

Tuesday 29th

08:00	Registration + Coffee (Hall)		
09:00	Welcome Plenary Session (Plenary Room)		
	Keynote Plenary Session (Plenary Room)		
	Chairman: Giorgio Dalpiaz		
09:20	Intelligent Vibration Signal Processing for Condition Monitoring		
	Keynote lecture by Pr Asoke K. NANDI, Brunel University, London, UK		
10:00	Time Domain Cyclostationarity Signal Processing Tools		
	Keynote lecture by François LEONARD, Hydro-Quebec, Canada		
10:40	Coffee Break (Hall)		
	PLENARY ROOM	ORAL SESSIONS	ROOM ONE
	Signal Processing (Cyclostationarity)		Case Studies
	Chairmen: Mohamed El Badaoui and Didier Remond		Chairman: Bob Randall
11:00	Comparison of Methods for Separating Excitation Sources in Rotating Machinery <i>Renata Klein</i>	Development of a Monitoring System for Air Bubbles Detection in an Internal Gears Pump <i>Michele Cotogno, Marco Cocconcelli, Riccardo Rubini</i>	
11:20	Coupling Cyclostationarity and Near-field Acoustic Holography for Bearing Fault Recognition <i>Corentin Chesnais, Jean-Hugh Thomas, Jean-Claude Pascal</i>	Impeller Fault Detection for a Centrifugal Pump using Principal Component Analysis of Time Domain Vibration Features <i>Berli Kamiel, Gareth Forbes, Rodney Entwistle, Ilyas Mazhar, Ian Howard</i>	
11:40	Diagnosis of Belt Drives Based on Cyclostationary Approach <i>Donald Rotimbo, Francois Guillet, Marius Béka, Mohamed El Badaoui</i>	Gear Fault Diagnosis by Motor Current Analysis – Application to Industrial Cases <i>Francois Combet</i>	
12:00	Analysis of Vibration Signals using Cyclostationary Indicators <i>Georges Ishak, Amani Raad, Jérôme Antoni</i>	Practical Methodologies for On-site Measurements of Torsional Natural Frequencies – Application to Industrial Cases <i>Jean-Luc Vasselín</i>	
12:20	Diagnosis of Gear Faults by Cyclostationarity <i>Thameur Kidar, Marc Thomas, Mohamed El-Badaoui, Raynald Guilbault</i>	Vibration Monitoring as a Tool for Leak Detection in Water Distribution Networks <i>Alberto Martini, Marco Troncossi, Alessandro Rivola</i>	
12:40	Vibroacoustic Source Separation using an Improved Cyclic Wiener Filter <i>Konstantinos C. Gryllias, Jérôme Antoni, Mario El-Tabach</i>	Balancing with the Presence of a Rub <i>Nicolas Péton</i>	
13:00	LUNCH (HALL) AND POSTER SESSION (ROOM TWO)		
	PLENARY ROOM	ORAL SESSIONS	ROOM ONE
	Instantaneous Angular Speed & Non Stationary Operating Conditions		Structural Health Monitoring
	Chairman: Radoslaw Zimroz		Chairman: Roger Serra
15:00	IFESIS: Instantaneous Frequencies Estimation Via Subspace Invariance Properties of Wavelet Structures <i>Ioannis A. Antoniadis, Christos T. Yiakopoulos, Konstantinos C. Gryllias, Konstantinos I. Rodopoulos</i>	Wavelet Based Recursive Identification of Modal Parameters <i>Andrzej Klepka, Tadeusz Uhl</i>	
15:20	An Analysis of Instantaneous Angular Speed Measurement Errors <i>Quentin Leclere, François Girardin, Didier Rémond</i>	Vibration-based Statistical Damage Detection for Scale Wind Turbine Blades Under Varying Environmental Conditions <i>Ana Gómez González, Spiliós D. Fassois</i>	
15:40	On the Time Synchronous Average in Planetary Gearboxes <i>Gianluca D'Elia, Emiliano Mucchi, Giorgio Dalpiaz</i>	Structural Changes Detection with Use of Operational Spatial Filter <i>Jeremi Wójcicki, Krzysztof Mendrok</i>	
16:00	Fault Detection in Induction Machine by Application of Hilbert Transform to Neutral Voltage <i>Khalid Dahi, Soumia Elhani, Said Guedira</i>	Tracking and Removing Modulated Harmonic Components with Spectral Kurtosis and Kalman Filters <i>Jean-Luc Dion, Cyrille Stephan, Gaël Chevallier, Hugo Festjens</i>	
16:20	Coffee Break (Hall)		
	Modelling	Acoustics and Acoustic Emission	
	Chairman: Alessandro Rivola	Chairman: Renata Klein	
16:40	Dynamic Behaviour of Two Stages Planetary Gearbox in Nonstationary Operations <i>Ahmed Hammami, Alfonso Fernandez Del Rincon, Fernando Viadero Rueda, Fakhre Chari, Mohamed Haddar</i>	Combining EMD and Lempel-ziv Complexity for Early Detection of Gear Cracks <i>Mourad Kedadouche, Thameur Kidar, Marc Thomas, Souheil-Antoine Tahan, Mohamed El-Badaoui, Raynald Guilbault</i>	
17:00	Identification of a Shaft Thermal Bow by Means of Model-based Diagnostic Techniques <i>Andrea Vania, Paolo Pennacchi, Steven Chatterton</i>	A Method for Extreme Data Reduction of Acoustic Emission (AE) Data with Application in Machine Failure Diagnosis <i>Cristián Molina Vicuña, Christoph Höweler</i>	
17:20	Modeling of Tangential Vibrations in Cylindrical Grinding Contact with Regenerative Chatter <i>Veli-Matti Järvenpää, Lihong Yuan, Hessam Kalbasi Shiravani, Faisal Mehmood</i>	New Aspects Concerning the Generation of Acoustic Emissions (AE) in Spur Gears and the Influence of Operating Conditions <i>Alvaro Barrueto, Cristián Molina Vicuña</i>	
17:50	Scientific Committee Meeting		
18:30	Touristic Train Departure		
	GALA DINNER		

Wednesday 30th

Keynote Plenary Session (Plenary Room)

Chairman: Paolo Pennacchi

08:30 [Contribution of New technologies for the Monitoring of Hydraulic Plants: the EDF Experience](#)

Keynote lecture by Alexandre GIRARD, EDF, France

09:10 [New Monitoring Technologies in Mechanical Systems](#)

Keynote lecture by Pr Aldo SESTIERI, University of Roma, Italy

09:50 Spot-Light Exhibitor Presentations (Plenary Room)

10:00 Coffee Break (Hall)

PLENARY ROOM

Data Mining

Chairman: Asoke K. Nandi

ORAL SESSIONS

ROOM ONE

Signal Processing

Chairman: Amani Raad

10:20 [Trending and Pattern Recognition using the Sphere-hardening Phenomenon of Signal Multidimensional Projection](#)

François Léonard, Michel Gauvin

[A History of Cepstrum Analysis and Its Application to Mechanical Problems](#)

Robert B. Randall

10:40 [A Novel Approach to Teaching Diagnostics: an Interactive 3D System Interedu](#)

Wojciech Moczulski, Adam Cholewa, Marcin Januszka, Krzysztof Psiuk, Marek Wyleżoł

[Novel Enhancement Techniques for Noisy Vibration Signals Applied to Local Damage Detection in Rotating Machines](#)

Jakub Obuchowski, Agnieszka Wylomanska, Radoslaw Zimroz

11:00 [Classification of Ball Bearing Faults using Entropic Measures](#)

M. L. Dennis Wong, Chao Liu, Asoke Nandi K.

[A New Windowing Method for the Parameter Estimation of Damped Sinusoids](#)

Karim Abed-Meraim, Muhammad Ali Al-Radhawi, Philippe Ravier

11:20 [Fault Detection in Induction Motors Based on Artificial Intelligence](#)

Vinicius Augusto Diniz Silva, Robson Pederiva

[Estimation of Geometric Properties of Three-component Sinusoidal Signals for System Monitoring](#)

Gailene Phua, Pierre Granjon

11:40 [Context Based Diagnostics of Rotating Machinery](#)

Anna Timofiejczuk

[Automated Diagnostics of Internal Combustion Engines using Vibration Simulation](#)

Jian Chen, Robert B. Randall, Ningshen Feng, Bart Peeters, Herman Van der Auweraer

12:00 LUNCH (HALL) AND POSTER SESSION (ROOM TWO)

PLENARY ROOM

Case Studies

Chairman: Riccardo Rubini

ORAL SESSIONS

ROOM ONE

Structural Dynamics

Chairman: Marc Thomas

14:00 [Decrease Axial Vibration Generator with Balancing](#)

Guillaume Christin, Nicolas Péton

[Shear Stiffness Measurement Against Frequency of Viscoelastic Materials](#)

Franck Renaud, Jean-Luc Dion, Gaël Chevallier, Jean-Yves Choley

14:20 [New Condition Monitoring Procedure for Lifting Cranes using Motor Current Signal Analysis](#)

Marcello Lopes Moreira, Bassel Assaad, Mario El-Tabach

[Numerical Analysis of Transient Responses for Elastic Structures Connected to a Viscoelastic Shock Absorber using FEM with a Nonlinear Complex Spring](#)

Takao Yamaguchi, Yusaku Fujii, Toru Fukushima, Akihiro Takita, Suguru Ota, Norihisa Tomita, Tatsuya Noto

14:40 [Steam Turbine Rotor Crack](#)

Peter Popaleny, Nicolas Péton

[A Design Strategy for Maximization of Damping in Assembled Structures](#)

Nicolas Peyret, Jean-Luc Dion, Gaël Chevallier

15:00 [The 30 Years Saga of Trying to Make a ISO Standard on Rolling-bearing Vibration Data](#)

René Archambault

[Consideration of Plasticity in the Study of Fatigue Damage Under Vibration Environment Application to a Model with 1 DOF Dahl](#)

Hervé Rognon, Gaël Chevallier, Tony Da Silva Botelho, Imad Tawfiq

15:20 Coffee Break (Hall)

Miscellaneous

Chairman: Fakher Chaari

Structural Health Monitoring

Chairman: Jean-Luc Dion

15:40 [User Interface of Diagnostic Systems](#)

Wojciech Cholewa, Krzysztof Psiuk

[Integrated System for SHM and Wear Estimation of Railway Infrastructures](#)

Nicola Roveri, Antonio Carcaterra, Aldo Sestieri

16:00 [Detection of Bearing Faults Based on Inverse Gaussian Mixtures Model](#)

Pavle Boskoski, Dani Juricic

[Automatic Parameter Setting of Random Decrement Technique for the Estimation of Building Modal Parameters](#)

Fatima Nasser, Zhongyang Li, Nadine Martin, Philippe Gueguen

POSTER OCTOBER 29th (ROOM TWO)

[Background Subtraction Techniques in Video Sequences](#)

Moustafa Seifeddine, Thierry Soriano, Bernard Roux, Jean-Luc Dion

[Balancing of Aeroderivative Turbine](#)

Guillaume Christin, Nicolas Péton

[Bearing and Gear Fault Detection using Artificial Neural Networks](#)

Mayssa Hajar, Amani Raad, Mohamed Khalil

[Coupling Mechanical Systems and Fluid Transmission Lines with Bi-dimensional Flow and Non Conventional Constitutive Models](#)

Giuseppe Catania, Silvio Sorrentino

[Excitation/transfer Separation in Non-stationary Conditions](#)

Sophie Baudin, Jérôme Antoni, Didier Rémond, Olivier Sauvage

[Gearbox Fault Detection using a New Denoising Method Based on Ensemble Empirical Mode Decomposition and FFT](#)

Hafida Mahgoun, Rais Elhadi Bekka, Ahmed Felkaoui

[Implementation of Diagnostics, Prognostics and E-maintenance Support Under Variable Operating Conditions](#)

Dani Juricic, Pavle Boskoski, Janko Petrovic, Bojan Musizza

[MCSA and SVM for Gear Wear Monitoring in Lifting Cranes](#)

Raymond Ghandour, Fahed Abdallah, Mario El-Tabach

[Numerical and Experimental Approach for Roll Grinding Process](#)

Lihong Yuan, Veli-Matti Järvenpää, Seppo Virtanen, Hessem Kalbasi Shiravani

POSTER OCTOBER 30th (ROOM TWO)

[A New Neuro-fuzzy Computing Technique for the Prediction of the Group and Phase Velocities of Acoustic Signals](#)

Youssef Nahraoui, El-Housein Aassif, Mostafa Laaboubi, Gerard Maze

[A New Structural Damage Detection Method by using Dynamic Properties of System and Gravitational Search Algorithm](#)

Fahime Sokhangou, Maryam Daei, Mehrdad Hejazi

[Application of Speed Transform to the Diagnosis of a Roller Bearing in Variable Speed](#)

Julien Roussel, Michel Haritopoulos, Edgard Sekko, Cécile Capdessus, Jérôme Antoni

[Combined Regularization Optimization for Separating Transient Signals From Strong Noise in Rolling Element Bearing Diagnosis](#)

Liang Yu, Jérôme Antoni, Quentin Leclere

[Compressor Rub Verified by Rotating Phase Symptoms](#)

Nicolas Péton, Charles Grislin, Guillaume Christin

[Contribution of Angular Measurements in the Diagnosis of Gear Faults by Artificial Neural Networks](#)

Semchedine Fedala, Didier Rémond, Rabah Zegadi, Ahmed Felkaoui

[PRSA Method for Transient Detection Applied to Drinking Water Production Surveillance](#)

Philippe Ravier, Meryem Jabloun, Julien Roussel, Cécile Capdessus

[Transient Response and Life Assessment: Case Studies on the Load Rejection of Two Hydroelectric Turbines](#)

Martin Gagnon, François Léonard