

AEWG-63 Agenda
 May 16-18, 2022
 Stress Engineering
 Times are in US Central Time

Monday, May 16, 2022, Stress Engineering and Social at Top Golf

2:00-5:00PM	Primer on the AE Applications in the Oil, Gas and Energy Industry Short lectures and hands-on testing and measurement at Stress Engineering
6:00-9:00PM	Social at Top Golf

Tuesday, May 17, 2022, Stress Engineering

8:00-8:20AM	Breakfast
8:20-8:30AM	Welcome and Introductions <i>Didem Ozevin, Chairman of AEWG</i> Welcome Remarks by Stress Engineering <i>Napoleon Douglas, Meeting Chair</i>
8:30-9:30AM	Keynote Presentation – Dr. Ripi Singh NDE 4.0 – How to build your Digitalization Roadmap
9:30-10:00AM	Tea and Coffee Break <i>AEWG Awards Committee Meeting (by invitation)</i>

10:00-12:20 PM Session 1: Oil, Gas and Energy Applications		
S1-1	10:00-10:20AM	AE Applications in Oil and Gas Napoleon Douglas
S1-2	10:20-10:40AM	Challenges of Big data management from acoustic emission monitoring projects Arturo Nunez
S1-3	10:40-11:00AM	COPV Inspection and Recertification using Acoustic Emission Obdulia Ley

S1-4	11:00-11:20AM	NDE in-service storage tank bottom robot John Nyholt and Adam Nyholt
S1-5	11:20-11:40AM	R&D Trends of Non-Destructive Testing of CFRP High-Pressure Hydrogen Tanks in Japan (Virtual) Y. Mizutani, T. Matsuo, K. Ito, S. Suzuki and M. Takuma
	11:40-12:20PM	Panel Discussion
	12:20-1:30PM	Lunch <i>AEWG Nominating Committee Meeting (by invitation)</i>
1:30-3:40 PM Session 2: Sensors and Instrumentation		
S2-1	1:30-1:50PM	Comparison of signals from a shear sensor, resonant sensor and conical sensor as a result of pencil lead breaks on the edge of a large aluminum plate Marvin Hamstad
S2-2	1:50-2:10PM	Use of a Shear-Horizontal Guided Wave Sensor for Improved AE Inspection Cody Borigo, Joseph Rose, Ronnie Miller
S2-3	2:10-2:30PM	Performance Comparison Between Fiber-Optic and Piezoelectric Acoustic Emission Sensors Mario Sorgente, Aydin R. Zadeh and Abdelkrim Saidoun
S2-4	2:30-2:50PM	Progress on MEMS Acoustic Emission Sensors Talha Khan and Didem Ozevin
S2-5	2:50-3:10PM	Practical Aspects of NDE4.0 Implementation in Acoustic Emission Applications Valery Godinez-Azcuaga
	3:10- 3:40PM	Panel Discussion
	3:40-4:00PM	Tea and Coffee Break <i>AEWG Executive Committee Meeting (by invitation)</i>
4:00-5:40 PM Session 3: Adrian Pollock Student Paper Submissions Session Chair: Valery Godinez		
S3-1	4:00-4:20PM	Temporal Diagnosis of ASR Expansion in Simulated Nuclear Containment Leveraging Convolutional Neural Networks and Acoustic Emission Li Ai University of South Carolina
S3-2	4:20-4:40PM	An Energy-efficient Acoustic Emission Acquisition System Pedram Bazrafshan New Mexico Institute of Mining and Technology

S3-3	4:40-5:00PM	An IoT-based Crack Monitoring System Leveraging Acoustic Emission Monitoring and Information Entropy Sarah Malik Drexel University
S3-4	5:00-5:20PM	Development of a Laser Based Acoustic Emission Method for Non-Contact Damage Detection Hammad Ur Rehman Ohio University
S3-5	5:20-5:40PM	Acoustic Emission detection and signal analysis for crack growth in snow (Virtual) Sakshi Sharma Panjab University

	6:30-9:30PM	Banquet and Award Ceremony
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Wednesday, May 18, 2022, Stress Engineering

	8:00-8:25AM	Breakfast
	8:25-8:30AM	Announcements
	8:30-9:30AM	Vendor Presentations: MISTRAS Group, Vallen Systeme, ATG, KRN Services
9:30-12:00 PM Session 4: Composite and Metallic Structures		
S4-1	9:30-9:50AM	Classification of Acoustic Emission Signals in Composite Specimen (Virtual) Duy Tran, Manoj Rijal, Travis Obie-Rolle, Mannur Sundaresan
S4-2	9:50-10:10AM	Using Acoustic Emission to Detect and Diagnose Loose Knee Prosthetics in the Laboratory Ronnie Miller, Fabrizio Billi, Aryeh Goldberg and Vignesh Iyer
S4-3	10:10-10:30AM	A IoT-based Self-Correcting Additive Manufacturing System Leveraging Acoustic Emission Monitoring Sarah Malik, Hadi Khezam, Dhruv Shah, Pablo Huang Zhang and Antonios Kontsos
S4-4	10:30-10:50AM	Acoustic Emission Monitoring to Determine Process-Microstructure-Properties-Behavior Relationships of Additively Manufactured metals Emine Tekerek, Vignesh Perumal, Lars Jacquemetton, Darren Beckett, Scott Halliday, Brian Wisner and Antonios Kontsos
S4-5	10:50-11:10PM	A Natural Language Processing Based Planetary Gearbox Fault Diagnosis

		with Acoustic Emission Signals David He, Jae Yoon, and Miao He
S4-6	11:10-11:30PM	Analysis of Shear Horizontal Component of Acoustic Emission waves in Plates (Virtual) Duy Tran, Manoj Rijal, Travis Obie-Rolle and Mannur Sundaresan
	11:30-12:00PM	Panel Discussion
	12:40-2:00PM	Lunch Break
2:00-3:40 PM Session 5: Infrastructure Applications		
S5-1	2:00-2:20PM	Assessment of bridge deck performance with overall elastic wave velocity by AE tomography Tomoki Shiotani, Nobuhiro Okude, Shogo Furuno and Yasushi Tanaka
S5-2	2:20-2:40PM	Protocols and Criteria for Acoustic Emission Monitory of Damage to Fracture-Critical Steel Bridges Arturo E. Schultz, Anton S. Tillmann, David Thompson and Daniel Morton
S5-3	2:40-3:00PM	Acoustic Emission Testing of Yankee Dryers Stanley F Botten
S5-4	3:00-3:20PM	An Experimental Study on the Failure Identification of Basalt-FRP Reinforced Concrete Slabs using Acoustic Emission Tonghao Zhang, Mohammad Mahdi, Mohsen Issa and Didem Ozevin
S5-5	3:20-3:40PM	Temporal Diagnosis of ASR Expansion in Simulated Nuclear Containment leveraging Convolutional Neural Networks and Acoustic Emission (Virtual) Li Ai, Paul Ziehl
	3:40-4:00PM	Coffee Break

4:00-5:30 PM Session 7: AEWG Business Meeting		
	4:00-5:00PM	AEWG Business Meeting (Open to All)
	5:00-5:30PM	Tour
	5:30PM	AEWG-63 adjourns.