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(CM 2013 AND MFPT 2013)

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CM2013/MFPT2013 PROGRAMME

08:00	**Registration – Balcony**
09:00	**Opening ceremony - (Room B) Chair Prof L Gelman - Prof Wiesław Starowicz, Councilor to the Mayor of Krakow (Room B) Chair Prof L Gelman - John Blizzard – Brief overview of the History of Krakow**
09:20	**PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman** [101] **Prof T Uhl, the President of the Polish Society of Technical Diagnostics (Poland), "Condition monitoring, non-destructive testing and structural health monitoring: what is the future?"**
09:50	**PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman** [102] **Dr J Lacalle, SAFRAN/SNECMA expert on algorithms (France), "Health monitoring algorithms"**
10:20	**Tea, Coffee & Exhibition (Room A)**

	1A- Room B	1B- Room C	1C- Room D	1D- Room E
	Experimental and simulation models for monitoring and diagnostics ***Prof A Lucifredi***	**CM of tribological contacts** ***Dr L Wang***	**Trained structures and statistical methods in condition monitoring** ***Prof L Kuravsky***	**Real-time health monitoring of machinery** ***Prof V N Kostyukov***
10:50	[103] Machinery monitoring and predictive diagnostics: application to hydro power plants *C Fasce[1], A Bongiovi[2], A Lucifredi[1] and P Silvestri[1]* *[1]University of Genova* *[2]ABB S.p.A. - Power Systems Division Plant Efficiency and Optimization*	[104] Monitoring of a hybrid rolling contact *R Hanzal, L Wang and R Wood* *University of Southampton*	[105] Mathematical backgrounds of a new technique for testing condition monitoring personnel professional skills *L S Kuravsky, P A Marmalyuk, V I Alkhimov and G A Yuryev* *Moscow State University of Psychology and Education*	[106] Real-time health monitoring systems of machinery *V N Kostyukov,* *Omsk State Technical University*
11:20	[107] Experimental measurement of a motorcycle, building of the virtual model and ideation of a parametric software aimed to simplify the race engineer decisions *A.Lucifredi[1], L.Capocchiano[2], P.Silvestri[1], M.Vaccaro[1]* *[1] University of Genova, Dept. of Mechanics* *[2] Team Liberty Effenbert – Ducati 1198 R – Mondiale SBK 2012*	[108] On-line oil condition monitoring using novel chemical sensors *M Soleimania[1], L Wang[1] J Atkinsona[1] and R J K Wood[1] R. I. Taylor[2]* *[1]University of Southampton* *[2]Shell Research Ltd, Shell*	[109] Information content measures in vibration-based diagnostic symptoms assessment *T Galka* *Institute of Power Engineering, Poland*	[110] Vibration diagnostics of rotating equipment with non-stationary speed mode *V N Kostyukov and S N Boichenko* *SPC Dynamics*

Session Continues

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	1A- Room B	1B- Room C	1C- Room D	1D- Room E
	Experimental and simulation models for monitoring and diagnostics ***Prof A Lucifredi***	**CM of tribological contacts** ***Dr L Wang***	**Trained structures and statistical methods in condition monitoring** ***Prof L Kuravsky***	**Real-time health monitoring of machinery** ***Prof V N Kostyukov***
11:40	[111] Multibody simulation model and dynamic behaviour's analysis of e.464 locomotive manufactured by bombardier нн *A.Lucifredi[1], M.Romairone[2], P.Silvestri[1], G.Scutiero[1]* *[1] University of Genova, Dept. of Mechanics* *[2] Bombardier Transportation*	[112] Nondestructive evaluation of residual stress state in butt welded three carbon steel plates using Barkhausen effect and hole drilling methods сл *B Augustyniak[1], W Kielczynski[1], K Szulinski [1], L Piotrowski [1], M Chmielewski [1], P Maciakowski[1], M Jaworski[2], D Mezyk [2] and D Kowalski [1 1]Gdansk University of Technology* *[2] Institute of Power Engineering, Warsaw* **ABSTRACT ONLY**	[113] Serial-cascade demodulation approach for machinery faults identification in nonlinear vibration diagnostics фу *F Ya Balitsky , A G Sokolova G V Dolaberidze and M A Ivanova* *IMASH RUN - Lab of Vibroacoustical Diagnostics of Machine*	[114] Rationing of piston machines vibration мпн *V N Kostyukov and A P Naumenko, SPC 'Dynamics*
12:00	[115] Detection of anomalous operation components on the driveline of a cavitation tunnel for marine propellers ор *A.Lucifredi[1], P.Silvestri[1], M.Viviani[2], A.Ferrari[2]* *[1] University of Genova, DIME* *[2] University of Genova, DITEN*	[116] The interference of variable frequency drives (vfds) on the vibration signature analysis of machine defects см *K Detrich[1] and S Ganeriwala[1] and N Sawalhi[2 1]Spectra Quest, Inc. [2]Prince Mohammad bin Fahd University* **ABSTRACT ONLY**	[117] Influences of aircraft manoeuvring load occurrences and climatic conditions of basing on damage accumulation rate млс *S N Baranov [1] and L S Kuravsky[2]* *[1]Russian Aviation Co, Research Grou,* *[2]Moscow State University of Psychology and Education*	[118] Technical condition evaluation of the electric multiple unit pneutronic system equipment мрм *V N Kostyukov, A V Kostyukov, D V Kazarin and A V Shchelkanov* *SPC Dynamics*
12:20	[119]**Specialised keynote paper** Development of a test rig for research in wind turbine technology and diagnostics пт *S Ganeriwala* *Spectra Quest, Inc. USA* **ABSTRACT ONLY**	[120] Onboard condition monitoring of two stroke diesel engine cylinder lubrication oil сн *S Lunt and D Atkinson* *Condition Monitoring BU, Hydraulic Filter Division Europe, Parker Hannifin (UK)*	[121] **Specialised keynote paper** Estimate frequency-dependent group delay of rayleigh-lamb wave using group delay operators based polynomial chirplet transform ммп *Y Yang, Z K Peng, W M Zhang and G Meng* *Shanghai Jiao Tong University*	[122] Grazing and tension diagnostics in half couplings rotors and bolts using shaft sensors мрт *A I Kumenko, O A Zlobin and A V Timin* *JSC ' VTI'*

12:40 – 14.00 Lunch & Exhibition (Room A)

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	2A- Room B	2B- Room C	2C- Room D	2D- Room E
	Diagnostics for electric machines and drives *Prof L Swedrowski*	Advanced signal processing in condition monitoring *Prof S Lahdelma*	Wind turbine condition monitoring technologies *Dr M Papaelias*	Advanced diagnostics and prognostics methods *Dr R Klein*
14:00	[123] **FREE SESSION**	[124] Advanced condition monitoring of epicyclic gearboxes нмр *S Lahdelma, E Juuso and J Immonen* *University of Oulu*	[125] The value of integrated condition monitoring for efficient wind turbine operations нум *M Papaelias* *The University of Birmingham* **ABSTRACT ONLY**	[126] Searching similar vibration patterns on turbofan engines ооу *J Lacaille* *Snecma (Safran Group)*
14:30	[127] Supply current signal and artificial neural networks in the induction motor bearings diagnostics мсм *T Ciszewski and L Swędrowski* *Gdansk Technical University*	[128] Condition monitoring by means of vibration and sound measurements ннт *J Laurila and S Lahdelma* *University of Oulu*	[129] Condition monitoring of railway wheelsets using acoustic emission нун *A Amini[1], M Entezami[1], S Kerkyras[2] and M Papaelias* *[1]The University of Birmingham* *[2]Feldman Enterprises Limited*	[130] Towards model based prognostics - characterisation of fault size in bearings орл *I Itzhak[1], S Shaharabany[1], G Kogan[1], R Klein[2] and J Bortman[1]* *[1] University of the Negev* *[2] R.K. Diagnostics*
14:50	[131] An experimental study on damage monitoring of rolling bearings using acoustic emission method мсф *L Nohal, F Hort and P Mazal* *Brno University of Technology - Institute of Machine and Industrial Design*	[132] Applying acceleration and strain signals for the stress evaluation of a steel cutter нпс *K Karioja and S Lahdelma* *University of Oulu*	[133] Condition monitoring of hydraulic power units in industrial wind turbines нуф *M Entezami, P Weston, S Hillmansen and M Papaelias* *The University of Birmingham*	[134] Damage tolerance analyses in engineering practice осо *J Bortman[1], Z Yosibash[1] and R Alevi[2]* *[1]University of the Negev, Beer-Sheva* *[2]Fracture.Fatigue.Finite elements Ltd*
15:10	**Exhibitor Spotlight Session - (Room B)**			

15:30-16:00	**Tea, Coffee & Exhibition (Room A)**

Session Continues

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	2A- Room B	2B- Room C	2C- Room D	2D- Room E
	Diagnostics for electric machines and drives ***Prof L Swedrowski (Con'd)***	**Advanced signal processing in condition monitoring** ***Prof S Lahdelma***	**Wind turbine condition monitoring technologies** ***Dr M Papaelias and F P García Márquez***	**Advanced diagnostics and prognostics methods** ***Dr R Klein***
16:00	[135]] Optimised non-destructive testing technique for crane inspection applications based on guided waves and acoustic emission мту *N A Makris[1], L Zhao[2] and S Soua[2]* *[1] iKnowHow Informatics* *[2] NDT Technology Group, TWI Ltd*	[136] Operator involvement improves the performance of a condition monitoring programme нрф *H Mikkonen[1] and Sulo Lahdelma[2]* *[1]Oy SKF Ab* *[2]University of Oulu*	[137] Condition monitoring of wind turbine gearboxes using acoustic emission оло *S Kerkyras[1], V Karakassidis[2] and M Papaelias[3]* *[1]Feldman Enterprises Limited* *[2]TERNA Energy S.A.* *[3]The University of Birmingham*	[138] THUMS and CBM in the Israeli Air Force – lessons learned ото *A Kushnirsky, Y Golan, E Haris and S Nissim* *Israel Air Force, Material Directorate Aircraft Eng.* *(Brig. Gen. Reserve) J Bortman* *Ben-Gurion University of the Negev*
16:20	[139] Investigation of the influence of oil film thickness on helical gear defect detection using acoustic emission мфл *M Hamel, A Addali and D Mba* *Cranfield University*	[140] **PAPER TITLE TO BE CONFIRMED**	[141] Use of novel algorithms for predictive maintenance in wind turbines омл *R R de la Hermosa González-Carrato[1], F P García Márquez[2] and M Papaelias[3]* *[1]CUNEF-Ingenium, Colegio Universitario de Estudios Financieros de Madrid (Spain)* *[2]Ingenium Research Group, Universidad Castilla-La Mancha, Ciudad Real (Spain)* *[3]University of Birmingham*	[142] S-discriminants. New approach to machinery condition monitoring and defects occurrence and development detecting оут *A Sokolova and F Balitsky* *Machinery Engineering Research Institute, Russian Academy of Science*
16:40	[143] On-line condition monitoring of aerospace gas turbine engines нлп *S Greenfield* *European Business Development Manager Eaton Aerospace*	[144] Automated image stitching for enhanced visual inspections of nuclear power stations нсф *P Murray, G West, S Marshall and S McArthur* *University of Strathclyde*	[145] Maintenance management of Icing blades in wind turbines оно *R R de la Hermosa Gonzalez-Carrato[2], F P García Márquez[1], and Jesús M Pinar[2]* *[1]Ingenium Research Group, Universidad Castilla-La Mancha,* *[2] CUNEF-Ingenium, Colegio Universitario de Estudios Financieros, Madrid (Spain)*	[146] The thermal signature of an industrial objects and diagnostic system with database of signatures офф *K J Kocyba* *P.P.H.U. PROMOTOR*

18:00 **A walking tour around Kraków**

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08:00	**Registration**
08:30	**PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [201] – TO BE CONFIRMED**
09:00	**PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [202] Mr Cameron Sinclair, CEO of BINDT, ' BINDT Strategy and the CM community'**
09:30	**Tea, Coffee & Exhibition (Room A)**

	3A- Room B	**3B- Room C**	**3C- Room D**	**3D- Room E**
	Condition monitoring oriented on reliability analysis ***Prof S Radkowski***	**Advanced reasoning and diagnosis in condition monitoring** ***Dr E Juuso***	**WiBRATE (wireless vibration monitoring and control)'** ***Dr C Kar***	**Signal component identification or tracking for condition monitoring of complex systems** ***Dr Nadine Martin***
09:50	[203] Application of nonlinear models of failures in maintenance proactive strategy плс *S Radkowski* *University of technology*	[204] Detection of multiple faults with intelligent condition indices ппс *E Juuso and S Lahdelma* *University of Oulu*	[205] Helicopter rotor blade monitoring using autonomous wireless sensor network рлп F L M dos Santos[1], B Peeters[1] S Ramirez[2] , R Loendersloot [2] and T Tienga[2] [1]LMS International	[206] Gear diagnostics in a planetary gearbox: a study using internal and external vibration рoу signals. *W Smith, L Deshpande, R Randall and H Li* *University of New South Wales*
10:15	[207] Multiple instantaneous frequency estimation using complex shifted morlet wavelets *I Antoniadis[1], K Rodopoulos[1] пмо C Yiakopoulos[2] Dynamics and Structures Laboratory, [1]Machine Design and Control Systems Section [2]National Technical University of Athens*	[208] Fatigue prediction with intelligent stress indices based on torque measurements in a rolling mill псл *E Juuso and M Ruusunen, University of Oulu*	[209] Rolling element bearing fault detection based on orthogonal hilbert-huang transform рмр *A Cisi, G D'Angelo and A Zanella Centro Ricerche Fiat*	[210] New generation of condition monitoring systems for non-stationary machinery – proposal of the architecture ррл *M Strączkiewicz, T Barszcz and A Jabłoński* *AGH University of Science and Technology*
10:35	[211] Residual life estimation on the basis of vibration time histories analysis пнр T Galka Institute of Power Engineering, Poland	[212] Condition based maintenance: from principles to commercial solutions птн J Vižintin1, G Peršin1, B Kržan1, D Juričič2 and B Kalmer3 1Univerza v Ljubljani, Fakulteta za strojništvo 2 Jožef Stefan- Odsek za sisteme in vodenje 3Kalmer d.o.o.	[213] Unbalance and bow phase diagnosis of rotating machinery through vibration analysis using Hilbert-Huang transform рнт S Singh1, N Kumar2 1Research Scholar, 2Assistant Professor, School of Mechanical, Indian Institute of Technology Ropar ABSTRACT ONLY	[214] A dynamic clustering approach for tracking the evolution of railway components рсл H El Assaad, A Samé and P Aknin IFSTTAR, Université Paris Est, GRETTIA
10:55	[215] Online monitoring of gear meshing conditions пот J Mączak Warsaw University of Technology	[216] Fusion of operations, event-log and maintenance data: A case study for optimising availability of mining shovels пуп H B Naeem, G Mainali, C A Johansson and D Galar Luleå University of Technology	[217] Model based fault diagnosis of a rotor bearing system: crack versus unbalance рну A K Jalan Birla Institute of Technology and Science Pilani	[218] Identification of harmonics and sidebands in a finite set of spectral components рсф T Gerber, N Martin & C Mailhes GIPSA-lab - DIS
11:15-11:45	**Tea, Coffee & Exhibition (Room A)**			

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	4A- Room B	4B- Room C	4C- Room D	4D- Room E
	Concepts and methods for effective NDT results ***Prof T Lago***	**Condition monitoring of wind energy system** ***Prof T–H Gan***	**Decision support system for condition monitoring** ***Dr C Kar***	**Successful applications of condition monitoring and the associated business case** ***Mr C Pomfret***
11:45	[219] Active thermography as an efficient NDT tool *T Uhl, L Pieczonka, M Szwedo and J Roemer AGH University* **NO PAPER OR ABSTRACT AVAILABLE**	[220] A comparative study on the use of acoustic emission and vibration analysis for angular misalignment detection using envelope analysis *J L Ferrando Chacon, E Artigao Andicoberry, W Balachandran and T–H Gan Brunel University*	[221] Condition monitoring in aluminium industries *Behera and B Shankar Sahoo AGM(Mech)-Nalco*	[222] Generating business cases for integrated condition monitoring systems *C Pomfret Society for MFPT* **ABSTRACT ONLY**
12:05	[224] An automatic approach for proper amplitude estimation in CBM applications *T L Lago, Tech Fuzion*	[225] Artificial intelligence and adaptive learning systems for condition monitoring of wind turbine blades and other complex ageing assets *SP Santospirito[1] Kamil Słyk[1], Rafał Łopatka[2], Alex Haig[3] and Rahi Rahbari[4] [1]Kingston Computer Consultancy Ltd, [2]Warsaw University of Technology, [3]TWI Ltd and [4]University of Sheffield*	[226] Functional modelling of complex systems *A Thorn and J S Stecki PHM Technology Pty Ltd*	[227] Machine diagnostic and condition monitoring systems based on National Instruments software and hardware *W Sommer, National Instruments* **NO ABSTRACT OR PAPER AVAILABLE**
12:30	[228] Discretization's impact on time domain analysis *T L Lago, Tech Fuzion*	[229] An unsupervised learning for damage detection using ultrasonic guided waves in glass fibre reinforced polymer material for tidal application *V Dimlaye and T–H Gan NDT and Asset Reliability Group, TWI Ltd*	[230] Computer aided design of condition based maintenance system *J S Stecki, PHM Technology Pty Ltd*	[231] Evaluation of a condition monitoring method's fault detection reliability for condition-based maintenance applications *G Wurzel[1], M Weigand[2] and A Doleschel[3] [1]Eurocopter Deutschland GmbH [2]Vienna University of Technology [3]Spinner Group, formerly Eurocopter Deutschland GmbH*

12:50	**Lunch & Exhibition (Room A)**
13:00	**Meeting of The International Scientific Committee (Working lunch by invitation) – (Room C)**

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13:50 **(Room B) Welcome by the President of The British Institute of Non Destructive Testing*, Prof Anthony Dunhill, Rolls Royce***
PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [235] Prof A Dunhill, Rolls-Royce Associate Fellow, NDE; the President of British Institute of NDT (UK), "The merging of health monitoring and NDT"
14:20 **PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [236] Dr D Howieson, SKF Manager (UK),"The internet of things and the future of condition monitoring"**
14:50 **Annual General Meeting of the International Society of Condition Monitoring – (Room B)**
15:10 **Tea, Coffee & Exhibition (Room A)**

	5A- Room B	5B- Room C	5C- Room D	5D- Room E
	Component cleanliness in fluid power ***Prof J Rinkinen***	**Machine condition monitoring under varying operation condition** ***Prof W Bartelmus***	**General condition monitoring** ***Prof P Trampus***	**Condition monitoring in railway: rolling stock and infrastructure** ***Prof D Galar***
15:35	[237] Current research in component cleanliness of fluid power СУМ *J Rinkinen, L Elo, M Kuosku and J Pekkonen* *Tampere University of Technology (TUT)*	[238] New condition indicators for bearings working in varying operation condition ТМФ *W Bartelmus and R Zimroz* *Wroclaw University of Technology*	[239] Non-destructive characterization of nuclear power plant components ageing ТРО *P Trampus* *College of Dunaújváros, Hungary*	[240] The effect of unbalance and misalignment on detection of rotor/shaft cracks using vibration analysis ТСП *S Kunche and S N (Suri) Ganeriwala, Spectra Quest, Inc.*
16:00	[241] Experiences of online measurements in technical cleanliness of fluid power system СФУ *L Elo, J Pekkonen and J Rinkinen, Tampere University of Technology (TUT)*	[242] Frequency spectra based vibration velocity RMS calculation algorithm dedicated to online monitoring systems ТОМ *B Greń[1], P Kępski[2] and T Barszcz[3]* *[1] Famur Institute Sp. z o.o.* *[2] AGH University of Science and Technology*	[243]**Specialised keynote paper** Integrated health management of machinery ТСО *N Vyas, Indian Institute of Technology Kanpur, India* **ABSTRACT ONLY**	[244] Fault detection of Railway EMC problems using MATLAB models ТТП *E Rodriguez[1], N R Karki[1] , D Galar[1] D Valderas[2] and S Niska[3]* *Luleå University of Technology* *University of Navarra[2]* *Trafikverket, Luleå[3]*
16:20	[245] Examples of technical cleanliness of fluid power components ТЛТ *M Kuosku, J Pekkonen and J Rinkinen, Tampere University of Technology (TUT)*	[246] Diagnosing gear tooth pitting on the basis of synchronously averaged motor current and the gabor transform ТПМ *J R Ottewill and M Orkisz* *ABB Corporate Research Center*	[247] **Specialised keynote paper** **TITLE TO BE CONFIRMED** *Prof I Jennions* *Cranfield University* **NO ABSTRACT OR PAPER AVAILABLE**	[248] Identifying the critical of frequency converter models ТУП *Y A Mahmood[1], A Ahmadi[1] and A K Verma[2]* *Luleå University of Technology[1]* *Stord/Haugesund University[2]*

16:40-17:00 **Tea, Coffee & Exhibition (Room A) – 17:00 EXHIBITION CLOSE**

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	6A- Room B	6B- Room C	6C- Room D	6D- Room E
	Component cleanliness in fluid power ***Prof J Rinkinen***	**Wind turbine condition monitoring technologies** ***Dr M Papaelias***	**General condition monitoring** ***Prof Dr P Trampus***	**General condition monitoring** ***Dr Nadine Martin & Prof V N Kostyukov***
17:00	[249] Test bench for measuring technical cleanliness of assembled fluid power components тфо *J Pekkonen, L Elo, M Kuosku and J Rinkinen Tampere University of Technology (TUT)*	[250] Feature selection for ANN model-based wind turbine condition monitoring уно *P Cross, X Ma and Y Wang, Lancaster University*	[251] Energy instensity analysis and cost of Fanuc AM100iB robot work урт *J Świder and A Zbilski, The Silesian University of Technology*	[252] Consequences of non-respect of the bedrosian theorem when demodulating утл *C Pachaud, T Gerber, N Martin, M Firla and C Mailhes, GIPSA-lab - DIS*
17:20	[253] New steps in the component cleanliness analysis улс *C Koehler, Hydac Filter Systems GmbH*	[254 Identification of Wind Turbine Natural Frequencies using Narrow-Band Decomposition Methods уор *O Cardona-Morales, E F Sierra-Alonso and G Castellanos-Dominguez Universidad Nacional de Colombia*	**MEETING OF THE MANAGEMENT COMMITTEE OF THE INTERNATIONAL SOCIETY FOR CONDITION MONITORING**	[255] Dynamic characteristics analysis, diagnostics and balancing of high temperature rotor having a permanent deflection уун *A I Kumenko, O A Zlobin and I A Suminov JSC 'VTI'*
17:40	[256] Strength assessment of dented pipes умо *E Asaadi[1], S Heyns[1] and M P Hindley[2]* *[1]University of Pretoria* *[2]Eskom Research Testing and Development (RT&D)*	[257] State dependent parameter model-based condition monitoring for wind turbines упр *P Cross and X Ma, Lancaster University*		[258] Automated diagnosis system for mechanical faults in IC engines уфн *J Chen and R B Randall University of New South Wales*

19:30 for 20:00 Conference Dinner incorporating Polish Traditional Singing and Dancers

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	7A- Room B	7B- Room C	7C- Room D	7D- Room E
	Condition monitoring of local damage of bearings ***Prof L Gelman***	**Advanced signal processing for MCM and NDT** ***Prof R Smid***	**Vibration analysis, diagnostics and prognostics – case studies from all industries** ***Prof T Hope***	**Condition monitoring in railway: rolling stock and infrastructure** ***Prof D Galar***
09:00	[301] **Specialised keynote paper** Diagnosis of Bearings by Novel Nonlinear Non-Stationary Higher Order Spectra флп *L Gelman, B Murray, T H Patel and A Thomson* *Cranfield University, UK* *SKF (UK)*	[302] Virtual sensors for machine condition monitoring *R Smid and V Horyna* фср *Czech Technical University in Prague*	[303] Update on ISO standards in condition monitoring and vibration *S Mills, AV Technology* млр	[326] **Specialised keynote paper** Hybrid models for PHM deployment techniques in млпт railway *D Galar[1], R Villarejo[1], C A Johansson[1], U Kumar[1] and L Berges[2] [1]Luleå University of Technology [2]University of Zaragoza*
09:30	[305] Enhancing bearing fault diagnosis Using Cepstrum pre-whitening technique фнл *S Ganeriwala, J Yang, and R Li SpectraQuest*	[306] Virtual sensor for diagnostics of valve фтл *V Horyna* *Czech Technical University in Prague*	[307] Improving reliability by correcting the "Big Four": balancing, shaft / belt alignment, looseness and resonance *D Whittle, RMS Ltd* **NO ABSTRACT OR PAPER AVAILABLE**	[330] Comparative study of track geometry quality prediction models млрт *S Famurewa, T Xin, M Rantatalo, D Galar and U Kumar* *Luleå University of Technology, Luleå Railway Research Centre*
09:50	[309] The novel technology for vibration diagnosis of bearings *L Gelman, B Murray,* фнп *T H Patel and A Thomson* *School of Engineering, Cranfield University, SKF*	[310] Gear tooth crack detection using dynamic response analysis фтт *O Mohammed, Lulea University of Technology*	[311] Rotor bar defect detection using vibration analysis *D Whittle, RMS Ltd* **NO ABSTRACT OR PAPER AVAILABLE**	[334] Green Condition based Maintenance - an integrated system approach for health assessment and energy optimization of manufacturing machines млсф C A Johansson[1], D Galar[1], R Villarejo[1]and M Monnin[2] [1]Luleå University of Technology [2]PREDICT
10:10	[313] Novel Technology for Bearing Condition Monitoring Based on the Bicoherence фоф *L Gelman[1], T H Patel[2], B Murray[3] and A Thomson[4]* *[1,2]Cranfield University [3,4] SKF*	[314] Application of diffuse guided waves for detection of originating defects in structural health monitoring of composite objects фуф *V Samaitis, L Mazeika, R Raisutis, R Kazys, K Barsauskas* *Ultrasound research institute, Kaunas University of Technology* **ABSTRACT ONLY**	[315] **TITLE AND ABSTRACT TO BE CONFIRMED**	[316] Good practices and pitfalls of finite element analysis application in NDT and failure prevention *M Augustyniak,* *[1]Gdansk University of Technology [2]DESART* **NO ABSTRACT OR PAPER AVAILABLE**

Session Continues

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	7A- Room B	7B- Room C	7C- Room D	7D- Room E
	Condition monitoring of local damage of bearings ***Prof L Gelman***	**Advanced signal processing for MCM and NDT** ***Prof R Smid***	**Vibration analysis, diagnostics and prognostics – case studies from all industries** ***Prof T Hope***	**Condition monitoring in railway: rolling stock and infrastructure** ***Prof D Galar***
10:30	[317] Novel Anomaly Detection Technique for Condition Monitoring фрл *L Gelman, B Murray, T H Patel and A Thomson* *School of Engineering, Cranfield University, SKF*	[318] Delamination of Twill-Weaved CFRP composites using acoustic emission technique ффл *B Y Mohammed, A Chong, S Wilcox* *and C K Tan* *University of Glamorgan*	[319] Marine machinery condition monitoring why has the shipping industry been slow to adopt? млот *D Shorten* *Lloyd's Register EMEA*	[320] eMaintenance Cloud for Railway Decision-making – Challenges and Issues млур *R Karim, U Kumar and R Kour* **ABSTRACT ONLY**

10:50 **Tea & Coffee**

11:15 **PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [321] Prof J Antoni (France), "A short review on the spectral kurtosis and its use in condition monitoring"**

11:45 **PLENARY KEYNOTE LECTURE: (Room B) Chair Prof L Gelman [322] Prof T-H. Gan, Dr S Soua (UK), "In-service condition monitoring using combined vibrational and acoustic emission signatures for wind turbine machinery"**

12:15 **Panel Session: Future directions in condition monitoring - (Room B) Chair Prof L Gelman**

13:00 **Lunch**

	8A- Room B	8B- Room C	8C- Room D	8D- Room E
	Condition based maintenance and monitoring ***CHAIR: TBC***	**NDT** ***CHAIR: TBC***	**Vibration condition monitoring** ***Prof Đ Juričić***	**Artificial intelligent techniques for condition monitoring** ***Dr Patel***
14:00	[323] CargoCBM – condition based maintenance for freight wagons млус *T Herrmann and M Hecht* *Technische Universität Berlin*	[325] Estimation of tensile stress level on a stressed wire using a magnetic circuit ммлр *B H Kim[1] and Il K Lee[2]* *[1]Kyungnam University* *[2]Expressway & Transportation Research Institute, Structure Research Team, Korea Expressway Corporation*	[304] Wavelet bispectral analysis of electrical motor vibration signals for the purpose of bearings lubricant deficiency fault detection ммпо *J Jamšek[1], Đ Juričić[2], P Boškoski[2] Jožef Stefan[3]* *[1]Univerza v Ljubljani, Pedagoška fakulteta [2]Oddelek za fiziko in tehniko; Inštitut* *[3]Odsek za sisteme in vodenje*	[324] Condition identification of cylinder liner-piston ring in marine diesel engine using bispectrum analysis and artificial neural networks ммпр *Z Guo[1,2], C Yuan[1,2], Z Li[1,2], X Yan[1,2], and Z Peng[3]* *[1, 2]Wuhan University of Technology, [3]The University of New South Wales*

	8A- Room B	8B- Room C	8C- Room D	8D- Room E
	Condition based maintenance and monitoring ***CHAIR: TBC***	**NDT** ***CHAIR: TBC***	**Vibration condition monitoring** ***Prof Đ Juričić***	**Artificial intelligent techniques for condition monitoring** ***Dr Patel***
14:20	[327] An Internet of things approach for intelligent monitoring of conveyor belt rollers ММФС *Jens Eliasson, EISLAB, Lulea tekniska universitet*	[329] **PAPER WITHDRAWN**	[308] Root cause analysis and countermeasures of high vibration of sea water make-up pump in large thermal power plant ММНС *K Jungchan and J Youngho Doosan Heavy Industries & Construction*	[328] Genetic algorithm enhanced neural network applied to tool condition monitoring in drilling process ММРТ *R Fayad and H Abou Chakra Beirut Arab University*
14:40	[331] Condition monitoring of the aerospace and marine materials using THz radiation *A Baryshev , A Belitskaya, A Khudchenko and H van der Linden* *SRON Netherlands Institute for Space Research* **NO ABSTRACT OR PAPER AVAILABLE**	[333] **PAPER WITHDRAWN**	[312] Coal mill pinion and main reducer gearbox bearing damage detection using co-ordinated condition monitoring at DTPS ММОО *H M Bari , A A Deshpande and S S Patil* *Department of Maintenance Planning, Condition Monitoring Cell, Reliance Energy*	[332] Outlier detection in rotating machines combining optimized one-class classifiers ММСФ *C Aguirre-Echeverry, O C Morales and G Castellanos-Dominguez Universidad Nacional de Colombia, Manizales*

Additional Paper:

Comparison of Fourier Spectra of Induction Machine Currents for Cage Asymmetry and Faults in Mechanical Part of a Drive **ММУЛ**
Alejandro J. Fernandez Gomez, Tadeusz J. Sobczyk
Institute on Electromechanical Energy Conversion

15:00 Conference Closing Ceremony (Room B)