

Tuesday 27 September		
09:00	Registration and exhibition	
10:00	Chairman's welcome Prof Clive Roberts, <i>University of Birmingham, UK</i>	
10:15	Keynote	
11:00	Refreshments, networking and exhibition	
	Session 1a: Hardware, communications and data standards from RCM applications	Session 1b: monitoring systems for systems and vehicles
11:30	1.a.1 An automated data-driven toolset for predictive analytics K Pipe, B Culkin, <i>Humanware, UK</i>	1.b.1 Crack detection in railway axle using horizontal and vertical vibration measurements M Hassan, S Bruni, M Carboni, <i>Politecnico di Milano, Italy</i>
12:00	1.a.2 An investigatory study into transmission power control for wireless sensor networks in railway applications J B Hughes, G D Horler, <i>University of Huddersfield, UK / Smart Component Technologies Ltd, UK</i> , E P C Morris, <i>Smart Component Technologies Ltd, UK</i>	1.b.2 Application of axle-box acceleration to track condition monitoring for rail corrugation management H Tanaka, M Matsumoto, <i>Railway Technical Research Institute, Japan</i> , Y Harada, <i>West Japan Railway Company, Japan</i>
12:30	Lunch, networking and exhibition	
13:30	Improving industry performance: Nexus GSM-R voice cab radio Ben Rostand, Siemens	
	Session 2a: Condition based maintenance	Session 2b: Network-wide or whole system approaches to RCM
14:15	2.a.1 A study on strategy of condition based maintenance for Korea metro rolling stocks K Lee, <i>Korea Railroad Research Institute, Korea</i> , J Lee, I Kim, <i>Seoul Metropolitan Rapid Transit, Korea</i>	2.b.1 Detecting railway under-track voids using multi-train in-service vehicle accelerometer F Balouchi, A Bevan, <i>University of Huddersfield, UK</i> , R Formston, <i>Siemens, UK</i>
14:45	2.a.2 The development of condition based maintenance and operational response on network rail's western route	2.b.2 An online state estimation approach for railway axle bearing based on EEMD and entropy

	P T Barnes, A Olney, M C Gallop, <i>Network Rail Western Route, UK</i>	C Yi, <i>Xihua University, China</i> , J H Lin, L Liu, <i>Southwest Jiaotong University, China</i>
15:15	Refreshments, networking and exhibition	
	Session 3a: Asset management strategies	Session 3b: Robotics and autonomous systems
15:45	3.a.1 People centred intelligent predict and prevent (PCIPP) a novel approach to remote condition monitoring A Myers, D Tickem, J Evans, <i>Thales, UK</i>	3.b.1 A modular approach to automation of condition monitoring and repair for rail M Taylor, <i>Network Rail, UK</i> , M Westwood, A Peters, <i>Transport Systems Catapult, UK</i>
16:15	3.a.2 Closing the loop on enterprise asset management (EAM) J McQuillan, <i>ONG Automation, UK & Ireland</i> , R Willekens, <i>MaxGrip, The Netherlands</i> , X-F Braud, <i>Schneider Electric, France</i>	3.b.2 Using model based systems engineering to increase the robustness of monitoring systems in railways M Blumenfeld, E J C Stewart, <i>Birmingham Centre for Railway Research and Education, UK</i> , E Larios, <i>Embed Limited, UK</i>
16:45	Drinks reception	
18:00	Close Day 1	

Wednesday 28 September

09:00	Refreshments and exhibition	
09:30	Keynote	
10:15	Refreshments, networking and exhibition	
	Session 4a: State-of-the-art NDT techniques and approaches	Session 4b: Operational responses to RCM events
10:45	4.a.1 Jubilee Line: a data-driven approach to improving performance and reliability M Cooper, C Hughes, P Dubery, <i>CPC Systems Ltd, UK</i>	4.b.1 How can we industrialise wheel and disc measuring systems? (Or new equipment new people new trains don't panic!) S Groom, <i>Alstom, UK / University of Birmingham, UK</i>
11:15	4.a.2 Enabling the multiple use of condition monitoring devices for real-time monitoring, real-time data logging and remote condition monitoring E P C Morris, <i>Smart Component Technologies Ltd, UK</i> , G Feng, G D Horler, <i>Smart Component Technologies Ltd, UK / The University of Huddersfield, UK</i>	4.b.2 Retrofit condition monitoring and remote data retrieval from railway vehicle engines A Mamaniyat, M Robinson, <i>Chrome Angel Solutions, UK</i> , G Dutton, <i>Angel Trains Limited, UK</i> , J Birch, <i>Instrumentel Ltd, UK</i>
11:45	4.a.3 Developing rolling stock fault analysis and key performance indicators using statistical modelling S Coates, N Wray, <i>Angel Trains Ltd, UK</i>	4.b.3 Estimation of lateral track irregularities from on-board measurement: effect of wheel-rail contact model S Alfi, A De Rosa, S Bruni, <i>Politecnico di Milano, Italy</i>

12:15	Lunch, networking and exhibition	
	Session 5a: Monitoring systems for infrastructure	Session 5b: Predictive analysis tools and techniques
13:15	5.a.1 Non-contact force measurement for current collection in a 25kV overhead line electrified railway M R Arthington, S R Duncan, <i>Oxford University, UK</i> , P T Barnes, <i>Network Rail, UK</i>	5.b.1 Software and machine learning tools for monitoring railway track switch performance N P Wright, <i>MPEC Technology Ltd, UK</i> R Gan, <i>Sydney Trains, New South Wales</i> , C McVae, <i>Translink, Belfast</i>
13:45	5.a.2 Research on evolution law of service performance of high-speed train based on tracking monitoring J H Lin, L Liu, W Y Wu, <i>Southwest Jiaotong University, China</i> , C Yi, <i>Xihua University, China</i>	Session to be confirmed
14:15	Refreshments, networking and exhibition	
14:45	5.a.3 PANTOBOT 3D: A vision system for the three dimensional inspection of train pantographs M Sachi, L Chiesi, P Capece, <i>Camlin, UK</i>	5.b.3 Track circuit indicators – monitoring without thresholds K Pipe, <i>Humaware, UK</i> , F Lynch, <i>Network Rail, UK</i>
15:15	5.a.4 Enhancing wireless remote condition monitoring with photographic imaging T Laque, S Maddison, B Smith, <i>Senceive Ltd, UK</i>	5.b.4 Evaluation of dymola for its suitability for simulating railway systems S Nath, <i>WSP PB, UK</i> , S B Tennakoon, <i>Staffordshire University, UK</i> , M Dempsey, <i>Claytex Services Limited, UK</i>
15:45	Chairman's close Prof Clive Roberts, <i>University of Birmingham, UK</i>	
16:00	Conference close	