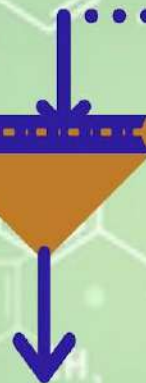
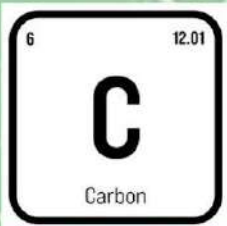


**DEPARTMENT OF**  
**CHEMICAL**  
**ENGINEERING**  
**NEWSLETTER**

**THE**



**CATALYST**  
**ACCELERATING YOUR GROWTH**

**Volume - 2, Issue - IX, September, 2023**



## Newsletter

# The Catalyst

(Accelerating your Growth rate)

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# Department of Chemical Engineering

## Vision

To be a leader in Chemical Engineering Education and Research by providing balanced learning and fostering research to enable the learners to meet the challenges of process industries and societal needs.

## Mission

M1: To produce graduates practicing Chemical Engineering professionally and ethically.

M2: To produce Chemical Engineering graduates contributing to the betterment of society in the competitive global environment.

M3: To focus on the development of Chemical Engineers to foster innovation through proficiency and effective communication.

## Motivation: Alumni page



**Proud Alumnus:**  
**Mr. ARUNACHALAM S,**  
**B.Tech Chemical Engineering**  
**(2015-2016)**  
**Sr. Engineer & Lead - FCA IMDS**  
**Validation Team,**  
**Stellantis,**  
**Indai.**

**Chemical engineers can create a new world.**

**SVCE made me choose to preserve the existing world as beautiful as it is now.**

**Self-drive and individual motivations form the basis of your growth in the College. The freedom to explore and engage in multiple exercises led to a path of self-discovery that made me decide on a career out of sustainability.**

**From the very first project on a "plastic pre-processing model for recycling" in 2013's Pansophy to my final year project on "Down-draft Bio-gasification of Rice husks" in 2016, I had complete support from the department to traverse through the realm of sustainability sagaciously.**

**I look back and think that I had completed "A Study of Solid Waste Management in the Urban City of Chennai and the Sustainable Model That Is Proposed", winning Wipro's Earthian Award 2015, designed a working model of a Coterminous annular Double pipe Heat exchanger, studied the acid recovery in the pickling of zirconium alloy employing fine anionic resin and also shared a presentation on "Boron Nitride Nanotubes – The solution for space radiation shielding" in ISRO, Sriharikota, all within three years seems ultimately a myth, but only it's not. It's impossible to have the support in any other campus, like we do in SVCE, to follow your passion. Not to be too indulgent here, but SVCE is as much about non-textbook learning as it is about textbooks.**

**Campus life helped me assess and associate the problems of today that go far beyond the curriculum. The Carbon footprint calculation exercise helped us understand the campus's green virtues, ultimately leading to SVCE winning the Green Campus of the Year state award 2019. As you can see, your association with the college extends just beyond the four years. Any self-initiated ideas are always welcome and will be guided towards fruitful completion by the department.**

**It is an Ideal college life experience where you are expected to grow into an adult through the virtues of tenacity and liberty. The whole new world is outside the campus, but the campus is entirely of newness, a go-getter's ultimate dream. Are you a go-getter?**

## Industrial Visit: *Learnings beyond classroom*

On 8th September 2023, third year of B.Tech chemical engineering students went to an industrial visit to M/s. Kothari Petrochemicals Limited, Manali, Chennai.



## Social Day Pledge: Societal cause

On 15th September 2023, a pledge is administered in the presence of all the students, faculty & of the department, for inculcating the moral and ethical practice among students.



## SVCE signed MoU with INDIAN RUBBER MANUFACTURERS RESEARCH ASSOCIATION, GOI

On 21st, 22nd & 23rd September 2023, dignities from Automobile, Chemical and Chemistry and Nano research centre, has attended the International conference at CHENNAI Trade Centre, organised by IRMRA, Chennai. On 22nd September 2023 a functional MOU was signed with the above esteemed research organisation to facilitate our faculty and students to utilize their unique research facilities.

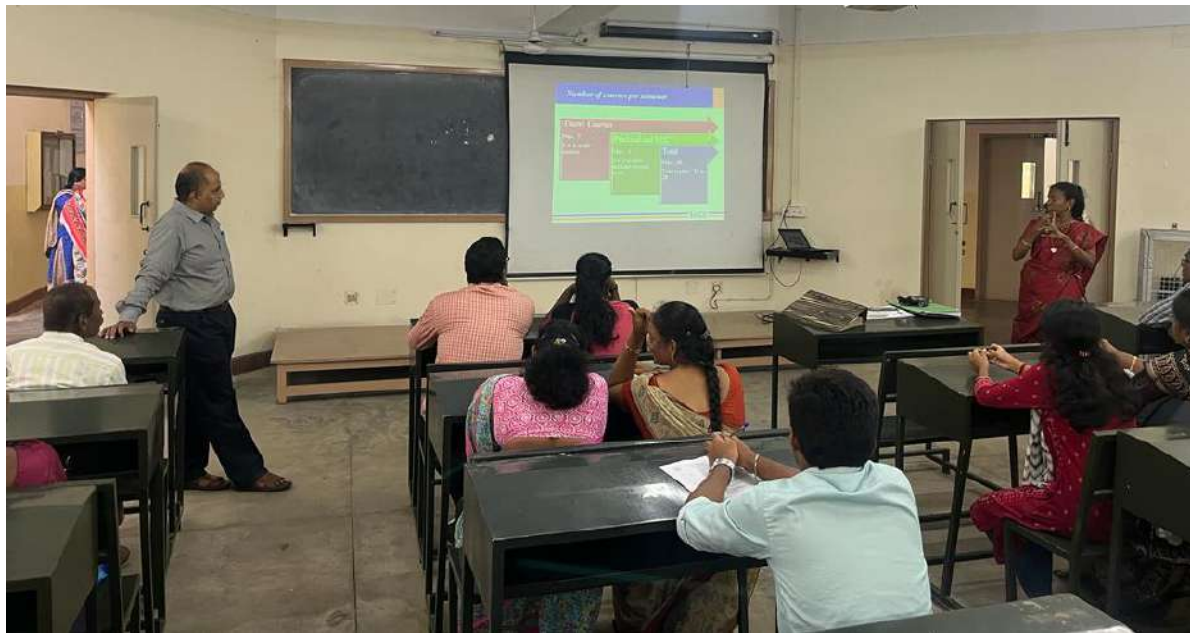
Furthermore, the topics may be appropriate to departments like Automobile, Chemical, Chemistry, Nano research Centre researchers and Environmental science engineers.

- Sustainable developments in Rubber and Allied Industry
- Importance of Circular economy in rubber industry
- Advances in Rubber and Rubber Chemicals
- Nano – Materials and Nanocomposites
- Bio – Materials and BioComposites
- Advances in Additives
- Advances in Testing and Characterization
- Virtual Testing, Modelling and Simulation
- Advances in Tyre Technology
- Global Regulations – Present and Future Trends
- Life Cycle Analysis and End of Life Rubber
- Products – Waste management



## Appraisal of students: *Parents & Teachers meet*

On 23rd September 2023, appraisal of students over all performance both in curricular and extra curricular is shared with parents by respective faculty advisors.



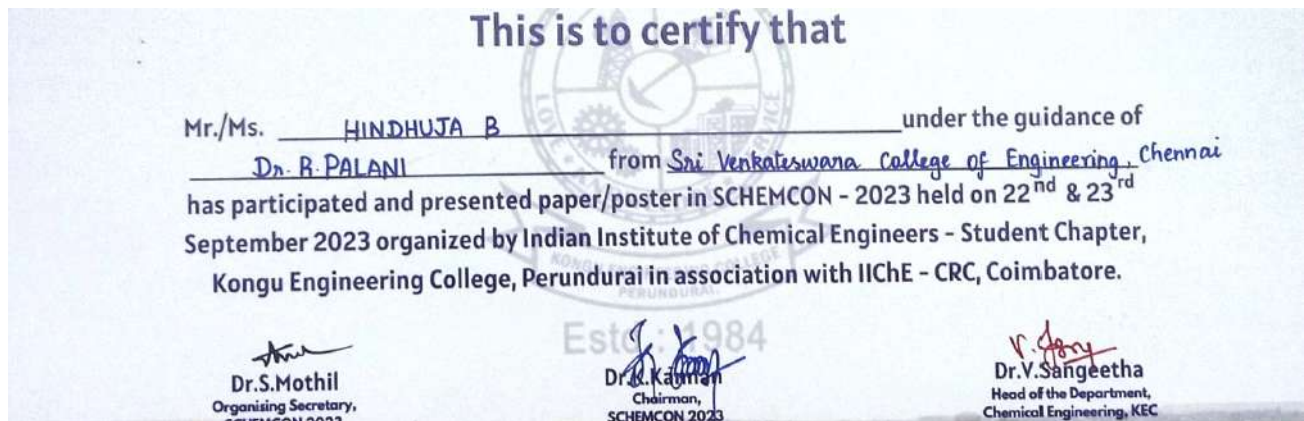
## Student Achievements: Paper presentation.

On 22nd September 2023, Students Abirami GN, Jothi Ganesan M and Charulatha G of final year B.Tech Chemical Engineering, has won the "Best paper award", for the paper presented at Session-1, SCHEMCON-2023, Organised by IICHe Student Chapter, Kongu Engineering College, Tamil Nadu.



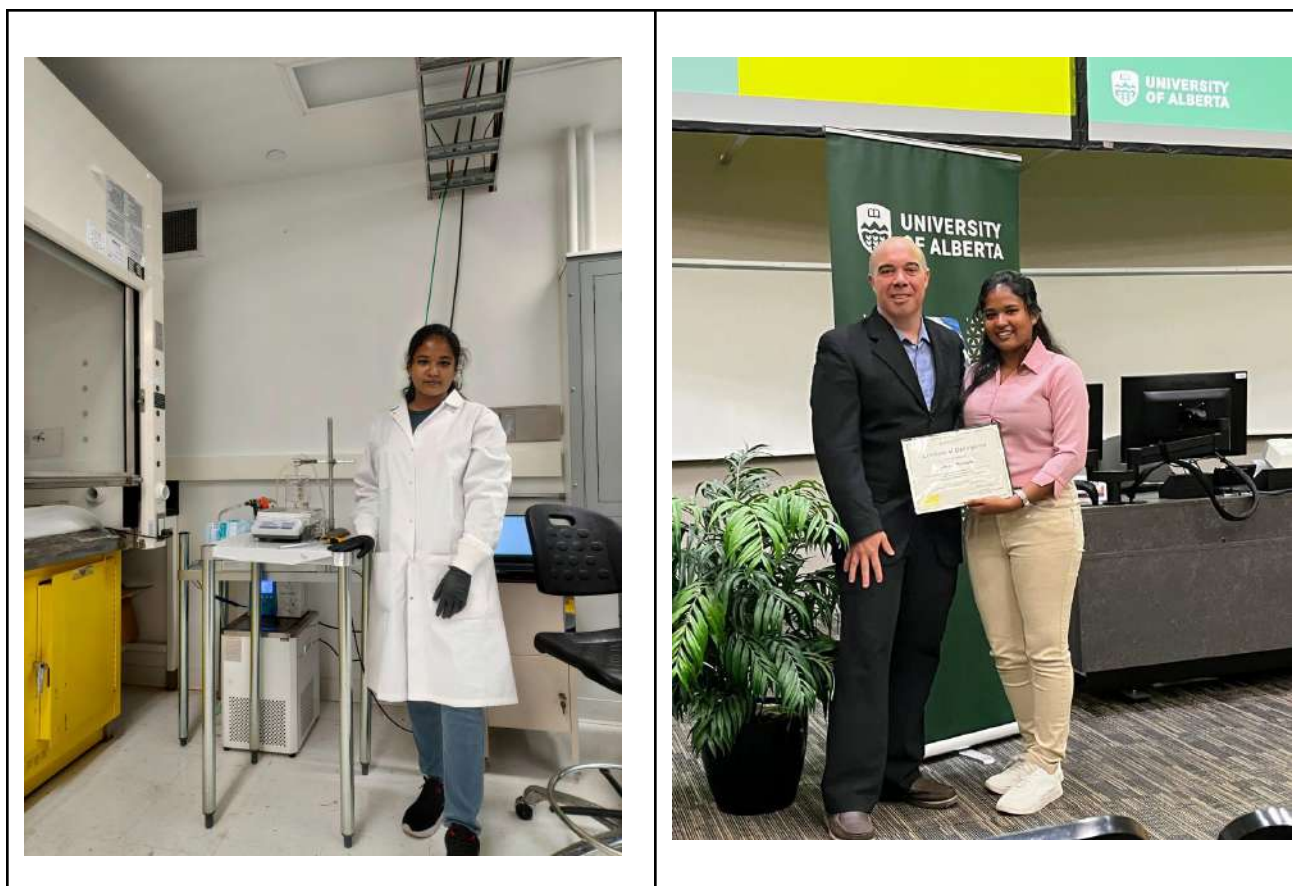


On 22nd September 2023, Student Moksaa Prasan P of third year B.Tech Chemical Engineering and Hindhuja B of final year B.Tech Chemical Engineering has presented paper at SCHEMCON-2023, Organised by IChE Student Chapter, Kongu Engineering College, Tamil Nadu.



## Research Internship: Star Performer

Final year student of B.Tech Chemical Engineering, Ms. Shrima M, has completed 12 weeks internship at UNIVERSITY OF ALBERTA CANADA. Where she has been worked with mentor Dr. Meharasa Yassari from Iran and worked on “FABRICATION OF ANTIFOULING MEMBRANES” in order to enhance the antifouling properties of the membranes to increase their lifetime and properties for the commercial use.



Programmes run by the Department of Chemical Engineering are,

- B.Tech Chemical Engineering
- M.Tech Chemical Engineering
- Ph.D

### B.Tech CHEMICAL Engineering

#### **Programme Educational Objectives**

PEO 1: Equip students with the necessary skills and knowledge to prosper in their career in Chemical Engineering and related domains.

PEO 2: Encourage students to Pursue advanced learning and engage in research with internationally acclaimed institutions and foster professional growth.

PEO 3: Empower students with leadership qualities to succeed in diversified fields with ethical administrative acumen and adapt to the rapid technological advancements and innovations.

#### **Programme Outcomes**

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs

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with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**P04: 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.

**P05: 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.

**P06: 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.

**P07: 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.

**P08: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**P09: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**P10: 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.

**P11: 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.

**PO12: 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.**

**PROGRAMME SPECIFIC OUTCOME's**

**PS01: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.**

**PS02: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.**

**M.Tech CHEMICAL Engineering**

**Programme Educational Objectives**

**PEO1: Function effectively to solve complex industrial problems using Chemical engineering concepts and also in expanding areas of Energy and Environmental industries.**

**PEO2: Pursue their careers in Research and Development towards an advanced degree in Chemical engineering and allied technical discipline.**

**PEO3: To become Professional Leaders in the complex work environment.**

**Programme Outcomes**

**PO1: Independently carry out research /investigation and development work to solve practical problems.**

**PO2: Write and present a substantial technical report/document.**

**PO3: Demonstrate a degree of proficiency over the area as per the specialization of the program. The proficiency should be at a level higher than the requirements in the appropriate bachelor program**

**PO4: Potential to analyze 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.**

**PO5: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.**

**PO6: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.**

**PROGRAMME SPECIFIC OUTCOME's**

**PS01: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.**

**PS02: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.**

**Editorial Team: Dr. N. Meyyappan, HOD/CHE & Mr. S. Jai Ganesh, AP/CHE.  
Student Team: Prerna Unnathe N, Ramapriyan A, Sanjana Shree P N. - III year CHE**