

The 9th EVI-GTI International Gas Turbine Instrumentation Conference

20 - 21 November 2019
Grand Hôtel Wiesler, Graz, Austria

Agenda

Tuesday 19 November 2019

18:30 - 20:00	Early Registration and Get Together
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Wednesday 20 November 2019

07:30 - 08:45	Registration and Welcome Refreshments
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09:00	Conference Chair Welcome Ralf Obertacke, President EVI-GTI Welcome to Graz! Michael Hirschler, Managing Director Piezocryst Advanced Sensorics GmbH
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09:15	Keynote Session #1 “Role and Challenges of CFD in the Design of Gas Turbines“ Raul Vazquez, Senior Aerothermal Specialist- Engineering Fellow, Rolls-Royce plc., UK
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10:00	Morning Refreshments and Registration Elevator Pitches
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10:30 - 12:10	Session 1 Chair: Pete Loftus Test Cell Concepts and Instrumentation
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25 min. 10:30-10:55	1.1 A GT Facility for the Development of New Sensor and Other Technologies M Christodoulou, SCITEK Consultants Ltd, UK
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25 min. 10:55-11:20	1.2 The Siemens Vane Cascade Rig – Pushing the Limits in Gas Turbine Testing R. Obertacke, S. Dahlke, Siemens Gas & Power, Germany
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25 min. 11:20-11:45	1.3 Advanced Rig for Permanent Magnet Alternator Testing M Christodoulou, M Biggs, D Steele, J Bates, M Christodoulou, SCITEK Consultants Ltd, UK, J Adams, W Weare, Rolls-Royce plc, UK
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25 min. 11:45-12:10	1.4 Acceptance Tests of a New Turbomachinery Test Facility M Henke, H Rätz, J R Seume Leibnitz University Hannover, Institute of Turbomachinery and Fluid-Dynamics, Germany
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12:15	Elevator Pitches: 6x 5 Minutes Company and Product Presentations <i>Chair: James P. Roberts</i>
12:45	Lunch
13:45 14:30	EVI-GTI Lab Gap Matrix <i>Chair: James P. Roberts</i>
14:30 - 16:35	Session 2 <i>Chair: Michele Scervini</i> New Sensors and Innovative Measurement Technologies
25 min. 14:30-14:55	2.1 A Review on Forcing Pulsations by Means of a Siren for Gas Turbine Applications F Giuliani, M Stütz, N Paulitsch, <i>Combustion Bay One e. U. Graz, Austria</i> L Andracher, <i>University of applied Sciences, FH Joanneum, Austria</i>
25 min. 14:55-15:20	2.2 Real Time Crack Detection on a Turbocharger Turbine Disc During Cycle Tests B Klein, <i>ABB Turbo Systems, Switzerland</i>
25 min. 15:20-15:45	2.3 Pulsation and Vibration Measurement on Stator Side for the Purpose of Turbocharger Turbine Blade Vibration Monitoring T Ando, <i>ABB Turbo Systems Ltd, Switzerland</i>
25 min. 15:45-16:10	2.4 Deformation Monitoring of Rotating Objects using Digital Image Correlation, P J Sousa, F Barros, P J. Tavares and P M Moreira, <i>Laboratory of optics and experimental mechanics, INEGI, Portugal</i>
25 min. 16:10-16:35	2.5 Enhancing Process Efficiency Through Improved Temperature Measurement: The Empress Projects J Pearce, G Sutton, G Machin, <i>National Physical Laboratory, UK</i> , A Heyes, A Andreu, <i>University of Strathclyde, UK</i> , F Edler, <i>Physikalisch-Technische Bundesanstalt, Germany</i> , A Fateev, <i>Danmarks Tekniske Universitet, Denmark</i>
16:35	Afternoon Refreshments Registration for factory tour
17:00 - 18:30	The Way Forward for EVI-GTI, EVI-GTI 2020 Conference & Journal Publications of EVI-GTI Papers <i>EVI-GTI Board and all Attendees</i>
18:30	Drinks
19:30	Conference Dinner

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08:30	Morning Refreshments
09:00 - 09:50	Session 3 <i>Chair: Michele Scervini</i> Engine Measurements for Performance Evaluation
25 min. 09:00-09:25	3.1 BEARCAT, the Heavily Instrumented Turboshaft by SAFRAN J Champion-Reaud, G Bidan, P Lambert, C Mendes, <i>Safran-Tech, France</i>
25 min. 09:25-09:50	3.2 Thermal Performance Evaluation in Gas Turbine Aero Engines Accessory Gearbox S Jafari, T Nikolaidis, A Bouchareb, <i>Cranfield University, UK</i>
09:50	Morning Refreshments Registration Elevator Pitches & Factory Tour
10:20 - 11:10	Session 4 <i>Chair: Ralf Obertacke</i> AI, Machine Learning and Controls
25 min. 10:20-10:45	4.1 TGSim Plus™ - Real-Time Dynamic Simulation Suite of Gas Turbine Systems for the Matlab®/Simulink® Environment. A Brighenti, D Duranti, D Quintabà, <i>S.A.T.E. Systems and Advanced Technologies Eng., Italy</i>
25 min. 10:45-11:10	4.2 Advanced Control System Design for Emission Reduction in the Next Generation of Turbofan Engines Using Artificial Neural Networks S Jafari, T Nikolaidis, <i>Cranfield University, UK</i> , M Aghasharifian Esfahani, M Montazeri-GH, <i>Iran University of Science and Technology, Tehran, Iran</i>
11:10 – 11:45	EVI-GTI Lab Gap Matrix, Part II / EVI-GTI Board internal Meeting <i>James P. Roberts and all Attendees</i>
11:45 – 12:15	Elevator Pitches: 6x 5 Minutes Company and Product Presentations <i>Chair: James P. Roberts</i>
12:15	Lunch

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13:15 – 14:30	Session 5 - Part 1 <i>Chair: Andreas Zeisberger</i> Non-Contact Optical Sensors
25 min. 13:15-13:40	5.1 Towards an Ultra-High-Speed Combustion Pyrometer A Sposito, D Lowe, G Sutton; <i>National Physical Laboratory, UK</i>
13:40 14:25	Keynote Session #2: „Measurement Technologies and Solutions for the Automotive R&D Market“ Michael Mühlögger, Business Unit Manager Measurement Technology, AVL, Graz, Austria
14:25 – 16:30	Session 5 - Part 2 <i>Chair: Andreas Zeisberger</i> Non-Contact Optical Sensors
25 min. 14:25-14:50	5.2 Combined Optic-Acoustic Monitoring of Combustion in a Gas Turbine F Giuliani; L Andracher, <i>FH Joanneum Graz, Austria</i>
25 min. 14:50-15:15	5.3 Review of a Custom-Designed Optical Sensing System for Aero-Engine Applications I García, <i>AOTECH, Spain</i> , G Durana, J Amorebieta, R Fernández, J Zubia, <i>University of the Basque Country UPV/EHU, Spain</i> ,
25 min. 15:15-15:40	5.4 High Temperature Distribution Monitoring in Gas Turbine Exhaust Ducts with Multi-Point Fibre-Optic Sensors F Dutz, J Roths, <i>Munich University of Applied Sciences, Germany</i> , S Boje, U Orth, <i>MAN Energy</i>
25 min. 15:40-16:05	5.5 The development and Introduction of High Temperature Optical Pressure Sensors In Gas Turbine Combustion Monitoring Applications. I Macafee, <i>Oxsensis Ltd, UK</i>
25 min. 16:05-16:30	5.6 Temperature Decline Thermography for Heat Transfer Visualization in Gas Turbine Rigs S von Hoesslin, J Gründmayer, A Zeisberger, M Sommer, <i>MTU Aero Engines AG, Germany</i> , Ch Kähler, <i>Universität der Bundeswehr, Germany</i>
16:30	EVI-GTI Chair’s Closing Comments: Ralf Obertacke, Pete Loftus
16:40	Afternoon Refreshments
17:00	Factory Tour: Piezocryst / AVL