2024 MARY KAY O'CONNOR PROCESS SAFETY & RISK CONFERENCE, OCTOBER 22-24, 2023

21-October-20	024 6:00 PM – 8:45 PM		rre-Registration & Networking	(Hilton Roof Top, All are Welcome)		
720 015	T		Breakfast			
7.30 - 8.15 $8.15 - 9.15$			Plenary Speaker – Dr. Michael Hamblin (Wo	(akida)		
9:15-9:25			Booth Exhibitors Presentation	oodside)		
9:15-9:25			Regroup to Breakout Rooms - Coffee Br	ool;		
Room	Mockingbird	Amphitheater	Unique1	North/South	Oakwood Ballroom	
Koom	Wiockingbird	Ampintheater	•	Noi tii/Soutii	Oakwood Baiii oolii	
9.45 – 11.45	Managing Process Safety	Hydrogen Safety	Consequence Analysis, Flammability, Combustion, Explosion	Ocean Safety Day	Data Technology	
9.45 – 10:15	Keynote Address – Dr. Ray Mentzer	Keynote Address – Dr. Md Modarres	Keynote Address – Dr. Paolo Gardoni	Keynote Address -Dr. Steven Wong	152, Azizli, AI Technology	
0:15 – 10:45	51 -Advancing Pipeline Safety: Leveraging Machine Learning and Data Analytics for Leak Failure Prediction- Hadiseh Ebrahimi	159 - Insights for hydrogen safety from Quantitative risk assessment (QRA): implications for fueling stations, forklifts, pipelines, and electrolyzers – Katrina Groth	33- Modified Williams' Mist Model to Include Shape Effects- Henry Foust	73- Machine Learning for Deepwater Drilling Operations: Case studies for Rig State Classification, Early Gas Kick Detection, and Downhole Quantitative Evaluation of Gas Kicks- Mayank Tyagi	123, Malone, Cybersecurity	
10:45 – 11:15	139-The Situation in the Field of Safety Culture in the Czech Republic with Regard to the Prevention of Major Accidents-Ivana Slovackova	NFPA 2: A Working Overview of Hydrogen Facility Fire Codes – 52- Joshua Ruiz	55-Fire of plant protection products - hazard identification-Jan Przybysz	96- Innovations in the Integrity Management of Offshore Grating- Ioannis Kalpakidis	30, Chow (E), Digital Transformation	
11:15 – 11.45	88-Risk and Supply Chain Issues in Optimizing Hazardous Materials Transportation Schemes- Vasiliki Kazantzi	Investigating the Formation of H2/O2 Explosive Mixtures in Low/High Pressure PEM Water Electrolyzers: A Fault Tree Analysis Approach – 23 – Luc Vechot	7-Assessment of the Vaporization Rate of Sulfur Dust and Its Application in the Prediction of the Associated Dust Explosion Properties-Asma Abousrafa	216- Around Monopiles and Its Implications for Safety- Nadim Zgheib	112, Antosh, Connected Workforce	
11.45-1.00			Lunch - Plenary Speaker – Dr. Scott Davis, Exhibito	rs Presentation		
1.00 - 3.00	Functional Safety, Control Systems, ASM, SIS/SIL/LOPA, Alarms	Learning from Incidents, Investigations, Case Histories, Incident Data	Operational Risk Management	Ocean Safety Day	Instrumentation	
1:00 - 1:30	42- Impact of Device Mission Time on Safety Instrumented System Lifecycle Cost-Rajeev Limaye	Keynote Address – Trish Kerin	150 - Risk based approach to establish on site health centers in the Oil and Gas Sector – 150- Diara Malick	170- Use of digital twin and machine learning for real- time estimation of wave/current and riser/mooring dynamics with fewest sensors- MooHyun Kim	64, McMillan, pH	
1:30 - 2:00	29-BPCS IPLs: Not all BPCS loops are created equalAracely Acevedo Arteche	188-Safety Culture: Almost 40 years of Experience- Mark Griffon	135 -Enhancing Risk Management by ensuring effective Emergency Response Plan for Hydrogen and Ammonia-SEC Success Story – Surendra Mahakalkar	181- Hydrate Formation with the Memory Effect Using Classical Nucleation Theory- Emre Arslan	13, Hoover, In-Situ Verification of Mass, Density, and Volume	
2:00 - 2:30	37 -Improving Integration between Process Safety and Functional Safety- Jenny Wilson	141-Thirty Year Review and Analysis of Reactive Incidents. Real Cost and Prevention of Future Incidents-Irene Uriarte Villanueva	32 -Captive Key Systems as an Effective Process Control Method- Virginia Holland	85- BSEE Renewables – A Different Approach to Oversight- Jonathan Fraser	47, Machuca (E) PRV monitoring	
2:30 - 3:00	77-Fault-prognostic Explicit Control of Safety- Critical Reaction Processes with Bayesian State Estimation-Austin Braniff	154-When Knowledge Transfers: Connecting Lessons Learned to Organizational Memory-Kristin Robbins	62-Aligning Process Safety Competency with Confidence to Improve Risk-Based Process Safety Decision-Making in the Process Industry: Enhancing Engineering with Psychology-Luc VECHOT	194- Offshore Crane Safety Related to Human Errors: A Review- Weihang Zhu	43, Braun, Temperature Excursion Interlock	
3.00 – 3.30			Break - Exhibitors Presentation			
3.30 – 5.30	Asset Integrity Management	Accident Modelling and Investigation	Risk Assessment	Ocean Safety Day	Process Control Systems	
3.30 – 4:00	204 -Internal Corrosion Management and Failure Analysis Framework- Susmitha Kotu	99-Consequence Modelling for Ammonia Safety: A Comparative Analysis for Assessing Toxicity Risks in Industrial Applications-Khama Matiti	66 -Using an Enhanced Onshore QRA Tool and PowerBI to Analyze and Manage Risk Effectively- Ganesh Mohan	41 - Application of Safety Critical Task Analysis (SCTA) method in the offshore industry- Toby Garner	Panel 15, Mozisek, Control Migration Challenges	
4:00 – 4.30	116-Risk Based Inspection and Maintenance Procedure for Chemical Supply Piping in Semiconductor Facilities-Kee Bong Yoon	147-A physics-informed data-driven model applied for gas dispersion modelling of complex geometry-Savio Vianna	163-Hierarchy of Process Control is Just a Corporate Philosophy or Implemented Effectively-Rajender Dahiya	120 - Understand the Cognitive Science that Underpins Reliable Safety Designs- Tom Shephard		
4:30 - 5:00	211-Application of Machine Learning Concepts in Inspection Data Management System at Process Plant Facilities-Dheerajkumar R Narang	129-Natech accidents caused by wildfires and Interfaces fires: an emerging threat for the chemical and process industries-Valerio Cozzani	78 -An Operability Case Study of a Proton Exchange Membrane Water Electrolyzer System- Beatriz Dantas	213- Metahuman Models for Reducing Human Exposure to Hazardous Conditions During Offshore Wind Turbine Operations and Maintenance- Jian Tao	Workshop 45, Beall, Control Valve Performance	
5:00 - 5:30	215-Small Bore Tubing – Guidelines for Mitigating Static & Dynamic Loads-Damien Hurley	160-Re-Thinking Root Cause Analysis: How Common Problem-Solving Tools Contradict the Fundamentals of Science and Engineering-Mark Galley	101-Our Approach to review and improve quality in Process Hazard Analysis (PHAs)-Karthick Deivasagayam	40 - Human Factors Considerations – Ammonia Fuel in the Maritime Industry- Toby Garner		
5:45 - 8:00		<u> </u>	Awards Banquet – Free for all registra	nts	<u>I</u>	

	7.30 - 8.15									
	8.15 – 9.15 9.15 – 9.25									
	9:30-9:45			Regroup to Breakout Ro						
	Room	Mockingbird	Amphitheater	Unique1	North	South	Oakwood Ballroom			
	9:45 – 11.45	Cyberphysical System and Big Data	Managing Process Safety	Accident Modelling	Learning from Incidents, Investigations, Case Histories, Incident Data	Ocean Safety Day	Safe Automation Practices 1			
	9:45 – 10:15	46-Navigating the Convergence of Safety and Security Risks-Kok Hwa Lim	31 -Alternatives to Car Seal Management Programs- Virginia Holland	Keynote Address – Dr. Nancy Currie Gregg	151-Using Machine Learning and Keyword Analysis to Analyze Incidents and Reduce Risk in Oil & Gas Operations-Michael Marshall	174- Enhancing Ocean Surface Current and Wave Estimation Through Real-Time Inverse Modeling Using TABS Buoy Data and Artificial Neural Networks- Dosoo Kwon	95, Aguilar, Organization Culture			
	10:15 – 10:45	183-Exploring Control and Safety System Architectures: Assessing Cybersecurity Pros and Cons'-Marco Ayala	76 -Facility Siting Tolerance Criteria - Do's and Don'ts- Annette Ashiofu	205-Chlorine and Ammonia Removal by Dry Deposition during an Accidental Release-Tom Spicer	169-Imagining the Future – Disaster Prevention Is A Verb, 35+ Years Post Piper Alpha-Robert Wittkower	187- System Risk: a hybrid methodology for exploring the risk propagation of wave energy system- Nima Golestani	16, Zhong, PHA to SIS			
	10:45 – 11:15	58-Zero Trust Network Architecture for Operational Technology-Alexandre Peixoto	164-Open Actions Means Unmitigated Risk: Are You in Control of your Actions-Rajender Dahiya	184-Enhancing Safety Assessments for Cryogenic Hydrogen: Cost-Effective Simulation with Dimensionality Reduction Techniques-Javad Mohammadpour	56-Troubleshooting BGCAPP MPT Startup Temperature Indicator Installation Error with Process Knowledge, Calculation and Modeling-Joseph Wall	190- Exploring Uncertainties in Multi-Purpose Offshore Platforms: A System Dynamics Approach to Marine Energy and Aquaculture Integration- Minghan Bao	54 Reilly, Alarm Management			
	11:15 – 11.45	167- Development of a risk assessment matrix for Canadian renewable energy projects- Uyen Dao	38-Improving Safety Performance: Compliance versus Competence - How will the Process Industries transcend from the former and achieve the latter?-Michael Taube	61-Investigating the regimes following underground gas releases: from Gas Migration to Crater Formation-Ola Srour	84- Identification of reference scenarios from incident datasets using Bayesian Network- Matteo laiani	201- Insights over the Enzymatic Conversion of Carbon Dioxide Utilization for Onboard Carbon Transportation- Mohammad Elkady	119, Hall, Application Software			
	11.45-1.00		,	Lunch/ Exhibitor's	s Presentation	-	1			
	1.00 - 3.00	Data Analytics and Big Data	Consequence Analysis, Flammability, Combustion, Explosion	Managing Process Safety	Hydrogen Safety	Ocean Safety Day	Safe Automation Practices 2			
23-October-2024	1:00 - 1:30	198-Barrier management as a basis for the functional integration of safety and security domains in critical infrastructures - an analysis of the existing technical framework-Juan Angarita	21-Experimental study of sulfur vaporization rate in the context of sulfur dust explosion-Luc	75 -Assessing Safety Culture Across Five Oil and Gas Refineries: A Comprehensive Study- Reza Sanij	125-DNS MODELLING OF FLAME DYNAMICS IN LEAN HYDROGEN MIXTURE AT DIFFERENT PRESSURES-Savio Vianna	49- Beyond Technical Barriers: Enhancing Onboard Safety through Human-Machine Interaction Management in Ammonia-Powered Ships- Rustam Abubakirov	103, Klein, ISA 84.91.03			
2 - 23-Octo	1:30 - 2:00	208-Teaching Cyber Security to Chemical Engineering Students-Helen lou	60- Analysis of Flammability and Smoke Emission of Wood-Based Materials- Kamila Mizera	87 -Using online risk tools (CloudQRA) to consider risk mitigation for atypical large open domains such as FLNG and deepwater facilities- Zoe Wattis	102-Unlocking the Power of Safety: Innovative Strategies for Explosive Protection in Hydrogen Applications- Andreas Brandl	107- SMART-SEA: Ship Collision Avoidance of Stationary Structures through Integrated Machine Learning Radar Image Detection and High-Fidelity Maneuvering Models- Mirjam Furth				
Day	2:00 - 2:30	79 -A cyber-attack detection based on time-delay mutual information analysis- Fangyuan Ma	127-Are empirical explosion models enough to evaluate far-field explosion pressures with complex topography?-Jesse Brumbaugh	158-Multilevel Flow Modeling for Improving Safety of Hydrogen Refueling Stations-Ruixue Li	197-A Global Mapping of Best Practice Design Standards for Hydrogen Project Developers-Bryce Levett	191- On the Design of Ports and Vessels for Safe and Efficient Installation of Offshore Wind Farms- Shintaro Sobashima	118, Muthu, SIS Digitalization			
	2:30 - 3:00	171-Applying Advanced Data Analytics to Predict (and Prevent) Process Safety Incidents-Meor Ahmad Qadri Mohd Zahari	86-Evaluation of a multi-phase dispersion model for the simulation of CCUS scenarios-Andreas Mack	185-Crediting Fired Equipment Protection Systems in Process Hazard Analysis-Karen Morton	182-Selecting Hydrogen Storage in Saudi Arabia: A Multi-Criteria Framework Integrating FAHP for Uncertainty and Safety- YooJeong Oh	97- Mooring Analysis of Floating Offshore Wind Turbines in Shallow to Intermediate Water Depths- Haidong Lu	132, Cheyna, Guidelines for IPS and SIS			
	3.00 – 3.30	Coffee Break/ Exhibitor's Presentation								
	3.30 - 5.30	Operational Excellence, Best Practices, Worker Involvement	Risk Assessment	Process Safety Automation	Accident Modelling	Ocean Safety Day	Test Considerations			
	3.30 – 4:00	161-Elevating Process Safety through Incident- Driven Insights and KPI Optimization; The SASREF ModelSaeed Alzahrani	67- How PowerBI and an Improved Offshore QRA Tool Enable Faster and Better Risk Decisions- Ganesh Mohan	3-Fundamentals of AI - Creation of a HAZOP Automation and Augmentation Tool-Edward Marszal	44-COMMON PSM GAPS REVEALED IN WORLDWIDE FATAL PROCESS SAFETY INCIDENTS-Sheraz Syed	189- Reliability Assessment of Floating Offshore Wind Platforms Susceptible to the Pitch Motion in Random Loads- Weishan Lyu	Workshop 93, Skweres, Thibodaux, and Garcia, Proof Testing			
	4:00 – 4.30	106-Optimizing Process Safety for Operational Excellence-Muhammad Iqbal Qasim	17-Project Safety Analysis (PSA): A Tool For Reducing Risk by Participative Developent of a Project-Specific Hazard Control and Safety Plan-David Breeding	26-Process Control and Safety Operation- Hans Sauer	65-Lifting the Veil: A Decade of Research Reveals New Thinking and Industry Trends in Human Factors and Operational Resilience- David Wilbur	48- An Overview of Safety Aspects and Risk Analysis of Critical Events in Offshore Oil Well Drilling Operations- Anilett Benny				
_	4:30 - 5:00	9-The Role of Process Safety Knowledge Management in Operational Excellence- Tekin Kunt	36- How to get data for your risk assessment and how to use its results? The marvels of expert elicitation and the decision-making process Hans Pasman	71-The SIS certification numbers - how hard can it be?-Martin McDonough	206-A comparison between genetic algorithm and integer optimisation for gas detector optimisation based on computational fluid dynamics-Savio Vianna	148- Remote Smart Monitoring of Offshore Wind Plant Components- Mario Rotea	166, Summers and Bukowski, Using Maintenance Records to Support API 754 Tiers 3 and 4 Metrics			
	5:00 - 5:30	14-Improving Operations Leaders PSM Decision Making-Dave Drerup	68- Phast CFD: A Novel Extension to Onshore QRA Applications- Ganesh Mohan	53-Remote Operations – Plant Design & Safe Operations Strategy-Javeed Mohammed	202-Hybrid CFD/analytical approach to assure safe blanketing of storage tanks-Bjorn Nilberg	192- Multi-fidelity Digital Twins for Prognostics Safety Management of Offshore Wind Plants- D. Todd Griffith	104, Elton, Logic Solver Testing			
	6.30 - 9.00		<u> </u>	BBQ Networking Session	on (Brazos Center)	I	1			

	7.30 – 8.15	Breakfast									
	8.15 – 9.15										
	9.15 – 9.25										
	9:30-9:45	Regroup to Breakout Rooms - Coffee Break									
	Room	Mockingbird	Amphitheater	Unique1	North	South	Oakwood Ballroom				
	9.45 – 11.45	Operational Excellence	Accident Modelling	Consequence Analysis, Flammability, Combustion, Explosion	Managing Process Safety:	Functional Safety / Corrosion & Material Failure	Optimizing Reliability				
	9.45 – 10:15	224-Preventive Risk Engineering: Revolutionizing Insurance Inspections- Rajender Dahiya	39- Counterfactual and rethinking of accident causality: Why inspections cannot prevent all accidents? – He Wen	176-How Important Is the Correct Wind Direction in Your Simulation?-Vinicius Simoes	178-A Common Approach to Toxic Risk Safeguards-Rance Ford	59- Reduce Loss of Containment Safety Risk with Continuous Real-Time Corrosion Monitoring-Michael Machuca	Panel 207, Propst, Instrumentation Reliability				
	10:15 – 10:45	124-The Institute for Operational Excellence and Learning-Stewart Behie	210- Fire and Explosion Hazards Associated with the Transfer of Powders into Flammable Solvents- Emmanuel Addai	137-Evaluation protocol for BLEVE models- Logan Vogelsong	72-Examining the Feasibility of Common Coverage Targets for Hazard Mapping- William Pittman	18-Is ISA 84.91.03 in agreement with NAMUR NE 165?-Luis Manuel Fernando Garcia Garcia					
	10:45 – 11:15	117-Enterprise Loss Prevention: The Path to Achieve Operational Excellence-Dave Drerup	74- How Modeling the Mixing Condition Enable us to Prevent Detonation- Reza Sanij	138-Validation of KFX against dispersion data sets-Logan Vogelsong	222-Hazard Identification at Laboratories & Pilot Plants-Ibrahim Al-Jamaan	1-Process Safety - Protecting People and The Environment-Stefan Mizera	Workshop 122, Shephard, Cognitive Ergonomics				
	11:15 – 11.45	5-A human-factors-oriented framework for dynamic risk assessments in aviation operations-Nazmul Rahmani	200-Application of Dynamic Simulation for Accurate Relief Rate Estimation and Dispersion Modeling: A Case Study in Process Safety-Reza Sanij	168-Leveraging CFD to Effectively Evaluate Sensitivity to Ignition Locations when Designing for Explosion Loads-Drew Botwinick	8-Enhancing the Implementation Strategy of "Simultaneous Operations (SIMOPS)" for the Major Turnaround at Pertamina Plaju Refinery- Daniswara Krisna Prabatha	195-The Value in Applying Process Safety Management to Enhance Safety in Non- Mandatory Compliance Facilities-Domingo Elias					
	11.45-1.00			Lunch			Ethics Training				
	1.00 - 3.00	Managing Process Safety	Hydrogen Safety	Process Safety Automation and Resilience	Consequence Analysis, Flammability, Combustion, Explosion	Cyberphysical Systems	Upgrading Existing Automation				
-2024	1:00 - 1:30		193-Quantitative Risk Assessment of Hydrogen Powered Passenger Car in Road Accidents-Mahasin Alam Sk	173-Safety and Productivity Benefits Using Electro-Hydraulic Actuators for Liquid Chemical Feed Control-Mark Ferra	100-Development of a Practical Guidance Document for Determination of Fire Scenarios and Passive Fire Protection Requirements at Oil & Gas Facilities- Onder Akinci	212-Feature Selection Methodology for Developing a Supervised Machine Learning Model for Risk Based Inspection Study on Process Plant Assets- Dheerajkumar R Narang	111, Barton, Grandfather's SIS				
24-October-2024	1:30 - 2:00	179-Integrating Climate Change Impact on Process Safety Management in the Oil and Gas Industry-Nabila Farhana Binti Jamaludin	50 -Detonation cell sizes for hydrogen- methane mixtures- Milin Martin	140-Model-based fault diagnosis for safety- critical chemical reactors: An experimental study- Pu Du	70-Pyrophoric Material Safe Handling & Risk Management Control-Omar Marghalani	89-IT/OT/ICS & IoT Asset Disposition (ITAD): Review of Methods, Standards, and Certifications for Managing Cybersecurity-Kris Hardwick	57, Green, Increase Furnace Capacity				
ay 3 - 24-	2:00 - 2:30	217-Identification and Performance Analysis of Eco Friendly Fire Retardant on Wood Surface Testing Surfaces with Solved based Paint- Jayandran Mohan		98-Magnetic Nanoparticles as Draw Solute in Forward Osmosis Treatment of Produced Water-Sunith Madduri	126-Multi-BESS Flame Propagation Analysis: A Comparative CFD Study between Open Source and Commercial Software Solutions-Savio Vianna	223-Towards Automating Process Decomposition and Interdependencies Modeling in Heterogeneous Systems-Eman Hammad	131, Fatima, Upgrade Project for Urea Plant				
	2:30 - 3:00	109-On the use of sufficiency of measure for optimization of safety critical elements register-Darmawan Ahmad Mukharror	80 -Domino Effect Analysis of Hydrogen Production and Storage Systems in a diversified facility Himesh	203-Chemical Weapons Convention and its relevance to the safety and sustainability of the chemical industry-Sultana Syeda	22-Modeling of the behavior of a gas generating chemical system under runaway conditions during venting-Luc VECHOT		165, Ulaganathan, PSSR as Safeguard				
	3.00 - 3.30			В	reak						
	3.30 - 5.30	Learning from Incidents, Investigations, Case	Asset Integrity Management	Risk Assessment	Accident Modeling	Risk Assessment					
	3.30 – 4:00	Histories, Incident Data 130-Numerical Modelling of hydrogen jet fire of storage facilities-Advaith Sunil	196-Impact of Impurities in Onboard CO2 Transportation and Storage: A Review-Md Saiful Islam	108-Key performance indicator for assessing quality of qualitative risk assessment – case studies in Indonesia-Darmawan Ahmad Mukharror	199-Enhancing Process Safety in Specialty Chemical Industry through Accurate Estimation of Physical Properties-Reza Sanij	133-Fuzzy Based Failure Mode ,Effect and Criticality Analysis (FMECA) on Tower Crane- Nivedh Renjith Nambiar					
	4:00 - 4.30		115-Machine Learning based approach to support Dynamic Risk Assessment in chemical process industries in Kochi, Kerala, IndiaKARTHIK RAJEEV	172-Development of Integrated Inherently Safer Design Assessment Framework using Phenomena Identification and Ranking Table (PIRT)Mardhati Zainal Abidin	39-Counterfactual and rethinking of accident causality: Why inspections cannot prevent all accidents? - He Wen	149-Dynamic Risk Assessment of LPG storage sphere in a Process Industry using Failure Assessment and Bayesian Theory-VIGNESH P NAIR					
	4:30 - 5:00	92-Existence of a mitigative measure under more than one element of hierarchy of control measures simultaneously-KRISHNAMOORTHI G	209-INTEGRATION OF PROCESS HAZARD ANALYSIS IN DIGITALTWIN-Arun Shourie Angaluri	114-Stay low-key, unlock the key result indicator for quality metrics of the quantitative risk assessment – case study on eight wellhead platforms in Indonesia-Darmawan Ahmad Mukharror	177-Process Safety in LNG terminals: Challenges and Opportunities-Renjith Ravindran	12-Quantitative Risk assessment of an underground methanol pipeline crossing a city (case study of a 6km methanol pipeline crossing Chabahar city)-Mahmood Akbari					
	5:00 – 5:30	134-Enhancing Safety Integrity level determination in batch reactor: A comparative study of fuzzy logic augmented layer of protection analysis-Vaishnav Vinod	144-Comprehensive tool for calculating ROSI-Abdul Razak P S	175-Accuracy And Reliability of LOPC Calculations: A Validation Study-Syaza Izyanni Ahmad	143-Dynamic risk analysis of hydrogen storage facilityE S NAVEEN KRISHNA	153-DYNAMIC FAILURE PROBABILITY ANALYSIS OF URBAN GAS PIPELINE NETWORK-Ahammed Sahal					