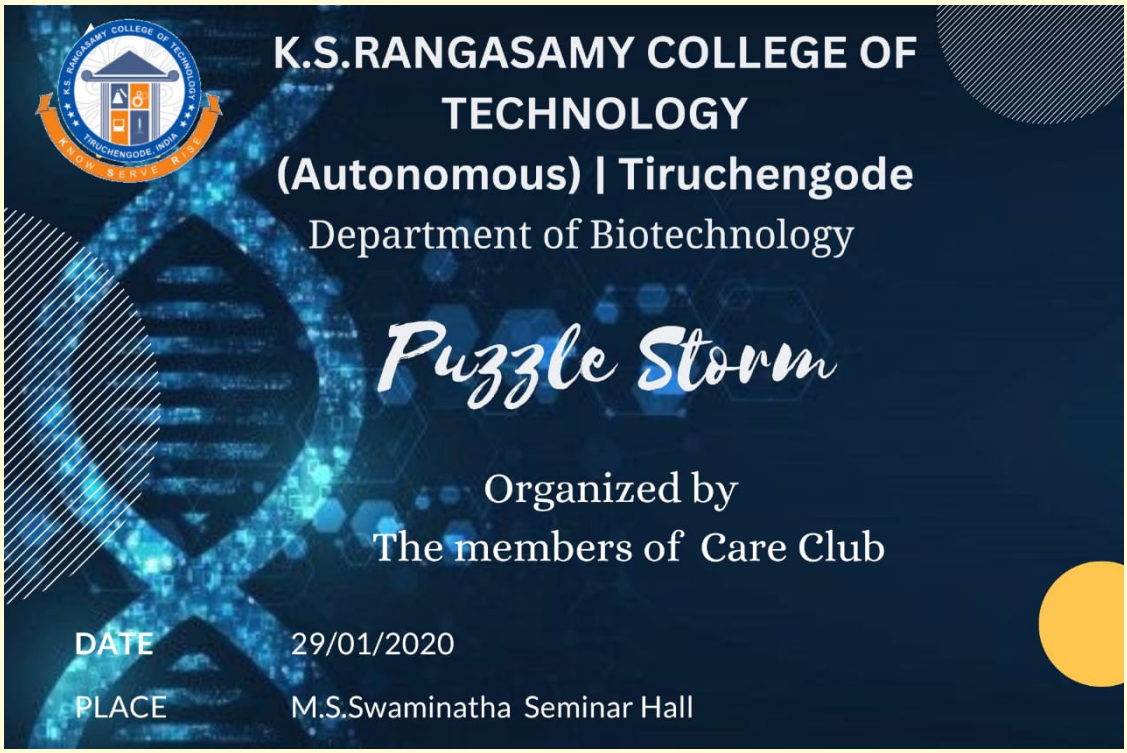
Conducted Game competition program on 29/01/2020 in theme of Puzzle storm

The members of the CARE club have taken initiative to conduct the "PUZZLE STORM". The invitation for the participation in the game is only limited to B. Tech, biotechnology students. Rather than conducting the quizzes, a new initiative has been taken to make students participate actively. Students shown their enthusiasm for this event and it is a successful one at the end. knowledge combined with game is the best combo that nothing can match.

·Through the event to Enrich and encourage students to attend GATE test Acquired Knowledge about the biology related advanced techniques. And SAT MAT awareness.

The winners are selected on the basis of score.Prize has been awarded as an motivation for students to participate in the upcoming events.

"Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime."
—Maimonides



42ND ANNUAL INTERNATIONAL CONFERENCE

The IEEE Engineering in Medical and Biology Society is pleased to announce the 42nd Annual International conference of the IEEE Engineering in Medicine and Biology Society, to be offered virtually via the EMBS Learning Academy, July 20th - 24th , 2020. the theme of the conference is "Enabling Innovative Technologies for Global Healthcare".

"An expert is a person who has made all the mistakes that can be made in a very narrow field."
– Neils Bohr

As the world's largest international biomedical engineering conference. A broad array of scientific tracks will cover diverse topics of cutting edge research and innovation in biomedical engineering, healthcare technology R&D, translational clinical.

In addition to the high profile keynotes, the conference program will feature mini symposia, Pre-Conference workshops, Special sessions, research presentations, sessions for students and young professionals, sessions for clinicians and entrepreneurs, and a virtual exhibit hall.

Conference Theme includes Biomedical Signal Processing, Biomedical Imaging and Image Processing, Micro/Nano-bioengineering Cellular/Tissue Engineering & Biomaterials, Computational Systems, Modeling and Simulation in Medicine, Multiscale Modeling & Synthetic Biology, Cardiovascular and Respiratory Systems Engineering, Neural and Rehabilitation Engineering, Biomedical Sensors and Wearable Systems, Biorobotics and Biomechanics, Therapeutic & Diagnostic Systems and Technologies, Biomedical & Health Informatics, Biomedical Engineering Education and Society, Translational Engineering for Healthcare Innovation and Commercialization.

KEY NOTE SPEAKER

Pierre-Alexandre Fournier

Pierre-Alexandre Fournier is co-founder and CEO of Hexoskin, a Montreal-based company focused on clinical-grade wearable sensors and AI software for health and clinical research. He graduated in Electrical Engineering from École Polytechnique de Montréal in 2001 and completed a master's degree in machine learning at the same university in 2005.

Mr. Fournier is also an advocate for transparency in healthcare, patient empowerment, and healthcare innovation through design.

Tal Arbel

Tal Arbel is a Professor in the Department of Electrical and Computer Engineering, where she is the Director of the Probabilistic Vision Group and Medical Imaging Lab in the Centre for Intelligent Machines, McGill University. She is also an elected Associate Member of MILA (Montreal Institute for Learning Algorithms) and the Goodman Cancer Research Centre. Prof. Arbel's research focuses on development of probabilistic machine learning methods in computer vision and medical image analysis, with a wide range of applications in neurology and neurosurgery.

"We live in a society exquisitely dependent on science and technology, in which hardly anyone knows anything about science and technology." – Carl Sagan

EMB IEEE Engineering in Medicine & Biology Society SEC STUDENT BRANCH CHAPTER

She is currently an Associate Editor for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), was previously an Associate Editor for the journal of Computer Vision and Image Understanding (CVIU) and is the Editor-in-Chief of a newly launched arXiv overlay journal: Machine Learning for Biomedical Imaging (MELBA).

Nitish V. Thakor

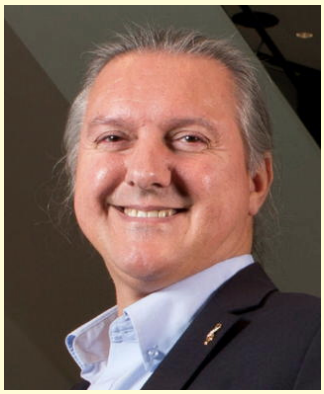
TNitish V. Thakor (Life Fellow, IEEE) is the Professor of Biomedical Engineering and Electrical and Computer Engineering at Johns Hopkins University since 1983. He is also the founding Director the Singapore Institute for Neurotechnology (SINAPSE) at the National University of Singapore and Biomedical Engineering since 2012-2018. Prof. Thakor's technical expertise is in the field of Neuroengineering, where he has pioneered many technologies for brain monitoring to prosthetic arms and neuroprosthesis.

Sandro Carrara

Sandro Carrara is an IEEE Fellow for his outstanding record of accomplishments in the field of design of nanoscale biological CMOS sensors. He is also the recipient of the IEEE Sensors Council Technical Achievement Award in 2016 for his leadership in the emerging area of co-design in Bio/Nano/CMOS interfaces. He is a faculty member at the EPFL in Lausanne (Switzerland). He is former professor of optical and electrical biosensors at the Department of Electrical Engineering and Biophysics (DIBE) of the University of Genoa (Italy) and former professor of nanobiotechnology at the University of Bologna (Italy). He holds a PhD in Biochemistry & Biophysics from University of Padua (Italy), a Master degree in Physics from University of Genoa (Italy), and a diploma in Electronics from National Institute of Technology in Albenga (Italy). He is now Editor-in-Chief of the IEEE Sensors Journal, the largest journal among 180 IEEE publications.

"Don't settle for average. Bring your best to the moment. Then, whether it fails or succeeds, at least you know you gave all you had."
—Angela Bassett

GALLERY



42ND ANNUAL INTERNATIONAL CONFERENCE MEMBERS