

Expert talk under R & D Talk Series

Organized by
Chemical Engineering Department
In association with
IIC and IIChE
On
08.08.2024



“How to ignite the thought process as an Engineer”



SARVAJANIK EDUCATION SOCIETY
SARVAJANIK COLLEGE OF ENGINEERING & TECHNOLOGY
Department of CHEMICAL ENGINEERING
In Association with
INSTITUTION INNOVATION COUNCIL (IIC)
INDIAN INSTITUTE OF CHEMICAL ENGINEERS (IICHE)






EXPERT TALK TOPIC:- HOW TO IGNITE THE THOUGHT PROCESS AS AN ENGINEER ??			
Date	Time	Venue	Speaker
AUGUST 08,2024	10:00 am - 12:00 noon	N.J.SEMINAR HALL, SCET,SURAT	Dr. Pankaj Gandhi (Director, MANTRA, SURAT)

Student Co-ordinators

Dhairya Sharma
Priyanshu Patel
Yaksh Lad
Sameer Mirza

Faculty Co-ordinator

Prof.(Dr.)Swati Sharma

HOD

Prof.Srujal Rana

Dean R & D

Prof.(Dr.) Utpal Pandya

Principal

Prof.(Dr.)Hiren Patel

FOR REGISTRATION SCAN



For more details contact on 8141866655

- **Objectives of the R & D talk:** Experts from the Chemical Engineering and allied fields are invited to share their valuable experience and profound research knowledge with our UG students to broaden their perspectives. These talks also serve to motivate the students towards higher echelons of learning and research.

Resource Person: Dr. Pankaj Gandhi, Director, MANTRA, Surat.

Venue: N. J. Seminar Hall, SCET

Date and Time: 08.00.2024, 10:00 -12:00 noon

Participants: BTECH CHEMICAL SEM III, V, VII students,
BTECH IT SEM III students In all 287 students registered.

Student volunteers: Dhairya Sharma, Priyansu Patel, Yaksh Lad, Sameer Mirza

Faculty Coordinator: Dr. Swati Sharma, Professor, Chemical Engg Department.

Dr Pankaj Gandhi, Director MANTRA, Surat, a very well read person with excellently unique academic credentials to his credit was invited to deliver the talk. His diverse interests and achievements in research and academia are notably par excellence. B Tech II Chemical Engineering student, Sameer Mirza introduced the speaker, Dr. Gandhi to the audience and Prof Srujal Rana welcomed him with a bouquet.

The topic of the day was “How to ignite the thought process as an engineer”. Dr Gandhi began with the concept that an engineer is the one who solves problems. He cited various examples of common use and explained the technicalities thereof. He urged the students to identify the needs for research, come up with probable solutions and always inculcate a practice of a backup plan to gear up for the challenges.

He called upon the students to nurture out of the box thinking process. The example of Yusuf Dekec (of Turkey), Silver Medalist in Paris Olympic-2024 has proved that, even without using the resources, goals can be achieved!

As most of the research calls for interdisciplinary approach, domain knowledge may not be sufficient. Hence the need for knowledge in diverse fields arises which is indispensable at that juncture. He cited cases of many distinguished scientific workers who have contributed immensely to the society inspite of having academic degrees in altogether different domains. In this context he presented a detailed account of Nicholas A. Peppas, Herman P. Schwan Sujoy Kumar Guha and Robert S. Langer whose noteworthy research contributions have made a mark in allied/different domains.

- **Geetha Manjunath**, a Computer Scientist with a ME (Computer Sc & Engg) & PhD (Data Mining & Semantic Web) from Indian Institute of Science (IISc) Geetha was the Lab Director for Data Analytics Research at Xerox. Founder and CEO, use of AI + ML in Healthcare, Computer Scientist, TEDx Speaker, Forbes Top 20
- She and her team at NIRAMAI, are developing a novel software to detect breast cancer at a much earlier stage than traditional methods or self-examination.
- She has led the company to develop a breakthrough artificial-intelligence-based test for detecting early stage breast cancer in a non-invasive radiation-free manner.

Mihir Shah, B S Computer Engg (Drexel Univ, USA) Founder and President - UE Life Sciences Inc. Founder and CEO, AI in Healthcare, Social Entrepreneur, Computer Scientist, TEDx Speaker, Forbes Top 20

- They are enabling breast cancer early detection for women in the developing regions around the world in collaboration with governmental and private healthcare partners.
- To date, they have successfully commercialized two products, iBreastExam™ and NoTouch BreastScan™, both US FDA cleared and CE marked. Over 120,000 women have been benefited to date. UE Life Sciences has raised US \$ 5.5M combined, in equity capital and grant funding.

He further advised the students to adopt an engineering mindset with an ability to see a structure where there's nothing apparent, adeptness at designing under constraints and understanding Trade-offs which can help them in any field in the future. He stressed the need for critical thinking-being able to analyze information, identify patterns, and make informed decisions based on data. He opined that critical thinking and abstract thought are invaluable tools which complement an engineer's technical expertise.

He discussed at length about smart textiles for medicine and healthcare. Transdermal patches, wearable biosensor for blood glucose monitoring, Real-time artificial intelligence based health monitoring systems to name a few. He explained how AI is revolutionizing the field of chemical engineering and machine learning & deep learning are currently having applications in many facets as Process Optimization, Predictive Maintenance, Quality Control and Product Optimization, Energy Efficiency and Sustainability, Supply Chain Management, Safety and Risk Assessment, New Materials Discovery.

All the students really appreciated his lucid style of communication rendering the complex concepts to simple, understandable and relatable ideas which can be dwelled upon with more clarity and executed skillfully too. Needless to say, all attendees have benefitted immensely from the said R & D talk.

GLIMPSES OF THE EVENT:



CURRICULUM VITAE

Dr Pankaj Gandhi, Director, MANTRA, SURAT.

Educational Qualifications:

- PhD (Chemical Engg, NIT Surat), research work is in the area of Bio Medical subject of Cardio Vascular Science and Technology.
- Ph D (HR Management, VNSGU, Surat) research work is on adoption of modern technology in Diamond Processing
- PhD (Civil Engg, NIT Surat), Synopsis approved, research work is on the evaluation of socio-economic-&-environmental impact of Flooding due to Urban Infrastructure Development in Surat
- M Tech (Chemical Engg, NIT Surat, Gold medalist)
- M Tech (MURP-Urban Planning [in Civil Engg], CEPT Univ, Ahmedabad), AMIE (Civil Engg),
- M Tech (Data Sc & Engg, BITS Pilani), MIETE (Electronics, IETE, New Delhi)
- M E (Thermal [Mechanical] Engg), PDMDIT, Pune (Vocational)
- M E (Textile Technology - Fiber [polymer] Science), PDMDIT, Pune (Vocational)
- C Text ATI (Textile Institute, Manchester, UK)
- MBA (Finance & Operations, IIM Kozhikode) - Batch Topper
- MBA (Computer & IT Management, VNSGU Surat),
- M A (Sociology), PGDUPDL, PGDM (HR), PGDM (Marketing)
- LL B (Special), LL M (Human Rights)-Batch Topper
- Post Graduate Diploma in Intellectual Property Rights (PGDIPR) from GTU Gandhinagar
- Post Graduate Diploma in Training & Development from ISTD New Delhi
- Company Secretary (ICSI, New Delhi) - 6th Rank,
- Cost Accountant (Inter, ICAI, Kolkata)

Published 102 research papers in reputed journals of Scopus, SCI and like, holding 59 international patents

Holding 33 Degrees including Post Graduate, PG Diploma and PhD

- Industrial and research experience of 33+ years
- Worked with Reliance Industries Limited (Hazira), Asian Paints India Ltd, Sahajanand Group
- Trustee in Bachkaniwala School, Surat

Acknowledgements:

The Chemical Engineering Department, SCET would like to thankfully acknowledge, Prof. (Dr.) Hiren Patel, Principal, SCET; Prof. (Dr.) Utpal Pandya, Dean R&D; Prof. Srujal Rana, Head, Chemical Engineering Department for their kind cooperation, motivation and support throughout. We thank the student coordinators for assisting with all the arrangements. We are grateful to all faculty members for gracing the event with their presence, laboratory assistants and attendants for their continuous support during this event. We thank all the student attendees for hearing with rapt attention and maintaining due decorum too.

-Compiled by : Dr. Swati Sharma, Professor, Chemical Engineering Department