

INTERNATIONAL CONFERENCE ON SAFETY 2017

ICS 2017 Program Overview

MAIN CONFERENCE (JANUARY 03 – 04, 2017)	
January 03, 2017	
08:00 - 09:00	Registration
09:00 - 09:30	Welcome and Opening Address
09:30 - 11:30	Plenary Session I
11:30 - 11:45	Tea and Networking
11:45 - 13:15	Parallel Session 1
13:15 - 14:30	Lunch
14:30 - 16:00	Parallel Session 2
16:00 - 16:30	Tea and Networking
16:30 - 18:00	Parallel Session 3
18:00 - 19:00	Poster Session
18:30 - 20:30	Conference Dinner
January 04, 2017	
08:30 - 09:00	Tea
09:00 - 11:30	Plenary II
11:30 - 11:45	Tea and Networking
11:45 - 13:15	Parallel Session 4
13:15 - 14:30	Lunch
14:30 - 16:30	Parallel Session 5
16.30 -17.00	Valedictory Function

<i>SYMPOSIUM ON PROCESS SAFETY</i>	<i>SYMPOSIUM ON STRUCTURES UNDER FIRE</i>
<i>JANUARY 05 - 06, 2017</i>	<i>JANUARY 05 - 06, 2017</i>

Detailed Programme

Time	Program Details	Venue
Day 1 (January 03, 2017)		
08:00 - 09:00	Registration	Auditorium (600)
09:00 - 09:30	Welcome and Opening address by Dr. Chinmay Ghoroi (Convenor, ICS 2017) and Prof. S. K. Jain (Director, IIT Gandhinagar)	Auditorium (600)
Plenary Session I		
09:30 - 11:30		Auditorium (600)
09:30 - 10:20	Plenary 1: Prof.Sam Mannan , Texas A&M University <i>From Bhopal to the Current Times: are We Making Progress in Process Safety Performance?</i>	
10:20 - 10:50	Plenary 2: Shri.R.A.Venkitachalam , Underwriters Laboratories. <i>Public Safety in India</i>	
10:50 - 11:30	Plenary 3: Prof.Hans Pasman , Texas A&M University <i>Risk Assessment and management in Chemical Industries</i>	
Tea and Networking		
11:30 - 11:45		Academic Block 6 (1 st floor)
Parallel Session 1		
11:45 - 13:15	Process Safety I	Academic Block 6/202
	Fire Safety I	Academic Block 6/203
	Explosion Safety	Academic Block 6/201
Lunch		
13:15 - 14:30		Auditorium Area
Parallel Session 2		
14:30 - 16:00	Process Safety II	Academic Block 6/ 202
	Fire Safety II	Academic Block 6/ 203
	Earthquake Safety I	Academic Block 6/ 201
Tea and Networking		
16:00 - 16:30		Academic Block 6 (1 st floor)
Parallel Session 3		
16:30 - 18:00		

	Risk Analysis I	Academic Block 6/ 202
	Behavioral Safety	Academic Block 6/ 203
	Disaster and Public Management	Academic Block 6/ 201
18:00 - 19:00	Poster Session	Academic Block 6
19:00 – 21:00	Conference Dinner	Outside 600 Auditorium Area (Fountain Area)

Day 2 (January 04, 2017)		
08:30 - 09:00	Tea	
09:00 - 11:30	Plenary Session II	
09:00 - 09:30	Plenary 4: Shri. D. K. Shami , Fire Advisor, Govt. of India, <i>Fire Safety in India</i>	Auditorium (600)
09:30 - 10:20	Plenary 5: Prof. Venkatesh Kodur , Michigan State University, <i>Post 9-11 Construction Strategies in the US for Enhanced Fire Safety</i>	Auditorium (600)
10:20 - 10:50	Plenary 6: Shri Hirak Dutta , Advisor Essar Oil and Gas <i>HSE Challenges in Hydrocarbon Sector</i>	Auditorium (600)
10:50 - 11:30	Plenary 7: Prof. En Soop Yoon , Seoul National University, <i>Leadership for the Global Process Safety in Chemical Process Industries</i>	Auditorium (600)
11:30 - 11:45	Tea and Networking	Auditorium Area
11:45 - 13:15	Parallel Session 4	
	Process Safety III	Academic Block 6/202
	Construction Safety	Academic Block 6/201
	Fire Safety III	Academic Block 6/203
13:15 - 14:30	Lunch	
14:30 - 16:30	Parallel Session 5	
	Process Safety IV	Academic Block 6/202
	Earthquake Safety II	Academic Block 6/201
	Risk Analysis II	Academic Block 6/ 203

16.30-17.30	Valedictory Function	Academic Block 6/ 202
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Day 1: 03 January 2017		
PARALLEL SESSION 1 (11:45 - 13:15)		
SESSION 1	PROCESS SAFETY I (Academic Block 6/ 202)	
CHAIR	Prof. Sam Mannan (Texas A&M University)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote1 (Invited)	Risk Evaluation of Oil and NG pipeline and Steel Plants	Sm. Sutapa Bhattacharya (Director, National Safety Council)
Keynote 2 (Invited)	Challenges in Establishing Process Safety Management System:Bangladesh Perspective	Prof. Syeda Sultana Razia (Professor, Bangladesh University of Engineering and Technology)
Keynote 3 (Invited)	Incorporating Sustainability Considerations in Process Systems Engineering: Design for economic, environmental and safety criteria	Dr. Debalina Sengupta (Associate Director, Gas and Fuel Research Centre, Texas A&M Research Station)
SESSION 2	FIRE SAFETY I (Academic Block 6/ 203)	
CHAIR	Prof. Venkatesh Kodur (Michigan State University)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	New Concepts for Hazardous Waste Cleanup by Combustion	Dr. Ali Rangwala (Associate Professor, Fire Protection Engineering, Worcester Polytechnic Institute, USA)
FS1-P1	3D Physics-Based Modeling Of Large-Scale Flammable Cloud Dispersion Using FLACS	Varun Teja, Kirti Bhushan Mishra
FS1-P2	Consequence Modelling for Propellant Storage Facilities	Vimlesh Kumar Bind, Kamlesh Kumar Meena, Chitra Rajagopal
FS1-P3	A Study of The Causes And Events Leading to the Fire Disaster at Lac-Megantic, Canada On July 6, 2013"	Ajai Banerji
SESSION 3	EXPLOSION SAFETY (Academic Block 6/201)	
CHAIR	Prof. Hans Pasman (Texas A&M University)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Safety Management in Defence	Dr. Chitra Rajagopal (Chief Controller R&D, System Analysis and Modelling DRDO, Ministry of Defence)
EXS-P1	Improvisation of the Minimum Ignition Energy device for studying the effect of partial inerting on the MIE of dusts	Purvali Chaudhari, Chad Mashuga
EXS-P2	Estimation of TNT Explosion Potential for Aerial Fireworks Mixtures	V.Surendar, V.P.Sridhar, S. P. Sivapirakasam, M.Surianarayanan
EXS-P3	Effect of Dispersion on Particle Breakage in Dust Explosion Phenomena	Pranav Bagaria, Jiaqi Zhang, Chad Mashuga
PARALLEL SESSION 2 (14:30 - 16:00)		

SESSION 4		
PROCESS SAFETY- II (Academic Block 6/ 202)		
CHAIR		
Prof. En Soop Yoon (Seoul National University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Hydrogen Safety : Progress made, knowledge gap and role of CFD	Dr.Prankul Middha (Principial Engineer, Formerly at Gexcon and DNV GL, UK)
PS2-P1	Integrated Safety and Security Approach for Effective Risk Management of Hazardous Chemical Facilities	Satya Dobhal, Vimlesh Kumar Bind, Chitra Rajagopal
PS2-P2	Integration of Hazard Identification & Risk Assessment with Standardized Plant Analysis Risk-Human reliability analysis method in Automotive Industry	V.S.Vivek
PS2-P3	Advancing Safety Management with Effective Statistical Data Analysis	Kaushik Jayaraman
SESSION 5		
FIRE SAFETY II (Academic Block 6/ 203)		
CHAIR		
Prof. Venkatesh Kodur (Michigan State University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Full Scale glass Facade Fire Test @ IIT Gandhinagar	Dr. Gaurav Srivastava (Assistant Professor, IIT Gandhinagar)
FS2-P1	Evaluating Visibility and Toxicity Effects of Indoor Fires on Occupants' Escape Ability	Abhay Purandare
FS2-P2	Novel Approach to Fire Safety Training using 3D Virtual Simulation	Sayli Bhide, Luis Rabelo
FS2-P3	Directional Intelligence Fire Suppression System	Manjuprakash Rama Rao, Surajit Borah ,Anand Bandyal,P.U. Kamruddin,. Clive Weston, C. S. Bhaskar Dixit
SESSION 6		
EARTHQUAKE SAFETY I (Academic Block 6 /201)		
CHAIR		
Dr. Dhiman Basu (IIT Gandhinagar)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Earthquake Hazard in India	Dr. Sumer Chopra (Director, Institute of Seismological Research)
ES1 – P1	On Characteristics of Near-Field Ground Motion	Gopala Krishna Rodda and Dhiman Basu
ES1 – P2	Evaluation of Safety Culture in Construction Industry for Nasik City based on a three-point Likert scale	Ninad Anil Bonde, Dharani Kumar K, Rupesh Kumar Koshe and Anuja Anil Dalvi
PARALLEL SESSION 3 (16:30-18.00)		
SESSION 7		
RISK ANALYSIS I (Academic Block 6 /202)		
CHAIR		
Prof.Hans Pasma (Texas A&M University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Safety in Design of Chemical Process Plants.	Dr. M. Surianarayanan (Principal Scientist, CSIR - CLRI)
RA1-P1	Fuzzy FMECA (Failure Mode Effect Criticality Analysis) in LNG Terminal Operations	V.R. Renjith, Manoj Jose Kalathil, Haresh Kumar, Dilip Madhavan
RA1-P2	Integration of Risk and its Importance in the Process Industry	Ashutosh Kumar
RA1-P3	Fuzzy LOPA of Sodium hypochlorite plant in a Chlor-Alkali industry – A case study.	Amal. S. George, Renjith V. R.

SESSION 8		
BEHAVIORALSAFETY (Academic Block 6/203)		
CHAIR		
Prof. En Soop Yoon (Seoul National University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Six-Sigma reliability and the brain worker: Towards Error Proofing the Human Decision Maker	Prof. Rajagopalan Srinivasan (IIT Gandhinagar)
BS-P1	Developing a Reporting Culture Through Behavioural Changes Beyond The Gates	Prabhanjan Dixit,Kaushik Jayaraman
BS-P2	Development of Behavioral-Based Safety Culture in Industries -Need of the Hour	Srikanth P., Lokeshwaran P., Vijay M.
BS-P3	An integrative model towards improvement of the safety behaviour of employee at workplace	D. Shreyasi and S. Kalaiselvam
SESSION 9		
DISASTER MANAGEMENT (Academic Block 6 /201)		
CHAIR		
Prof. Dongil Shin (Myongji University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Emerging Trends in Public Alert & Warning System	Dr. R. K. Dave (Head Government Initiatives, Information Technology Research Academy, Media Lab Asia, MeitY, Govt. of India)
DM-P1 (Invited)	Implementing INSARG Marking System for Urban Search and Rescue (USAR) in India	Anju Sharma Chintan Pathak, Sachin Bhagat (GIDM, Gujarat)
DM-P2	Structural Equation Modelling of Work Injuries in the Construction Sector	Dongre, P., Jha, K.N., Patel, D.A
Day 2: 04 January 2017		
PARALLEL SESSION 4 (11:45 - 13:15)		
SESSION 10		
PROCESS SAFETY III (Academic Block 6/ 202)		
CHAIR		
Prof. Dongil Shin (Myongji University)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Functional Safety in first generation process plants.	Mr. G.Vishwanathan (Former DGM, Reliance Industries)
PS3-P1	Centre of Excellence: Tata Steel way to Process Safety	Surya Bhushan Kumar Sinha, Amit Kumar Singh, Rakesh Kumar Sharma, Vilas N. Gaikwad
PS3-P2	Safety issues in City Gas Distribution Network	Ajay kumar Sharma
PS3-P3(Invited)	Off-site Emergency Plan for Chemical Disasters Mitigation	Dr. R. K. Dave (Head Government Initiatives, Information Technology Research Academy, Media Lab Asia, MeitY, Govt. of India)
SESSION 11		
CONSTRUCTION SAFETY (Academic Block 6/ 201)		
CHAIR		
Dr. Gaurav Srivastava (IIT Gandhinagar)		
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Safety-An Introspection	Mr. Debasish Kar (Director General, Kolkata Municipal Corporation)
CS3-P1	A Fuzzy Multi Criteria Risk Assessment Methodology Based On Failure Mode And Effective Analysis: A Case Study In Construction Industry	Pavanaditya Badida, Jayapriya Jayaprakash

CS2-P2	Experimental Determination of Natural Frequency of Confined Masonry buildings by Ambient and Forced Vibration Testing.	Harshit Nema and Dhiman Basu
SESSION 12		
FIRE SAFETY III (Academic Block 6/203)		
CHAIR	Mr. D. K. Shami (Fire Advisor, Government of India)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Fire Behaviour of Reinforced Concrete Structural Elements	Dr.N Gopalakrishnan (Director, CSIR -CBRI)
FS3-P1	Progressive Collapse Analysis of RCC Planar Frames Subjected to Fire	P.Ravi Prakash , Gaurav
FS3-P2 (Invited)	CFT Columns at Elevated Temperatures: Behavior and Design	Dr.Anil Agarwal (Assistant Professor, IIT Hyderabad)
SF3-P3	Need to Revisit Fire Loads - Findings of a Recent Survey at Ahmedabad	Nasar A Khan and Gaurav Srivastava
PARALLEL SESSION 5 (14:30 - 16:30)		
SESSION 13		
PROCESS SAFETY IV (Academic Block 6/202)		
CHAIR	Prof. Sam Manan (Texas A&M University)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Atmospheric dispersion modelling and stochastic programming for optimal fence monitoring of gas release	Prof. Dongil Shin (Chemical Engineering, Myongji University)
PS4-P1	Quantitative Risk Assessment for Highway Due to Explosive Storage Facilities	Vimlesh Kumar Bind, Bimal Kumar, Arti Bhatt, P. K. Rai, Chitra Rajagopal
PS4-P2	Real-time, High-Sensitivity Chemical Sensing using LASERS for industrial process control and safety	Anirban Roy, Abhishek Upadhyay, Arup Lal Chakraborty
SESSION 14		
EARTHQUAKE SAFETY II (Academic Block 6/ 201)		
CHAIR	Dr. Sumer Chopra (Director, Institute of Seismological Research)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	A Robust Pushover Analysis for Multi-Component Seismic Excitations- A New Frame Work	Dr. Dhiman Basu (Assistant Professor, IIT Gandhinagar)
ES2-P1	Response analysis of asymmetric-plan system with viscous damper subjected to random ground excitations	C. C. Patel
ES2-P2	Probabilistic Seismic Hazard Assessment of Gujarat and its Implications on Seismic Design in the region.	Asim Bashir and Dhiman Basu
ES2-P3	Improving Construction Workers Safety through Design	C.Vigneshkumar, Monica Shrivastava, J.Uma Maheswari
SESSION 15		
RISK ANALYSIS II (Academic Block 6/ 203)		
CHAIR	Prof. Rajagopalan Srinivasan (IIT Gandhinagar)	
PAPER ID	TITLE OF THE PAPER	NAME OF THE AUTHORS
Keynote (Invited)	Barrier based Risk Assessment	Shri. Umesh Dhake (Asia Pacific Regional Manager, CCPS, AIChE)
RA2-P1	Safety Investment Optimization in Process Industry: A Risk-based Approach	Ankit Gupta and Sandip Roy
RA2-P2	Risk Evaluation of Oil And Natural Gas Installations Due	Yakesh Balasubramaniam, Pavanaditya

	to Natural Hazards Using Fuzzy Fault Tree Analysis	Badida, Jayapriya Jayaprakash
RA2-P3	Industrial Risk Management and Land Use Planning in India	Anandita Sengupta

Symposium on Process Safety

January 05, 2017 (Day 1)		Venue: Academic Block 6/202
08:30	Registration	
09:15 – 9:30	Welcome & Opening	
09:30 – 10:30	Prof. Sam Mannan Texas A&M University, USA	Safety Culture and Engineering Ethics
10:30 – 11:00	Tea & Networking	
11:00 – 12:30	Prof. Sam Mannan Texas A&M University, USA	Safety Culture and Engineering Ethics
12:30– 14:00	Lunch	
14:00 – 15:30	Prof. Hans Pasman Texas A&M University, USA	Root Cause Investigation
15:30 – 16:00	Tea & Networking	
16:00 – 17:30	Dr. Prankul Middha Principal Engineer,	CFD and Technical Safety - Need, Value and Approaches
19:30	Symposium Dinner & Networking Venue: IITGN - Auditorium Area	

January 06, 2017 (Day 2)		Venue: Academic Block 6/202
08:30	Registration	
09:30 – 10:30	Prof. Sam Mannan and Prof. Hans Pasman Texas A&M University, USA	Leading and Lagging Indicators: Key Performance Indicators
10:30 – 11:00	Tea & Networking	
11:00 – 12:00	Prof. Sam Mannan and Prof. Hans Pasman Texas A&M University, USA	Leading and Lagging Indicators: Key Performance Indicators
12:00-13:00	Prof. En Soop Yoon Seoul National University	Sustainability and Safety in the future
13:00 – 14:00	Lunch	
14:00 – 15:30	Dr. M. Surianarayanan CSIR-CLRI, Chennai	Reactive Chemicals and Process Hazards
15:30 - 16:00	Valedictory	

Symposium on Structures Under Fire

January 05, 2017 (Day 1)		Venue: Academic Block 6/203
8:30	Registration	
9:00 – 9:30	Dr. Gaurav Srivastava IIT Gandhinagar	Introduction and overview
9:30 – 10:30	Prof. Venkatesh Kodur Michigan State University	Introduction to fire safety <ul style="list-style-type: none"> - Historical perspectives, types of fire, codal provisions, objectives of fire safety design
10:30 – 11:00	Tea & Networking	
11:00 – 12:00	Dr. Anil Agarwal IIT Hyderabad	Fire behaviour <ul style="list-style-type: none"> - How fire behaves, different types of fire, growth rate calculations, link with FLED
12:00 – 13:00	Dr. Anil Agarwal IIT Hyderabad	Heat transfer principles <ul style="list-style-type: none"> - Mechanisms of heat transfer, design calculations for assessing temperatures inside structural members (RC and steel)
13:00 – 14:00	Lunch	
14:00 – 15:00	Prof. Venkatesh Kodur Michigan State University	Effect of fire on materials and structures <ul style="list-style-type: none"> - Mechanical and thermal properties of steel and concrete
15:00 – 16:00	Dr. Anil Agarwal IIT Hyderabad	Design of steel members
16:00 – 16:30	Tea & Networking	
16:30 – 17:30	Dr. Anil Agarwal IIT Hyderabad	Hands on session on design of steel members under fire
19:30	Symposium Dinner & Networking Venue: IIT Gandhinagar Auditorium Area	
January 06, 2017 (Day 2)		Venue: Academic Block 6/203
8:30	Registration	
9:00 – 10:00	Dr. Gaurav Srivastava IIT Gandhinagar	Design of reinforced concrete members

10:00 – 11:00	Dr. Gaurav Srivastava IIT Gandhinagar	Hands on session on design of RC members under fire
11:00 – 11:30	Tea & Networking	
11:30 – 13:00	Prof. Venkatesh Kodur Michigan State University	Fire safety provisions for high-rise buildings
13:00 – 14:00	Lunch	
14:00 – 15:00	Shri Abhay Purandare Consultant – Fire and Life Safety	Provisions in Indian codes for fire safety (NBC part 4)
15:00 – 15:30	Prof. Venkatesh Kodur Michigan State University	Performance-based fire design and research questions
15:30 – 16:00	Valedictory	