Program Surveillance 9 (on-line version)

Monday 22 May, 2017

Time	
8:30	**Registration**
9:30	**Welcome plenary session (30')**
10:00	**Keynote lecture: A Cruise through Signal Processing (50')** **Mohamed Najim, Université de Bordeaux, France**
10:50	**Coffee break and late registration**

ORAL SESSIONS

Time	Condition Monitoring Chair: Bob Randall	Vibration models Chair: Alessandro Rivola
11:20	Cost-effective (non-contact) ultrasound system for bearing fault diagnostics: Development, Validation and Benchmark Agusmian Ompusunggu 124907	On the use of diagnostic forces applied on rotating machines for crack detection Nicolò Bachschmid 122696
11:40	Condition monitoring of gear grinding processes Konstantinos Gryllias, Bovic Kilundu, Steven Devos, Yann Vonderscher, Bart Vandewal 120067	Frequency modulations in a multiphysic model of an induction motor applied to the diagnosis of bearings using MCSA Aroua Fourati, Adeline Bourdon, Didier Rémond, Nabih Feki, Fakher Chaari, Mohamed Haddar 123311
12:00	The effect of gear tooth surface quality on diagnostic capability, Ido Dadon Renata Klein, Jacob Bortman 123310	Dynamics analysis and experiment research of casing vibration response for rotating machinery under rubbing fault Nanfei Wang, Dongxiang Jiang 127034
12:20	Using optical fiber sensors for health monitoring of rotational systems, Shlomi Konforty, Bortman Jacob, Renata Klein, Tur Moshe, Ben-Simon Uri 123229	Prediction of Vibration of planetary gear – Improvement of variable vibration transmission path modelling Fakher Chaari
12:40	**LUNCH**	
14:00	**Keynote lecture: Industrial application of SHM: How can we help industries to adopt new techniques? (50')** **Dmitri Tcherniak, Bruel & Kjaer, Denmark**	

ORAL SESSIONS

Time	Signal Processing (nonstationary regimes) Chair: Cécile Capdessus	SHM, Modal Analysis, Identification Chair: Nicolò Bachschmid
15:00	Planet bearing diagnostics under variable speed operation Robert Randall, Wade Smith, Xavier de Chasteigner du Mée, Zhongxiao Peng 125192	Experimental vibration analysis of a rotary transfer machine for the manufacture of lock components Alberto Martini, Marco Troncossi, Alessandro Rivola, Nicolò Vincenzi 122376
15:20	Demodulation of vibration signals generated by defects in rolling element bearings under variable speed using morphological analysis and complex shifted morlet wavelets Konstantinos Gryllias, Ioannis Antoniadis, Christos Yiakopoulos present	Damping contribution of coatings to the viscoelastic behaviour of materials Amadori Stefano, Catania Giuseppe 123304
15:40	Perceptive analysis of bearing defects "Contribution to vibratory monitoring of bearings" Nacer Hamzaoui, Abdelkader Laissaoui, belaid bouzouane, Abdelhamid Miloudi	Fatigue crack detection based on changes of the structure vibration characteristics Raissa De Melo Brandao, François Girardin, Nacer Hamzaoui, Pascal Vouagner, Thierry Mazoyer

16:00	126023 Vibration based fault detection under variable non-measurable operating conditions via a stochastic Functional Model method and application to railway vehicle suspensions Sakellariou John, Aravanis Tryfon-Chrysovalantis, Fassois Spilios	125080 Fault diagnosis in a railway vehicle suspension based on vertical vibration measurements and an advanced functional model method John Sakellariou
		123820
16:20	Coffee break	
	Signal Processing / Classification **Chair: Quentin Leclère**	**Classification** **Chair: Jérôme Antoni**
17:00	Detection and Estimation of Variable Speed Vibration Signal Parameters using Adaptive Quadratic Phase Transform Karim Abed-Meraim, Cécile Capdessus	Nonlinear Cointegration using Statistical Learning Theory Keith Worden, Cecilia Surace, G. Coletta, N. Dervilis, H. Shi, E.J. Cross
	123315	126260
17:20	Influence of speed fluctuation on cepstrum Frédéric Bonnardot	ANOVA and other statistical tools for bearing damage detection Alessandro Daga, Luigi Garibaldi, Alessandro Fasana, Stefano Marchesiello
	129565	126289

19:00   **Shuttle to APERITIF**

APERITIF AT SPECIAL RYIAD WITH VIEW

21:00   **Shuttle to Hotel**

Tuesday 23 May, 2017

9:00	**Keynote lecture: "Recent Advances in Structural Health Monitoring" (50'),** **Keith Worden, University of Sheffield, UK**
9:50	**Coffee break**

ORAL SESSIONS

	Case Studies Chair: Mohamed El Badaoui	Signal Processing for Diagnostics Chair: Gianluca d'Elia
10:20	Instrumentation and diagnosis on a vacuum pump - ARPE Project Renaud Bertoni	Comparison between some psychoacoustic metrics and the spectral coherence for a better diagnosis of domestic motors, Amani Raad, Issam Zock, Jérôme Antoni
	123211	132238
10:40	The vibratory diagnosis of gearboxes with latest tools developed by Dynae: the gear processing module Xavier Thomas, Francois Combet	Harmonic Product Spectrum revisited and adapted for rotating machine monitoring based on IAS Hugo Andre, Ilyes Khelf, Quentin Leclère
	123261	127138
11:00	Studies of case on turbo-alternators Henri Campagna	Statistical evidence of central moments as fault indicators in ball bearing diagnostics Giuseppe Curcurù, Marco Cocconcelli, Riccardo Rubini
	127123	126993
11:20	Algorithms and strategies for the diagnostics of rolling element bearings in a locomotive of regional trains Chatterton Steven, Pennacchi Paolo, Vania Andrea	Discrete Random Sampling: Theory and Practice Hajar Mayssa, Mohamad El Badaoui, Amani Raad, Frédéric Bonnardot
	126922	125842
11:40	**LUNCH**	

ORAL SESSIONS

	Monitoring Chair: Renata Klein	Diagnostics Chair: Hugo André
13:00	Tool life prediction using symptom reliability and vibration signal in milling process of ST-52-3 steel Bovic Kilundu, Innocent Mpia	Instantaneous angular speed estimation for multi-stage wind turbine gearboxes Peeters Cédric, Jérôme Antoni, Quentin Leclère, Jan Helsen
	123657	121443
13:20	Step-by-step algorithm for the simulation of a faulted gearbox D'Elia Gianluca, Cocconcelli Marco, Rubini Riccardo, Dalpiaz Giorgio	Application of variational mode decomposition to misalignment fault diagnosis in a wind turbine Han Te, Jiang Dongxiang
	123806	127009
13:40	Investigative techniques for detecting torsional stresses of shaft lines of a ball mill Mounir Lahlimi, Xavier Thomas	Guided ultrasonic waves for inspection and non destructive evaluation of tubular structures, Elhadji-Barra Ndiaye, Philippe Guy, Thomas Monnier
	120288	123364
14:00	**POSTER SESSION**	**Coffee break**

14:20	**Debriefing of SAFRAN Contest (one hour)**

SAFRAN
AEROSPACE · DEFENCE · SECURITY

	Monitoring Chair: Frédéric Bonnardot	Bearing Diagnostics / Tool Wear Chair: Amani Raad

15:20	Condition monitoring of rotating machinery based on acoustic imaging, Edouard Cardenas, Nacer Hamzaoui, Quentin Leclère, Jérôme Antoni, Konstantinos Gryllias	Misalignment cases on machine trains of CC Power Plants Francesco Miniello, Nicolas Peton
	120067	123374
15:40	A review on the instantaneous angular speed estimation with application to an aircraft engine Edgar F. Sierra-Alonso, Jérôme Antoni, German Castellanos-Dominguez	Using Unbiased Autocorrelation to Enhance the Envelope Analysis Results for Rolling Element Bearing Diagnostics Ali Moshrefzadeh, Alessandro Fasana, Luigi Garibaldi
	132563	127158

16:00   **Shuttle to guided visit to Medina (English and French)**

Medina Guided Visit

18:30   **Shuttle to Hotels**

20:00   **Shuttle to Gala Dinner**

DINNER AT RYAD ANEBAR

22:30   **Shuttle to Hotels**

Wednesday 24 May, 2017

	Current Signature Analysis / NDT Chair: Riccardo Rubini / Marco Cocconcelli	
9:20	Monitoring of bearing damage based on joint exploitation of the current signals and the instantaneous angular speed signals Ali Bouzndag, Mohamed El Badaoui, Soumia Elhani	
	127580	
9:40	Study of the faults Severity Progression in Induction Machines for Conditional Maintenance Purposes Lahbib Sadiki	
	127170	
10:00	Automotive HVAC total NVH quality from design to vehicle integration Said Naji, Sebastien Goude, Darius Kurniawan	
	126450	
10:20	Acoustic analysis and Modeling of the Group Velocity of Acoustic circumferential wave by an Adaptive Neuro-Fuzzy Inference System (ANFIS) Youssef Nahraoui	
	119593	
10:40	Moving sensor approach for cracks detection in plates Hajar Chouiyakh, Lahcen Azrar, Khaled Alnefaie, Omar Akourri	
	126988	
11:20	**Final Speech**	
12:00	**LUNCH**	

POSTERS (presented onTuesday 23, 12:30)
Extension of the predictive policy to a series of mechanical systems Giuseppe Curcurù, Marco Cocconcelli, Riccardo Rubini, Giacomo Galante
Effect of Coupling Types on Rotor Vibration, Ronak Prajapati
Development of a system based on a neural network for faults monitoring of a gearbox Samir Khamel, Nouredine Ouelaa, Khaider Bouacha
Cyclic Analysis and Modelling of Faulty Bearing Signals Anas Had, Khalid Sabri
System monitoring and maintenance policies: a review Giuseppe Curcurù, Marco Cocconcelli, Riccardo Rubini, Giacomo Galante
Bayesian approach in the predictive maintenance policy Giuseppe Curcurù, Marco Cocconcelli, Riccardo Rubini, Giacomo Galante