



GTI 2016

27 – 29 September 2016 | Novotel Berlin Am
Tiergarten, Berlin, Germany

Tuesday 27 September 2016

08:00	Registration and welcome refreshments
09:00	Chairs Welcome Peter Loftus, Rolls-Royce plc, UK
	Session 1 Sensing systems for EHM and Control Session Chair:
09:10	Introduction and update on NATO AVT workshop (TITLE TBC) Harvey Niska, <i>Senior Technology Manager, Honeywell Aerospace, USA</i> Radoslaw Przynowski, <i>Assistant Professor, ITWL – Air Force Institute of Technology, Poland</i>
10:00	The need for quality checks of signals relevant for control R Widhopf-Fenk, J Hermann, <i>IfTA GmbH, Germany</i>
10:30	Refreshments and exhibition
11:00	Robust data exchange mechanism for low power wireless sensor networks A F Hills, D G Holtby, V Kadiramanathan, A R Mills, <i>The University of Sheffield, UK</i>
11:30	Piezoelectric energy harvesting as energy source for autonomous intelligent wireless systems on gas turbines L G H Staaf, E Köhler, P Lundgren, P Enoksson, <i>Chalmers University of Technology, Sweden</i> , J Kemp, M Allen, <i>Coventry University, UK</i> , A Lindblom, S Zenkic, <i>GKN Aerospace, Sweden</i> , M Christodoulou, <i>SCITEK Consultants Ltd, UK</i> , J Roberts, <i>Rolls-Royce plc, UK</i>
12:00	Supercapacitor with increased capacitance at 200°C E Köhler, L G H Staaf, P Enoksson, <i>Chalmers University of Technology, Sweden</i>
12:30	From lab tests to rig and engine tests: the challenges to develop new low drift nickel based thermocouples for gas turbines M Scervini, <i>University of Cambridge, UK</i>
13:00	Lunch and exhibition
14:00	Proof of concept thermoelectric energy harvester powering wireless sensor on gas turbine E Köhler, L G H Staaf, P Enoksson, <i>Chalmers University of Technology, Sweden</i> , M Allen, <i>Coventry University, UK</i> , S Zenkic, A Lindblom, <i>GKN Aerospace, Sweden</i> , M Christodoulou, <i>SCITEK Consultants Ltd, UK</i> , J Roberts, <i>Rolls-Royce plc, UK</i>
14:30	Configurable wireless and less wired data concentrator J Bates, Z Sobkow, D Adams, M Christodoulou, <i>SCITEK Consultants Ltd, UK</i> , S Gier, <i>Rolls-royce plc, Germany</i> , J P Roberts, <i>Rolls-Royce plc, UK</i>

15:00	Refreshments and exhibition
	Session 2 Measurements in Flows Session Chair:
15:30	Traverse system for experimental characterization of low pressure turbine stages A De Grassi, G Mattioli, G Angione, <i>Loccioni Group, Italy</i> , M Varriani, R Martoriello, V Panizza, <i>Avio Aero GE Aviation Business, Italy</i>
16:00	Measurement of industrial gas turbine inlet air mass flow rate using a 3D (cuboidal) ultrasonic sound path arrangement A R Boucher, <i>Real Time Power Inc., Switzerland</i> , F Xin, <i>Real Time Power Inc., USA</i>
16:30	Precursor for thermoacoustic instability in annular combustion systems, based on output-only system identification D Rouwenhorst, J Hermann, <i>IFTA GmbH, Germany</i>
17:00	Conference chair closing remarks Peter Loftus, <i>Rolls-Royce plc, UK</i>
17:10	Close of Day 1
17:15	Drinks Reception <i>Novotel Berlin Am Tiergarten</i>

Wednesday 28 September 2016

08:30	Morning refreshments and exhibition
	Session 3 Vibration and Clearance Session Chair:
09:00	Opportunities for advanced sensors and measurements in gas turbine engines R H Niska, <i>Honeywell Aerospace Co, USA</i>
09:30	An airjet excitation system for measuring the fatigue life of gas turbine blades J Bates, M Haste, M Christodoulou, <i>SCITEK Consultants Ltd, UK</i>
10:00	Tip-clearance measurement in a legacy turbojet with the use of an optical fiber sensor R Przynowa, <i>ITWL – Air Force Institute of Technology, Poland</i> , I García, J Zubia, <i>University of the Basque Country UPV/EHU, Spain</i>
10:30	Refreshments and exhibition
11:00	Vibration and clearance measurements using magnetoresistive sensors R Tomassini, <i>CISAS - University of Padova, Italy/ von Karman Institute, Germany</i> , G Rossi, <i>University of Perugia, Italy</i>
11:30	Design considerations of triangulation based optical blade tip clearance sensors M Willsch, <i>Siemens AG, Germany</i>
12:00	Hot section demonstration of an uncooled multi-function blade tip clearance and timing sensor M Laing, <i>S Poland, Prime Photonics, USA</i>
12:30	Lunch and exhibition
	Technical Site Visits – Details to be confirmed

13:15	Transport to depart
14:15	Technical site visit to commence
16:00	Transport to return to hotel
17:00	Close of day 2
19:00	Conference Dinner <i>Capt Schillow Restaurant</i>

Thursday 29 September 2016

08:30	Morning refreshments and exhibition
09:00	Keynote:
	Session 4 Control and Sampling Session Chair:
09:30	A new method for intelligent sampling and storage of vibration waveforms <i>S J Sabin, SETPOINT Vibration, USA</i>
10:00	Siemens Digital Torque Sensor - Contact free and capable for multi-purpose applications <i>U Pfeifer, H G Brummel, Siemens AG, Germany</i>
10:30	Refreshments and exhibition
11:00	The efficiency enhancement in thermal power plant by controlling the combustion process <i>M M Omar, R A Rasoul, M S Zagloul, I Y El Adly, Arab Academy for Science and Technology, Egypt</i>
11:30	Safe operation of combined cycle gas turbine and gas engine systems using hydrogen rich fuels <i>K Moodie, W Rattigan, B Ewan, Health and Safety Laboratory, UK, M Christodoulou, SCITEK Consultants Ltd, UK</i>
12:00	Standards Committee meeting (TITLE TBC)
13:00	Lunch and exhibition
	Session 5 Temperature measurement and Harsh Environment Sensing Session Chair:
14:00	Fibre optical temperature sensor for potential gas turbine applications <i>R D Pechstedt, A Sposito, C Langton, Oxsensis Ltd, UK</i>
14:30	Non-Intrusive pyrometer temperature measurements in a Siemens Industrial Gas Turbine <i>A Lantz, A Laendin, R Forsén, Siemens Industrial Turbomachinery AB, Sweden</i>

15:00	Temperature distribution measurement in gas turbine exhaust path-field test report of a distributed fiber optical high temperature sensor M Willsch, T Bosselmann, <i>Siemens AG, Germany</i>
15:30	Refreshments and exhibition
16:00	Development and validation of a long wavelength infrared (IWIR) radiation thermometer for contactless temperature measurements in gas turbines during operation J Manara, M Zipf, T Stark, M Arduini, H-P Ebert, <i>Bavarian Center for Applied Energy Research (ZAE), Germany</i> , A Tutschke, <i>Siemens AG, Germany</i> , A Hallam, J Hanspal, M Langley, <i>Meggitt Sensing Systems, UK</i> , J Hartmann, <i>University of Applied Science Wuerzburg-Schweinfurt, Germany</i>
16:30	Synchronous capture of GT combustor operating conditions and main combustion dynamics parameters combining quasi-static and fast-response measurements in a well-documented and compact manner F Giulinai, L Pfefferkorn, C Wieland, <i>Combustion Bay One e.U., Graz, Austria</i> , H Reiss, <i>Meggitt Sensing Systems, Switzerland</i>
17:00	Final closing remarks Peter Loftus, <i>Rolls-Royce plc, UK</i>
17:10	Close of Conference