

***PURDUE PROCESS SAFETY AND  
ASSURANCE CENTER (P2SAC)  
FALL 2020 VIRTUAL CONFERENCE***

*AGENDA AT A GLANCE*

**Day 1 of 3**

Tuesday, December 1, 2020: 12:55 pm-4:50 pm

**Tutorial on process safety and assurance**

Prasad Goteti (Honeywell): Safety life cycle per IEC/ISA 61511

**Day 2 of 3**

Monday, December 7, 2020: 11:30 am-5:50 pm

**Mini conference on “General process safety and assurance”**

**Day 3 of 3**

Thursday, December 10, 2020: 1:00 pm-5:30 pm

**Mini conference on “Process safety and the pharmaceutical industry”**

# **PURDUE PROCESS SAFETY AND ASSURANCE CENTER (P2SAC) AGENDA FOR FALL 2020 VIRTUAL CONFERENCE**

## *TUTORIAL ON PROCESS SAFETY AND ASSURANCE*

Tuesday, December 1, 2020 (*Day 1 of 3*)

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| 12:55-1:00 | <b>Osman Basaran</b> (Gedge Professor ChE and Academic Director P2SAC, Purdue):<br>Welcome |
| 1:00-2:45  | <b>Prasad Goteti</b> (Honeywell): Safety life cycle per IEC/ISA 61511                      |
| 2:45-3:00  | Break  |
| 3:00-4:45  | <b>Goteti</b> tutorial continued   |
| 4:45-4:50  | <b>Osman Basaran</b> (Gedge Professor ChE and AD P2SAC, Purdue): Closing remarks           |

**Description/brief summary of tutorial:** Use a real plant example to walk through all steps of the Safety Life Cycle per the standards. This tutorial will touch upon the following topics - HAZOP, LOPA, SIL calculations, SRS, Functional Test Plans, and monitoring of Safety Functions during the Operation and Maintenance phase of the Safety Life Cycle.

# PURDUE PROCESS SAFETY AND ASSURANCE CENTER (P2SAC) AGENDA FOR FALL 2020 VIRTUAL CONFERENCE

## *GENERAL PROCESS SAFETY AND ASSURANCE*

Monday, December 7, 2020 (*Day 2 of 3*)

- 11:30-12:00 **Osman Basaran** (Gedge Professor ChE and Academic Director P2SAC, Purdue):  
Welcome, overview, and history and mission/goals of P2SAC
- 12:00-12:30 **Ray Mentzer** (Professor of Practice ChE and Executive Director P2SAC, Purdue):  
Welcome and overview of P-MS (PMP) and UG research projects
- 12:30-1:00 **Edward Marszal** (Kenexis): Assessing combustible and HF gas detection  
requirements for lithium ion battery containing facilities
- 1:00-1:30 **Bryan Boudouris** (Professor of ChE, Purdue): Low power, low cost portable gas  
sensors with highly specific chemical responses
- 1:30-2:00 **Laurence Pearlman** (Marsh): Learning from incidents - are we really learning  
and how to rethink investigations
- 2:00-2:30 **Trish Kerin** (IChemE): Leadership in process safety, now more than ever
- 2:30-3:00 **Vilas Pol** (Professor ChE, Purdue): Designing safer batteries via materials  
architectures and multimode calorimetry
- 3:00-3:15 Break
- 3:15-3:45 **Kingsly Ambrose** (Associate Professor ABE, Purdue) and **Carl Wassgren**  
(Professor ME, Purdue): Developing a non-contact dust layer thickness  
measurement system
- 3:45-4:15 **Bruce Vaughen** (CCPS): Understanding and managing the risk during the  
transient operating mode: Start-ups and Shut-downs

- 4:15-4:45 **Raj Gounder** (Associate Professor ChE, Purdue): Prevention through design and heterogeneous catalysis
- 4:45-5:15 **Letian Dou** (Assistant Professor ChE, Purdue): Safe and efficient printed perovskite solar cells and optoelectronics
- 5:15-5:45 **Donald Knoechel** (Fauske): Process safety scale-up aspects of a nitric acid-catalyzed hydrolysis of epichlorohydrin reaction
- 5:45-5:50 **Osman Basaran** (Gedge Professor ChE and AD P2SAC, Purdue): Closing remarks

# PURDUE PROCESS SAFETY AND ASSURANCE CENTER (P2SAC) AGENDA FOR FALL 2020 VIRTUAL CONFERENCE

## *PROCESS SAFETY AND THE PHARMACEUTICAL INDUSTRY*

Thursday, December 10, 2020 (*Day 3 of 3*)

- 1:00 – 1:15      **Ray Mentzer** (Professor of Practice ChE and Executive Director P2SAC, Purdue): Plans for event & overview of recent P2SAC pharma related research
- 1:15 – 1:45      **Ayman Allian** (AMGEN): Safe scale-up of an exothermic Grignard reaction based on thermal hazard understanding and engineering control
- 1:45 – 2:15      **Frank Dixon** (GSK): Playing with fire? A safe and effective quench of Raney cobalt using aqueous sodium nitrate
- 2:15 – 2:45      **Jeff Sperry** (Vertex): Assessing explosive properties in the pharmaceutical industry
- 2:45 – 3:15      **Brett Savoie** (Assistant Professor ChE, Purdue): High-throughput predictions of molecular thermodynamics and reactivity
- 3:15 – 3:25      Break
- 3:25 – 3:55      **Han Xia** (Lilly): Safe operating space for handling hydrogen evolved during stab hydrolysis
- 3:55 – 4:25      **Simon Rea** (Mettler-Toledo AutoChem): Utilizing heat flow calorimetry for understanding thermal risks of chemical processes during scale-up and safety studies
- 4:25 – 4:55      **Qiang Yang** (Corteva): Explosion hazards associated with using DMSO and DMF in chemical reactions
- 4:55 – 5:25      **Rexonni Lagare** (PhD candidate ChE, Purdue): Clearing the Air: Rethinking dust safety in pharmaceutical manufacturing
- 5:25 – 5:30      **Ray Mentzer** (Professor of Practice ChE, Purdue): Closing comments