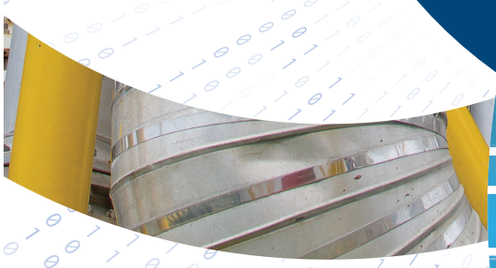
2019 EUROPEAN CONFERENCE ON PROCESS SAFETY & BIG DATA

An AIChE Technology Alliance
CCPS Center for Chemical Process Safety
EPSC

2019
EUROPEAN CONFERENCE ON PROCESS SAFETY & BIG DATA PROGRAM



OCTOBER 1-2, 2019

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FRANKFURT AM MAIN, GERMANY

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TIPS FOR A SUCCESSFUL MEETING

Say **hello** to everyone.
You might make someone's day.

Introduce yourself to people you don't know.
They may be your next good friends.

Stop and **smile**.
You will brighten the room considerably.

Be **understanding**.
Everybody makes mistakes.

Help those with less experience.
We were all novices at some point.

Respect others.
We all have something valuable to contribute.

Value staff and volunteers.
They are here for you.

Be **kind**.
You will never like everybody, but you can be cordial to all.

Enjoy the meeting!
You can have fun while sharing,learning and networking.

WELCOME ADDRESS

Dear Participants,

On behalf of the Center for Chemical Process Safety® (CCPS®) and the European Process Safety Center (EPSC), we are pleased to welcome you to the 2019 European Conference on Process Safety and Big Data. This is the fourth edition of the conference in Europe, featuring Augmenting Process Safety Performance through Big Data, Digitalization and Robotics, jointly organized by CCPS and EPSC.

The first three editions of this conference series were held in 2016, 2017 and 2018, respectively, and we received excellent feedback from all attendees and stakeholders. Those who attended these events have felt that Big Data, in relation to Process Safety, is an emerging area and we must stay abreast with this important evolving subject, as it can deliver exceptional value to our key stakeholders. This event will serve as a common platform that brings together our key stakeholders - industry, academia, governmental regulatory agencies, and labor organizations, to lead the way in improving industrial process safety and achieving process safety excellence.

We would like to acknowledge our technical planning committee and presenters, who worked tirelessly with presenters to put together the best presentations that you will enjoy at this conference at the DECHEMA-House in Frankfurt am Main.

It is with the generous support of our sponsors and exhibitors that conferences like this are made possible. We are thankful for their dedication and contribution to the global process safety community.

Finally, we would also like to thank all of you for attending this conference. It is an excellent opportunity to exchange between peers and learn from experts about process safety and big data. We hope as you participate, your time will be well spent, enriching, and inspiring.

We sincerely hope that you will enjoy the conference!

Shakeel H. Kadri
Executive Director & CEO, CCPS

Hans Volkmar Schwarz
EPSC Board Member

Pol Hoorelbeke
TOTAL Fellow Process Safety
EPSC Board Member

COMMITTEE MEMBERS & EXHIBITORS

2019 Conference on Process Safety and Big Data, Planning Committee Members

Abdul Aldeeb
Siemens

Gus Carroll
Centrica

Ivan Castillo
Dow Chemical

Tony Downes
Honeywell

Thomas Froese
atlan-tec Systems

Arthur Groot
DSM Resins & Functional Materials

Charles Harper
Air Liquide

Pol Hoorelbeke
TOTAL

Tijs Koerts
EPSC

Daniel Mottaghi
TOTAL

Rendall Ricardo
Dow Chemical

Richard Pawulski
Air Liquide

Hans Schwarz
BASF

Mike Synder
DEKRA

CCPS Staff

Shakeel Kadri
CCPS Executive Director

Willi Meier
CCPS European Regional Manager

Jing Chen
CCPS Senior Engineering Specialist

Horst Massong
CCPS Europe Project Manager

Evan Flach
AIChE Associate Director, Sales

Exhibitors

AcuTech Consulting Group Inc

CGE Risk Management Solutions

Emerson

eVision Industry Software

Siemens Process & Safety Consulting

Sphera

Versatec Energy B.V.

PROGRAM SCHEDULE

OCTOBER 01, 2019 – DAY 1	
8:30 AM - 8:50 AM	**WELCOME ADDRESS - Shakeel Kadri and Hans Schwarz**
8:50 AM - 10:00 AM Keynotes session chair: Shakeel Kadri	**KEYNOTE 1:** Integrating the Digital Field Worker **Torsten Schroeter**, **Benjamin Weiher**, and **Alex J. Wood**, Aveva
	KEYNOTE 2: Digital Tools to Help Operators and Technicians Avoid Incidents Caused by Human Error **Dror Barak,** GOARC
10:00 AM - 11:00 AM Panel session chair: Richard Pawulski	**PANEL DISCUSSION - Process Industry's Evolution Towards Big Data for Process Safety: Challenges and Successes** **Panelists:** • Dow: **Erik Jan van den Heuvel** • Dupont: **Nicolas Sands** • TOTAL: **Pol Hoorelbeke** • Shell: **Marijn Bezuijen**
11:00 AM - 11:25 AM	**Coffee Break**
11:25 AM - 12:55 PM	**SESSION 1: Tools to Avoid Human Errors**
Session chair: Willi Meier	Safety Through Digitization – Digital Field Solutions that Enable and Empower, **Sebastian Loeb**, Honeywell
	Decision Support Platforms and Industry 4.0, **Jim Petrusich**, Northwest Analytics
	Unprecedented Process Safety Improvements through Dynamic Barrier Risk Management, **Michel Tol**, eVision Industry Software
12:55 PM - 1:55 PM	**Lunch**
1:55 PM - 3:25 PM	**SESSION 2: Data Lakes / Intelligent Dashboards / KPIs**
Session chair: Willi Meier	Overcoming of Accuracy and Computing Time of Online Model-Based Reactor Safety Concepts, **Johannes Biernath**, Center of Safety Excellence
	From Incidents to Intelligent KPIs: The Construction of Safety Indexes Based on Events, **Chabane Mazri, Ineris**
	Using an Artificial Intelligence Technique and Quantitative Data in Risk Assessment Matrix: Fuzzy Sets Approach **Pedro Prado**, Petronew Engenharia e Projetos and University of Campinas
3:25 PM - 3:50 PM	**Coffee Break**
3:50 PM - 5:20 PM	**SESSION 3: Data Lakes / Intelligent Dashboards / KPIs and Big Data Analytics**
Session Chair: Hans Schwarz	Integrating Operational and Enterprise Risk Management to Improve Asset Integrity and Reliability,**Sam Williams**, ERM and Igor Milic, MOL Group
	Big Data Analytics and Emergency Management, **Begum Dogan**, CASGEM
	Finding Health & Safety Buried Treasure with AI, **James Neophytou**, IBM
5:20 PM - 5:50 PM	**SESSION 4: Big Data Analytics and Standards**
Session chair: Pol Hoorelbeke	Applying Analytics to the Process Safety Life-Cycle: Reveal and Repair Process Safety Vulnerabilities, **Nicolas Sands**, DuPont and **Tony Downes**, Honeywell
5:50 PM	**RECEPTION & POSTER SESSION**

Note: Posters will be displayed during all breaks, Lunches and at Reception

PROGRAM SCHEDULE

OCTOBER 02, 2019 – DAY 2	
8:30 AM - 8:50 AM	**WELCOME ADDRESS - Pol Hoorelbeke** and **Willi Meier**
8:50 AM - 9:25 AM Keynote session chair: Pol Hoorelbeke	**KEYNOTE 3:** Applying Safety Analytics for Improving Organizational Risk Capability to Reduce Incident Frequency and Severity: From Heavy Industry to the Modern Tech World, **Joe Stough**, WAITR, INC.
9:25 AM - 10:25 AM Panel session chair: Abdul Aldeeb & Tony Downes	**PANEL DISCUSSION - Current Technology Developments for EHS Digital Solutions** **Panelists:** • Sphera: **Uwe Schneider** • Honeywell: **Sebastian Loeb** • IBM: **Thomas Garvin**
10:25 AM - 10:50 AM	**Coffee Break**
10:50 AM - 12:20 PM	**SESSION 5: Practical Examples/Case Studies and Plant Monitoring**
Session chair: Daniel Mottaghi	Journey from a Disconnected to an Integrated Workflow in Process Plant Operation, **Sven Lohmann**, Emerson
	Cloud QRA: Developing Digital Twins for Offshore Installations, **Zoe Wattis**, DNV GL and MyQRA: Dynamic Quantitative Risk Assessment and Online Sensitivities, **Olivier Baldan**, DNV GL
	A Holistic Approach for Managing Past, Present and Future of Operational Process Safety, **Steve Elliott**, Schneider Electric
12:20 PM - 1:10 PM	**Lunch**
1:10 PM - 2:40 PM	**SESSION 6: Robotics in Support of Safety & Predictive Maintenance**
Session chair: Mike Snyder	Insight in the Use of Drones at Total, **Julien da Vela**, TOTAL
	Equipment Predictive Analytics for Predictive Monitoring. **Monica Florentina Hildinger**, Siemens
	Applying Deep Learning and Sequence Mining in Alarm Management, **Janos Abonyi**, University of Pannonia
2:40 PM - 3:15 PM Keynote session chair: Pol Hoorelbeke	**KEYNOTE 4:** Artificial Intelligence for Process Safety: Past, Present, and Future, **Venkat Venkatasubramanian**, Columbia University (This presentation will be virtual)
3:15 PM - 3:40 PM	**Coffee Break**
3:40 PM - 4:40 PM	**SESSION 7: Standard & Methods and Augmented Reality**
Session chair: Hans Schwarz	Mission #2 to the Safety Data Universe , **Joep Coenen**, Versatec Energy and **Mark Van 't Zet**, Radial SG
	Is Big Data Analysis Really Worth for Instrumentation?, **Christian Demski**, Dow Chemical
4:40 PM	**Vote of Thanks & Plan for 2020**

Note: Posters will be displayed during all breaks, Lunches and at Reception

CODE OF CONDUCT

AIChE® Volunteer and Meeting Attendee Conduct Guidelines

AIChE's volunteers are the core of the Institute and make all of its programs, conferences and educational efforts possible. These offerings provide excellent opportunities for AIChE members and meeting attendees to gain greater technical expertise, grow their networks, and enhance their careers. AIChE events provide engineers, scientists, and students a platform to present, discuss, publish and exhibit their discoveries and technical advances.

At all times, volunteers and meeting attendees should act in accordance with AIChE's Code of Ethics, upholding and advancing the integrity, honor and dignity of the chemical engineering profession. AIChE's Board of Directors has developed these guidelines to foster a positive environment of trust, respect, open communications, and ethical behavior. These guidelines apply to meetings, conferences, workshops, courses and other events organized by AIChE or any of its entities and also to volunteers who conduct other business and affairs on behalf of AIChE.

Specifically:

1. Volunteers and meeting attendees should understand and support AIChE's Code of Ethics.
2. Volunteers and meeting attendees should contribute to a collegial, inclusive, positive and respectful environment for fellow volunteers and attendees, and other stakeholders, including AIChE staff.
3. Volunteers and meeting attendees should avoid making inappropriate statements or taking inappropriate action based on race, gender, age, religion, ethnicity, nationality, sexual orientation, gender expression, gender identity, marital status, political affiliation, presence of disabilities, or educational background. We should show consistent respect for colleagues, regardless of discipline, employment status, and organizations for which they work, whether industry, academia, or government.
4. Disruptive, harassing or other inappropriate statements or behavior toward other volunteers, members, and other stakeholders, including AIChE staff, is unacceptable.
5. Volunteers and meeting attendees should obey all applicable laws and regulations of the relevant governmental authorities while volunteering or attending meetings. Volunteers and meeting attendees taking part in any AIChE event, including the Chem-E-Car Competition®, should also comply with all applicable safety guidelines.

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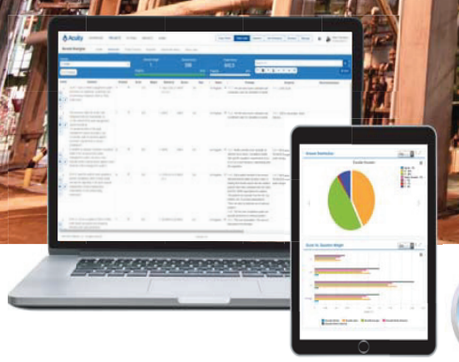
NOTES

Acuity®

Promote a clear vision of risk across your business



Key Benefits

- Improve process safety performance
- Efficiently manage assessments
- Keep informed with dashboards
- Benchmark performance
- Manage actions & tasks
- Collaborate seamlessly in real-time
- Work online, offline or mobile

Aligns and adapts to your risk methodology

Provides insight to the risk across your business

Strengthens leadership, teamwork and collaboration

Optimizes and empowers the way risk is managed

Generates a positive culture towards risk, builds confidence

Acuity® is an innovative cloud-based software solution which enables the mobility of existing safety, security and environmental management programs, facilitating field-level assessments and audits. Acuity® connects your organizational knowledge, integrates and improves your existing management system processes, while empowering your teams with assessment, audit and analysis tools.

To learn more about Acuity® and receive a product demo, please contact us at info@acutech-software.com.

AcuTech has been the leader in process safety and security consulting since 1994. Our consultants have internationally recognized expertise in all aspects of process safety and security management programs including PHA, LOPA, QRA, Facility Siting, SRA, CFATS, WSA, and emergency response and management as well as training classes. Please let us know how we can help you.

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