



SEANEWS

CoE-SEA organized short-term certificate course on “Prevention through Design (PtD) and Redesign (PtR) to ensure product and process safety”

CoE-SEA, jointly with the Federation of Indian Chambers of Commerce and Industry (FICCI), organized a short-term online course on "Prevention through Design (PtD) and Redesign (PtR) to ensure product and process safety" from January 24th-30th, 2022. The course included lectures, tabletop exercises, and case studies on various topics like addressing safety issues using PtD, hazard identification and control, quantitative risk management, micro-hazard mapping and bow-tie management, energy control, work system design, etc.

Industry professionals, academicians, research scholars, safety consultants from different domains attended the course. The program was successful in imparting the concepts, principles and procedures to design for safety using the methodology of Prevention through Design and Redesign. The sessions were highly interactive and was well appreciated by the participants.



CoE-SEA offered micro-credit course on “Risk and uncertainty analysis”

The centre, in collaboration with guest faculty from the School of Engineering Technology, Purdue University, offered a micro-credit course on "Risk and Uncertainty Analysis" from March 18–31, 2022 for the students of IIT Kharagpur. The duration of the course is 12 hours with a credit of 1. 29 students opted in and actively attended the course. Lectures were given by Prof. J Maiti, Chairman of CoE-SEA and HoD, Department of Industrial and Systems Engineering; Prof. Gaurav Nanda, Assistant Professor, School of Engineering Technology, Purdue University; and Prof. Sayak Roychowdhury, Assistant Professor, Department of Industrial and Systems Engineering. The concepts of risk and uncertainty in decision making, the Bayes theorem and Bayesian decision making, Bow-tie analysis, FMEA, types and sources of uncertainties, methods of representing uncertainties, quantification of qualitative inputs, and quantification of model and parametric uncertainties were among the topics covered in the course.

EXPERT TALK ON SEMA UNDER AZADI KA AMRIT MAHOTSAV

WEEK 32

Dr. Theodore T Allen, Associate Professor, Department of Industrial and Systems Engineering, Ohio State University delivered his talk on “Industrial Engineering and Operations Research (IEOR) applications in cybersecurity and healthcare management”, on 07th January 2022.

Click here to watch the talk: [Link](#)



WEEK 38

Mr. Rajnish Kumar Jain, Safety Head, UG Coal Mining, Gainwell Commosales Pvt. Ltd. shared his thoughts, knowledge and experience on “Safety in underground coal mining” on 18th February 2022.

Click here to watch the talk: [Link](#)



WEEK 33

Mr. Sameer Abdul Azeez, Scientist F, NPOL, DRDO discussed on “Human factors in undersea warfare systems – Challenges and current trends” on 14th January 2022.

Click here to watch the talk:



WEEK 39

Dr. Saptarshi Mandal, User Research Specialist, Microsoft USA presented a talk on “Improving safety using data analytics and eye tracking – A case study in air traffic control operations” on 25th February 2022.

Click here to watch the talk: [Link](#)



WEEK 34

Prof. Biswajit Mahanty, Professor, Department of Industrial and Systems Engineering, IIT Kharagpur delivered his talk on “Decision analytics – Learning through systems archetypes” on 21st January 2022.

Click here to watch the talk: [Link](#)



WEEK 40

Mr. Atanu Chatterjee, Corporate Head, Safety Health and Environment, Texmaco Rail and Engineering Ltd. discussed “Safety from conceptual stage in construction – An overview” on 04th March 2022.

Click here to watch the talk: [Link](#)



WEEK 35

Prof. O B Krishna, Visiting Professor, Department of Industrial and Systems Engineering and CoE-SEA spoke on “Prevention through Design (PtD)” on 28th January 2022.

Click here to watch the talk: [Link](#)



WEEK 41

Prof. Jean Christophe Le Coze, Safety Researcher and Head, Research on human and organizational factors, INERIS spoke on “Safety Science Research – Evolution, challenges and new directions” on 11th March 2022.



WEEK 36

Dr. Jayachandran K, Chief General Manager, Fertilizers and Chemicals Tranvancore (FACT) Ltd. delivered a talk on “Safety management in fertilizer and petrochemical industry” on 04th February 2022.

Click here to watch the talk: [Link](#)



WEEK 42

Dr. Krantiraditya Dhalmahapatra, Assistant Professor, Thiagarajar School of Management, TamilNadu discussed “Applications of data analytics and virtual reality for accident causation and prevention” on 18th March 2022.

Click here to watch the talk: [Link](#)



WEEK 37

Prof. Pradip Kumar Ray, Emeritus Professor, Department of Industrial and Systems Engineering, IIT Kharagpur spoke on “Interface design and safety engineering – Applications in healthcare sector” on 11th February 2022.

Click here to watch the talk: [Link](#)



WEEK 43

Prof. Kara Kockelman, Professor, Transportation Engineering, University of Texas delivered his talk on “Anticipating and avoiding pedestrian crashes – Lessons from Texas and broader US” on 25th March 2022.

Click here to watch the talk: [Link](#)



Safety is a choice you make

RESEARCH IN FOCUS: SAFETY ANALYTICS AND VIRTUAL REALITY

The Safety Analytics and Virtual Reality Laboratory (SAVR) the first of its kind in India, is established in the year 2016 in the Department of Industrial and Systems Engineering at Indian Institute of Technology, Kharagpur.

Virtual Reality (VR) Laboratory is equipped with requisite hardware and software for modelling, simulation, data visualization and hands on training in the areas of accident modelling and analysis, design of man-machine interface and design of production and assembly.



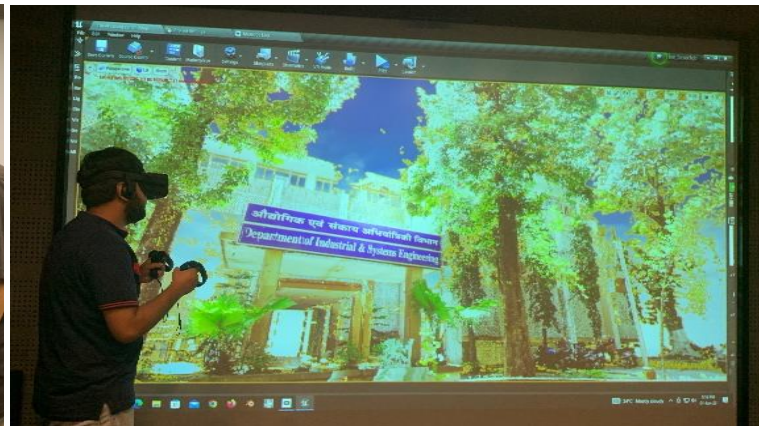
Visit of Padma Shri Prof Sankar Kumar Pal, Ex-Director, ISI Kolkata



Visit of Mrs Ruchika Chaudhary Govil, Joint Secretary, Ministry of Steel, India



Visit of Mr Sanjiv Paul, Vice President, Safety, Health & Sustainability, Tata Steel



Scholars working on Virtual reality model



Scholar working with 5DT Data Gloves



Scholar scanning the laboratory using Faro Scanner



Scholar working with 3D glasses

Safety is first aid to the uninjured

CoE-SEA PROJECTS

- AI and virtual reality modelling and collaborative learning of risk and situational awareness in the socio-technical system under disruptions.
- Evaluation of District Skill Development Planning (DSDP) awards.
- Evaluation of human factors and safety in submersible platform for acoustic characterization and evaluation.
- Centre of Excellence in Safety Engineering and Analytics.

Expect the unexpected and
always be protected

CENTRE NEWS

- The centre has completed 43-weeks of weekend talk in Safety Engineering, Management & Analytics and more talks are scheduled.
[Centre of Excellence in Safety Engg. & Analytics - YouTube](#)
- The centre along with Federation of Indian Chambers of Commerce & Industry (FICCI) is organised a 7-day **online short-term certificate course** on 'Prevention through Design (PtD) and Redesign (PtR) to ensure product and process safety' from 24th January 2022.
- The centre offered a micro-credit course on 'Risk and uncertainty analysis' in collaboration with guest faculty of School of Engineering Technology, Purdue University from Marc 18 – 31, 2022
- CoE-SEA commenced NPTEL course on Safety and Risk Analytics in Spring 2022. Visit [NPTEL](#)

PUBLICATION WATCH

- A data-driven penalty-reward methodology for performance assessment of risk control systems
<https://doi.org/10.1016/j.jlp.2022.104756>
- An integrated RFUCOM – RTOPSIS approach for failure modes and effects analysis: A case of manufacturing industry
<https://doi.org/10.1016/j.res.2022.108333>

FEEDBACK

It is an honor for me to be a part of your excellent efforts. Was very happy to meet you all. Many thanks for your complimentary mail too. If I could be any help in your endeavor, please let me know.

--- Dr. Jyoti Mukherjee
Reliability and Design Consultant for machine tools

The short-term course was a very good learning experience. Thanks to IIT Kharagpur and CoE-SEA. I am looking forward to more association with the organization.

--- Arun Kumar Das, L&T.

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Reach Us

Prepare and prevent, don't repair and repent