



## Academic Year 2020-2021

ANITS INNOVATION COUNCIL  
IN ASSOCIATION WITH  
DEPARTMENT OF CHEMICAL ENGINEERING



DATE: 02-08-2020

As a part of IIC calendar activity, ANITS Innovation Council (ANITS, IIC) in Association with Department of Chemical Engineering conducted a Impact Lecture Series which mainly focused on the concepts of 'The Current Trends in Chemical Engineering' which is held in the month of August 2020. Students and faculties of our institution have participated actively in this session. This lecture series comprised of five notable speakers who spent their valuable time in getting all of us notified with the situations and trends of the chemical engineering.

### Schedule for Impact Lecture Series – I:

**Overall Flyer: Impact Lecture Series-I: Current Trends in Chemical Engineering**

## LECTURE-1

The flyer features logos for ANITS (Annamalai University), the Department of Chemical Engineering, and the Indian Institute of Chemical Engineers (IICE). The title is "Chemical Engineering Impact Lecture Series - I" with "Lecture-I" and the topic "Current Trends in Chemical Engineering". A circular photo of Dr. Naveen is shown. The date is August 2, 2020, at 2:30 PM. Contact information includes phone numbers 9177095990, 7995362032, and 9032740742. Organizers listed are Kalla Reshma (Student Coordinator, IChE), Dr. M Shiva Naresh (Faculty Coordinator, IChE), and Dr. Ch. Anil (Head of the Department).

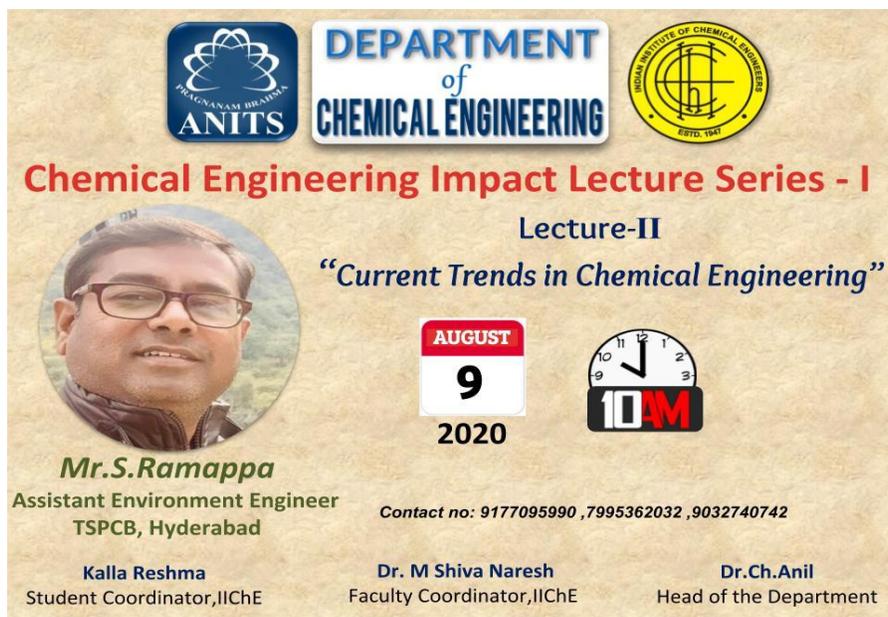
### Flyer 1: Impact Lecture Series-I: Lecture-1

The first session was held on 2<sup>nd</sup> August 2020 by Dr. Naveen who is a professor in Dept. of Chemical Engineering at KU LEUVEN, Belgium. He discussed about the opportunities for studies who want to pursue higher studies. He described about his areas of research which mainly was Sideways Self-propulsion mechanism. His words inspired many students who wish to continue their education towards Research and Development.

The first slide, titled "Chemical Engineering Education - Masters", lists countries under "Language?". North America includes USA and Canada. Europe includes U.K., Switzerland, Sweden, Netherlands, Belgium, Germany, Denmark, and France. Australia and New Zealand are listed at the bottom. The second slide, titled "Sideways self-propulsion mechanism", shows a schematic of a fiber with Pt/Pd and Au layers. It illustrates the reaction of H<sub>2</sub>O<sub>2</sub> to H<sub>2</sub>O and O<sub>2</sub>, with H<sup>+</sup> ions moving along the fiber. A cross-sectional view shows a PS fiber core surrounded by Pt/Pd and Au layers, with H<sup>+</sup> and e<sup>-</sup> ions moving through the layers.

### Chief Guest Address on Sideways Self-propulsion mechanism

## LECTURE-2



**DEPARTMENT of CHEMICAL ENGINEERING**

**Chemical Engineering Impact Lecture Series - I**

**Lecture-II**

**“Current Trends in Chemical Engineering”**

**Mr.S.Ramappa**  
Assistant Environment Engineer  
TSPCB, Hyderabad

**AUGUST 9 2020**

**10 AM**

Contact no: 9177095990 ,7995362032 ,9032740742

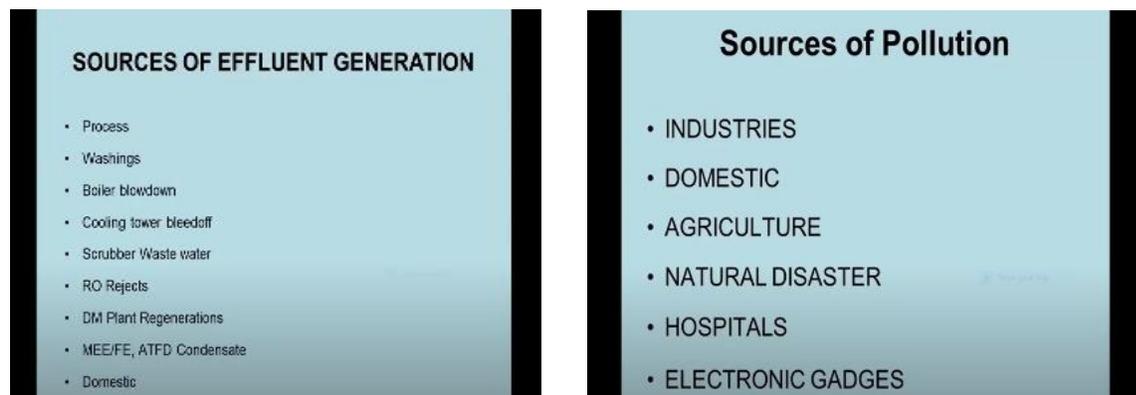
**Kalla Reshma**  
Student Coordinator, IICChE

**Dr. M Shiva Naresh**  
Faculty Coordinator, IICChE

**Dr.Ch.Anil**  
Head of the Department

### Flyer 2: Impact Lecture Series-I: Lecture-2

The second session was held on 9<sup>th</sup> August 2020 by Mr. S Ramappa who is a Assistant Environment Engineer at TSPCB, Hyderabad. He being a environmental engineer discussed his views on the different sources of pollution and effluent generation. He also explained about industrial downstream treatment which is very useful for treating these effluents.



**SOURCES OF EFFLUENT GENERATION**

- Process
- Washings
- Boiler blowdown
- Cooling tower bleedoff
- Scrubber Waste water
- RO Rejects
- DM Plant Regenerations
- MEE/FE, ATFD Condensate
- Domestic

**Sources of Pollution**

- INDUSTRIES
- DOMESTIC
- AGRICULTURE
- NATURAL DISASTER
- HOSPITALS
- ELECTRONIC GADGES

### Chief Guest Address on Various sources of pollution

## LECTURE-3

The flyer features the logos of ANITS (Andhra University Institute of Technology) and the Department of Chemical Engineering at IIT Kharagpur. The title is "Chemical Engineering Impact Lecture Series - I" with "Lecture-III" and the topic "Current Trends in Chemical Engineering" in quotes. A circular portrait of Dr. P. Shiva Rama Krishna is shown. The date is August 16, 2020, at 10 AM. Contact numbers are listed as 9177095990, 7995362032, and 9032740742. The speaker's details are: Dr. P. Shiva Rama Krishna, Scientist, Unilever, Bengaluru. Other faculty members listed are Kalla Reshma (Student Coordinator, IICHe), Dr. M Shiva Naresh (Faculty Coordinator, IICHe), and Dr. Ch. Anil (Head of the Department).

### Flyer 3: Impact Lecture Series-I: Lecture-3

The session was held on 16th August 2020 by Dr. P. Shiva Rama Krishna who is a scientist at Unilever, Bengaluru. He described the scope of chemical engineer in the field of bio-medical sciences. His views on Higher Education provoked thoughts in students who are aspiring for higher studies.

The slide is titled "Chemical Engineer Prospects" and lists two main areas: "Higher Education (Masters/PhD)" and "Industry". Below the "Industry" point, there is a sub-point "Rectangular Soap". The slide also features a "MORE VIDEOS" button. The background of the slide is a collage of medical and chemical engineering images, including MRI scans (T1, T2, Water content image, Fat image, WM image, GM image), MR Spectroscopy, MR angiography (non-contrast), Dynamic Imaging, and Perfusion.

### Chief Guest Address on Various chemical engineering prospects

## LECTURE-4

**ANITS** **DEPARTMENT of CHEMICAL ENGINEERING** **IICChE**

**Chemical Engineering Impact Lecture Series - I**  
**Lecture-IV**  
**“Current Trends in Chemical Engineering”**

**Dr. Uma Numburi**  
Senior Systems Engineer  
Philips India Ltd, Bengaluru

**August 23 2020** **10 AM**

Contact no: 9177095990 , 7995362032 , 9032740742

**Kalla Reshma** Student Coordinator, IICChE  
**Dr. M Shiva Naresh** Faculty Coordinator, IICChE  
**Dr. Ch. Anil** Head of the Department

**Flyer 4: Impact Lecture Series-I: Lecture-4**

The session was held on 23th August 2020 by Dr. Uma Numburi who is a Senior Systems Engineer at Philips India Ltd, Bengaluru. She talked about about current trends and areas of research in chemical engineering. She even mentioned about the scope of nanotechnology in industries. She also added the current role of women in the field of chemical engineering.



**Current Areas of Research**

- Hydrogen Economy – Role of Hydrogen and fuel cells as emerging energy solution
- Global Refining & Petrochemical Challenges and Opportunities
- Renewable Fuels & Biofuels
- Bottom of the Barrel Upgradation
- Digital Transformation in Refining & Petrochemicals
- Crude to Chemicals
- Thermo-chemical conversion of biomass to hydrogen rich syngas
- Cost effective indigenous catalyst manufacturing
- Catalytic conversion of waste plastic to oil
- Biomethanation – Organic waste to compressed biogas
- Aligning refineries for sustainable future

**Chief Guest Address on importance of GATE Examination**

## LECTURE-5:

The flyer features logos for ANITS, the Department of Chemical Engineering, and IIC. It includes a portrait of Mr. Gopi Bisetti, a calendar icon for August 30, 2020, and a clock icon for 10 AM. Contact information and the names of the student coordinator, faculty coordinator, and department head are also provided.

**DEPARTMENT of CHEMICAL ENGINEERING**

**Chemical Engineering Impact Lecture Series - I**

**Lecture-V**

**“Current Trends in Chemical Engineering”**

**Mr. Gopi Bisetti**  
Senior Process Engineer  
HPCL, Visakhapatnam

**AUGUST 30 2020**

**10 AM**

Contact no: 9177095990 , 7995362032 , 9032740742

**Kalla Reshma**  
Student Coordinator, IICHE

**Dr. M Shiva Naresh**  
Faculty Coordinator, IICHE

**Dr. Ch. Anil**  
Head of the Department

### Flyer 5: Impact Lecture Series-I: Lecture-5

The session was held on 30th August 2020 by Mr. Gopi Bisetti who is a Senior Process Engineer at HPCL, Visakhapatnam. He discussed the scope of Chemical engineers in the field of petroleum industries. He also emphasized on various competitive exams and showcased the right path to prepare for these exams. He also mention the projects which he has undertaken as a process engineer.

The slide outlines a structured approach to GATE exam preparation, including mock tests, initial assessment, planning stages, and a learning stage with components like PYQs and textbooks.

**GATE Exam Preparation**

- Mock Tests**
  - Previous Year Question Paper
  - Full length Mock tests
  - Keynotes
- Initial Assessment**
  - Previous Year Question Paper
- Planning Stage**
  - Previous Year Question Papers & Syllabus
  - 8 CORE** subjects (70%) + Engg Mathematics (15%) + Aptitude (15%)
  - Classify the subjects
  - Allocate **TIME** accordingly
- The LEARNING Stage**
  - Components
    - PYQs & syllabus
    - Standard textbooks
    - Notes
    - KEYNOTES**
- Revise & Recall**
  - Previous Year Question Papers
  - Notes
  - Subject-wise/Topic-wise tests
  - Keynotes

The slide describes the responsibilities of a process engineer, such as overseeing expansion projects, handling scheduling and resources, and managing project risks.

**Projects - Process Engineer**

- Responsible for overseeing the new expansion projects at various stages viz., Basic Design Engineering, HAZOP study, P&IDs finalization and execution.
- Deals with scheduling and resource handling in addition to all other project management principles.
- Project management skills, decision-making ability, leadership and organizational skills are key for success.

### Chief Guest Address on Process engineer projects

Kalla Reshma  
Student Coordinator,  
IICHE

  
Dr. M. Shiva Naresh,  
IIC Convener,  
ANITS

  
Dr. Ch. Anil  
HoD,  
Dept of CHE