

Wednesday 16 September 2009 - MORNING SESSIONS

PLENARY ROOM (1st floor)

PARALLEL 1 (3rd floor)

PARALLEL 2 (3rd floor)

	SESSION 01 Development, selection and testing of rail steels	SESSION 02 Monitoring and maintenance of wheel and rail damage	SESSION 03 Rail corrugation and short-wave irregularities
9.40	<i>CHAIRMAN: JOHN COOKSON</i>	<i>CHAIRMAN: ROB DWYER-JOYCE</i>	<i>CHAIRMAN: XUESONG JIN</i>
10.00	S06-Carroll <i>R. Carroll, J. Jaiswal, P. Pointner</i> Rail grade selection, the degradation approach	S10-Enblom <i>R. Enblom, S. Stichel</i> Industrial implementation of novel railway wheel damage prediction procedures	S01-Ciavarella <i>M. Ciavarella, L. Afferrante</i> Recent progress on railways corrugation
10.20	S07-Folgarait <i>P. Folgarait, A. Saccocci, F. Crabu, R. Porta, E. Petrone, R. Bucci, M. Raspolli</i> Performance-driven integrated thermal-microstructural-mechanical approach for top-edge rail production processes	S03-Kabo <i>E. Kabo, R. Enblom, A. Ekberg</i> Assessing risks of subsurface initiated rolling contact fatigue from field measurements	S09-Xie <i>G. Xie, S. Iwnicki, P. Vila, L. Baeza</i> An investigation of rail corrugation with a coupled, flexible, rotating wheelset, a flexible track and a non-steady contact model
10.40	S07-Saccocci <i>A. Saccocci, P. Folgarait</i> Metallurgical design of high-strength bainitic steels for rails	S03-Sandstrom <i>J. Sandström, J. De Maré</i> Probability of subsurface fatigue initiation in rolling contact	S03-Saulot <i>A. Saulot, S. Descartes, L. Baillet, Y. Berthier</i> Curved track corrugation: from tribological observations to numerical modelling
11.00	S01-Zapata <i>D. Zapata, J. Jaramillo, A. Toro</i> Rolling contact and adhesive wear of bainitic and pearlitic steels	S11-Magnus <i>D.L. Magnus, T.H. O'Brien</i> Optimization of wheel and rail performance through continuous condition-based monitoring	S11-Molodova <i>M. Molodova, Z. Li, R. Dollevoet</i> Simulation of dynamic responses of vehicle-track system for detection of track short wave defects

	SESSION 04 Wheel profiles: design and evolution	SESSION 05 Development, selection and testing of rail and wheel steels	SESSION 06 Modelling of the wheel/rail contact
11.30	<i>CHAIRMAN: STEFANO BRUNI</i>	<i>CHAIRMAN: GIORGIO DONZELLA</i>	<i>CHAIRMAN: ROB DWYER-JOYCE</i>
11.50	S09-Polach <i>O. Polach</i> Wheel profile design for the targeted conicity and a wide contact spreading	S01-Ahlstrom1 <i>J. Ahlström, M. Schilke, B. Karlsson</i> Monotonic and cyclic deformation of medium and high strength rail steels	S10-Li <i>W. Li, G. Xiao, Z. Wen, X. Xiao, X. Jin</i> Plastic deformation of curved rail at rail weld caused by train-track dynamic interaction
12.10	S10-Cui <i>D. Cui, L. Li, X. Jin, X. Li</i> Optimizing design of wheel profiles based on weighed wheel/rail gap	S01-Franklin <i>F.J. Franklin, A. Gahlot, D.I. Fletcher, J.E. Garnham, C. Davis</i> Three-dimensional modelling of rail steel microstructure and crack growth	S01-Tanaka <i>T. Tanaka, B. Leban, T. Kubo, Y. Saito, M. Pau, H. Cheng, M. Ishida, A. Namura</i> Assessment of accuracy of real contact area observation in contact between rough surfaces
12.30	S10-Gerlici <i>J. Gerlici, T. Lack</i> Railway wheel profile development based on the geometric characteristics shapes	S07-Mutton <i>P.J. Mutton, D. Welsby, E. Alvarez</i> Wear and rolling contact fatigue behaviour of heat-treated eutectoid and hypereutectoid rail steels under high axle load conditions	S01-Mazzù <i>A. Mazzù, G. Donzella, M. Faccoli, C. Petrogalli, R. Roberti</i> Progressive damage assessment in the near-surface layer of railway wheel-rail couple under cyclic contact
12.50	S10-Pombo <i>J.C. Pombo, J. Ambrósio, M. Pereira, R. Lewis, R. Dwyer-Joyce, C. Ariaudo, N. Kuka</i> Development of a wear prediction tool for steel railway wheels	S01-Garnham <i>J.E. Garnham, C.L. Davis</i> Very early stage rolling contact fatigue crack growth in pearlitic rail steels	S10-Bozzone <i>M. Bozzone, E. Pennestri, P. Salvini</i> A compliance based method for wheel-rail contact analysis
13.10	S09-Li <i>X. Li, X. Jin, D. Hu, D. Cui, W. Zhang</i> A new integrated model to predict wheel profile evolution due to wear	S01-Zhong <i>W. Zhong, W. Wang, Z. Li, Q. Liu, Z. Zhou</i> Study on growth behavior of fatigue crack of U75V and U71Mn rail	S01-Vollebregt <i>E.A.H. Vollebregt</i> Refinement of Kalker's Rolling Contact Model

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PLENARY ROOM (1st floor)

PARALLEL 1 (3rd floor)

PARALLEL 2 (3rd floor)

	SESSION 07 The effect of water and contaminants on wheel/rail traction	SESSION 08 Development, selection and testing of rail and wheel steels	SESSION 09 Contact conditions in switches, crossings and tight curves
	<i>CHAIRMAN: STANISŁAW BODGAŃSKI</i>	<i>CHAIRMAN: MICHAEL LUKE</i>	<i>CHAIRMAN: PETER POINTNER</i>
14.40	S02-Lewis2 <i>S.R. Lewis, R. Lewis, U. Olofsson, D. Eadie, J. Cotter, X. Lu</i> Effect of humidity, temperature and railhead contamination on the performance of friction modifiers: pin-on-disk study	S07-Cvetkovski <i>K. Cvetkovski, J. Ahlström, B. Karlsson</i> Monotonic and cyclic deformation of a high silicon pearlitic wheel steels	S10-Johansson <i>A. Johansson, B. Pålsson, M. Ekh, J. Nielsen, M.K.A. Ander, J. Brouzoulis, E. Kassa</i> Simulation of wheel-rail contact and damage in switches & crossings
15.00	S02-AriasCuevas <i>O. Arias-Cuevas, Z. Li, R. Lewis</i> A laboratory investigation of the influence of the particle size and slip during sanding on the adhesion and wear in the wheel-rail contact	S01-Brunel <i>J.F. Brunel, E. Charkaluk, P. Dufrénoy, F. Demilly</i> Methodology for the analysis of rolling contact fatigue of railways wheels and comparison of different steel grades	S09-Pletz <i>M. Pletz, W. Daves, F.D. Fischer, H. Ossberge</i> A dynamical wheel set - crossing model regarding impact, sliding and deformation.
15.20	S01-Tomberger <i>C. Tomberger, P. Dietmaier, W. Sextro, K. Six</i> Friction in wheel-rail contact: a model comprising interfacial fluids, surface roughness and temperature	S01-Hernandez <i>F.C. Robles Hernandez, S. Kalay</i> Properties and microstructure of high performance wheels	S10-Haba <i>A. Hába, J. Zelenka, M. Kohout</i> Experimental and theoretical analysis of wheel-rail contact in the course of passing over turnout frog
15.40	S02-Nakahara <i>T. Nakahara, K.S. Baek, H. Chen, M. Ishida</i> Relationship between surface oxide layer and transient traction characteristics for two steel rollers under unlubricated and water lubricated conditions	S07-Hernandez <i>F.C. Robles Hernandez, S. Kalay, R. Ordoñez Olivares, C.I. García, A. DeArdo</i> Development of the new rail steels for the 21st century	S08-Kohout <i>M. Kohout, J. Zelenka, A. Hàba</i> Studies of wheel-rail contact conditions in curves of small radius
16.00	S02-Chen <i>H. Chen, M. Hishida, K.S. Beak, T. Nakahara, B. Leban, M. Pau</i> Estimation of wheel/rail adhesion under wet condition with measured boundary friction coefficient and real contact area	S09-Hernandez <i>F.C. Robles Hernandez, K. Gonzales, S. Anankitpaiboon, N.G. Demas, A.A. Polycarpou</i> Wear performance of premium rail steels	S09-Suda <i>Y. Suda, M. Nishina, H. Komine, T. Tsuji, S. Lin, T. Miyamoto, H. Doi, H. Chen, H. Sugiyama, Y. Tani</i> Measurements and analyses of wheel/rail contact geometry in tight curving using test track
16.20			

	SESSION 10 Rail grinding and maintenance strategies	SESSION 11 Rail corrugation: known and novel treatments	SESSION 12 Fundamental contact mechanics
	<i>CHAIRMAN: PETER MUTTON</i>	<i>CHAIRMAN: AKIRA MATSUMOTO</i>	<i>CHAIRMAN: ROGER LUNDÉN</i>
16.50	S08-Wu <i>H. Wu, S. Kalay, K. Hou, R. Thompson</i> Management of wheel/rail contact interface in heavy haul operations	S08-Ishida <i>M. Ishida, T. Ban, S. Fukagai</i> Friction moderating system for preventing low rail corrugations in sharp curves	S09-Myslinski <i>A. Myslinski, A. Chudzikiewicz</i> Thermoelastic wheel - rail contact problem with elastic graded materials
17.10	S11-Bredif <i>P. Bredif, J. Plu, C. Royer, C. Poidevin, P. Pouligny</i> Rail restoration lifetime on high speed line	S04-Wu <i>T. Wu</i> Effects on rail corrugation growth of rail vibration absorber/damper	S09-Zhao <i>X. Zhao, Z. Li, R. Dollevoet</i> Solution of the wheel-rail rolling contact in elasticity and elasto-plasticity using a transient finite element model
17.30	S08-Heyder <i>R. Heyder, T. Hempe</i> Maintenance strategies and material concepts to control rolling contact fatigue of rails	S03-Croft <i>B.E. Croft, C.J.C. Jones, D.J. Thompson</i> The effect of rail dampers on roughness growth rates with multiple wear mechanisms, non-Hertzian contact and velocity dependent friction	S09-Wu <i>L. Wu, Z. Wen, W. Li, W. Zhang, X. Jin</i> Thermo-elastic-plastic finite element analysis of wheel/rail sliding contact
17.50	S08-Zacher <i>M. Zacher</i> Prediction of gauge corner cracking in rails for rail maintenance	S03-Batten <i>R. Batten, P. Bellette, P. Meehan, R. Horwood, W. Daniel</i> Field and theoretical investigation of the mechanism of corrugation wavelength fixation under speed variation	S09-Wen <i>Z. Wen, L. Wu, W. Li, X. Jin, M. Zhu</i> Three-dimensional elastic-plastic stress analysis of wheel-rail rolling contact
18.10			

Thursday 17 September 2009 - MORNING SESSIONS

PLENARY ROOM (1st floor)

PARALLEL 1 (3rd floor)

PARALLEL 2 (3rd floor)

	SESSION 13 Approaches to modelling wear and rolling contact fatigue	SESSION 14 Wheel flats and out-of-roundness	SESSION 15 Measurement and effects of wheel/rail contact conditions
8.40	<i>CHAIRMAN: STUART GRASSIE</i>	<i>CHAIRMAN: PAUL MEEHAN</i>	<i>CHAIRMAN: DAVID FLETCHER</i>
9.00	S10-Dirks <i>B. Dirks, R. Enblom</i> Prediction model for wheel profile wear and rolling contact fatigue	S10-Corradi <i>R. Corradi, A. Facchinetti, L. Mazzola, K. Lipp, U. May</i> A methodology for estimating rolling contact fatigue damage in urban rail transport systems	S09-DwyerJoyce2 <i>R.S. Dwyer-Joyce, R. Lewis, C. Yao, J. Zhang, B.W. Drinkwater</i> An approach for track mounted measurement of wheel rail contact using an ultrasonic array
9.20	S02-Tunna <i>J. Tunna, J. Sinclair, J. Perez</i> The development of a wheel wear and rolling contact fatigue model	S03-Dhardivilliers <i>W. D'Hardivilliers</i> Studies of flattenings located on the running surface of the wheel	S02-Wang <i>W. Wang, P. Shen, J. Song, J. Guo, Q.Y. Liu, Z.R. Zhou</i> Study on the adhesion behaviour of wheel/rail under dry and water conditions
9.40	S07-Stock <i>R. Stock, R. Pippin</i> Rcf and wear in theory and practice - the influence of rail grade on wear and RCF	S09-DiGialleonardo <i>E. Di Gialleonardo, F. Braghin, S. Bruni</i> Effect of wheel defects and out of roundness on dynamic loads at wheel-rail interface	S11-Girardi <i>L. Girardi, J. Plu, B. Blakeley, P. Bredif, C. Davis, M. Lugg, M. Papaalias, C. Roberts</i> Innotrack SP4.4 - Detection of rolling contact fatigue in rails using electromagnetic and ultrasonic phased-array inspection technique
10.00	S06-Pointner <i>P. Pointner</i> Functions for wear and RCF	S03-Kwon <i>S.J. Kwon, D.H. Lee, J.W. Seo, W. You</i> Damage evaluation of wheel tread using flat generation and replication test	S02-Jaramillo <i>J. Jaramillo, D. Zapata, M. Palacio, A. Toro</i> Effect of lubrication on wear and traction coefficient in a simulated rail/wheel contact

	SESSION 16 Rail corrugation measurement and control	SESSION 17 Traction, friction and creep measurement and modification	SESSION 18 Rolling contact fatigue: modelling and control
10.30	<i>CHAIRMAN: YOSHIHIRO SUDA</i>	<i>CHAIRMAN: MAKOTO ISHIDA</i>	<i>CHAIRMAN: ANDERS EKBERG</i>
10.50	S03-Spannar <i>J. Spännar</i> Measured rail corrugation growth	S02-Lewis1 <i>S.R. Lewis, R. Lewis</i> An alternative method for the assessment of railhead traction	S01-Bogdanski <i>S. Bogdanski, M. Pietrzyk</i> The behaviour of squat-type cracks under quasi-static and dynamic loading
11.10	S11-Matsumoto <i>A. Matsumoto, H. Tsunashima, T. Kojima</i> Detection methods of rail corrugation from vibration or noise in passenger cabin	S01-Doi <i>H. Doi, T. Miyamoto, Y. Nishiyama, S. Ohe, H. Kamachi</i> A new experimental device to investigate creep forces between wheel and rail	S09-Six <i>K. Six</i> The influence of the local slip distribution on the development of rolling contact fatigue in the wheel/rail contact of railway vehicles
11.30	S11-Lee <i>J.S. Lee, S. Choi, S.S. Kim, C. Park</i> Identifying the characteristics of high-speed railway by an on-board measurement of the noise and vibration from the wheel and railway interaction	S02-Bosso <i>N. Bosso, A. Gugliotta, A. Somà, M. Spiryagin</i> Methodology for the determination of wheel-roller friction coefficient on 1/5 scaled test rig	S01-Daves <i>W. Daves, W. Yao, F.D. Fischer</i> Surface deformation and crack initiation in wheel rail contact
11.50	S08-Chestney <i>M. Chestney, N. Dadkash, D. Eadie</i> The effect of top of rail friction control on a european passenger system: the Heathrow express experience	S10-Adachi <i>M. Adachi, A. Matsumoto</i> Improvement of running performance by modification of wheel/rail contact condition	S10-Markine <i>V.L. Markine, M.J.M.M. Steenbergen, I.Y. Shevtsov</i> Combatting RCF on switch points by tuning elastic track properties
12.10	S10-Kurzeck <i>B. Kurzeck</i> Combined friction induced oscillations of wheelset and track while curving of metros and their influence on corrugation	S02-Magel <i>E. Magel, Y. Liu</i> Study of friction – Measurement, analysis and practical implications for the wheel/rail contact	S01-Datsyshyn <i>O. Datsyshyn, V. Panasyuk, A. Glazov</i> The model of fatigue contact damages formation in rolling bodies and estimation of their durability

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PLENARY ROOM (1st floor)	PARALLEL 1 (3rd floor)	PARALLEL 2 (3rd floor)
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	SESSION 19 Surface defects on wheels and rails (1)	SESSION 20 Tribology of wheel flange/gauge face contact	SESSION 21 Wheel/rail noise
13.40	<i>CHAIRMAN: ERIC MAGEL</i>	<i>CHAIRMAN: FRANCIS FRANKLIN</i>	<i>CHAIRMAN: MATTHIAS PIPPERT</i>
	S05-Dedmon <i>S. Dedmon, D. Stone, T. Snyder</i> A proposed mechanism for accelerated shelling of railroad wheels induced by the hyperbaric transformation of ice	S02-Descartes <i>S. Descartes, A. Saulot, C. Godeau, S. Bondeux, C. Dayot, Y. Berthier</i> Wheel flange / rail gauge contact lubrication: tribological investigations	S04-You <i>W. You, J. Park, H. Koh, H. Hur</i> A study on the characteristics of curving noise and wheel wear in subway system.
14.00	S03-Halama <i>R. Halama, R. Fajkoš, P. Matušek, P. Bábková, F. Fojtík, L. Václavek</i> Contact defects initiation in railroad wheels - Experience, experiments and modelling	S09-Jin <i>Y. Jin, M. Ishida, A. Namura</i> Experimental simulation and prediction of wear of wheel flange/rail gauge corner	S04-Brunel <i>J.F. Brunel, P. Dufrénoy, F. Demilly</i> Numerical approach for the attenuation of squeal noise of railway wheels in narrow curves
14.20	S03-Datsyshyn <i>O. Datsyshyn, A. Levus, A. Glazov, H. Marchenko</i> On some development features of pitting, spalling, cracking and dark-spot damages in rail steels under rolling contact	S08-Sone <i>Y. Sone, J. Suzumura, H. Koga, Y. Tamoto, H-o Yamazaki</i> Application of traction oil to the wheel/rail lubricant	S04-Gerlach <i>T. Gerlach, A. Brinkmann, C. Kemp-Lettkamp</i> Development of state of the art of systems for reducing the sound emission level of rolling noise and curve squealing noise
14.40	S03-Li1 <i>Z. Li, R. Dollevoet, M. Molodova, X. Zhao</i> The validation of some numerical predictions on squats growth	S08-Tietz <i>A. Tietz, K. Schnappenberger</i> Intelligent wheel flange lubrication for railway systems	S03-Nielsen <i>J.C.O. Nielsen, A. Ekberg</i> Acceptance criterion for rail roughness level spectrum based on assessment of rolling contact fatigue and rolling noise
15.00	S03-Grassie1 <i>S.L. Grassie, P. Summers, D. Fletcher</i> Squats and squat-type defects in rails	S09-DwyerJoyce1 <i>R.S. Dwyer-Joyce, C. Yao, R. Lewis</i> An ultrasonic sensor for monitoring wheel flange contact	S04-Quarz <i>V. Quarz, C. Klotz, T. Gerlach, A. Brinkmann, C. Kemp-Lettkamp</i> Acoustical structural optimization of railway running gears under consideration of the interaction in the wheel-rail-contact
15.20			

	SESSION 22 Wheel/rail interface policy and maintenance monitoring	SESSION 23 Rail maintenance: common and uncommon problems and treatments	SESSION 24 Wear models & railhead contamination
15.50	<i>CHAIRMAN: WILLIAM DANIEL</i>	<i>CHAIRMAN: SEMIH KALAY</i>	<i>CHAIRMAN: JOHAN AHLSTRÖM</i>
	S05-Paulsson <i>B. Paulsson, P. Pointner, J. Jaiswal, R. Carroll, G. Baumann, B. Ripke, J. Amooe, A. Ekberg</i> An overview of wheel-rail interface related research in the European project INNTRACK including issues in technical and economical	S08-Hartleben <i>D. Hartleben</i> Tasks for mobile railway machining and predestined machining methods	S02-Sundh <i>J. Sundh, U. Olofsson</i> Relating contact temperature and wear transitions in a wheel-rail contact
16.10	S03-Smith <i>L. Smith, R. Allen, J. Jayswal</i> A scientific approach to minimum actions	S08-Taubert <i>M. Taubert, K. Von Dienst, A. Pueschel</i> High speed grinding preventative rail care	S01-Tountas <i>E. Tountas, A. Tudor, N. Sandu</i> A thermomechanical wear model for the metro wheel-rail contact
16.30	S10-Acquati <i>M. Acquati, E. Magel</i> Preliminary wheel/rail interface study: what benefits?	S04-Steenbergen <i>M.J.M.M. Steenbergen</i> Efficient long-term track design: energy flux optimisation	S02-Vuong <i>T. Vuong, P. Meehan, D.T. Eadie, K. Oldknow, D. Elvidge, P. Bellette, W. Daniel</i> Investigation of a transitional wear model for wear prediction and control in rolling contact
16.50	S10-Higashida <i>O. Higashida</i> Development of a new wheel tread profile and examination result in narrow-gauge lines	S03-Fischmeister <i>E. Fischmeister, H.P. Rossmannith, F. Loibnegger, H.N. Linsbauer, P. Mittermayr, A. Oberhauser</i> From Rail Surface Cracks to Rail Breaks – Recent Investigations and Results of Research at the Wiener Linien Metro System	S05-Olofsson <i>U. Olofsson</i> A study of airborne wear particles generated from the train traffic
17.10	S04-Pippert <i>M. Pippert</i> The political and economical relevance of rail noise abatement	S03-Grassie2 <i>S.L. Grassie, E. Fischmeister, A. Oberhauser</i> Rail breaks, rail grinding and rolling contact fatigue	S02-Suzumura <i>J. Suzumura, Y. Sone, A. Ishizaki, Y. Yamashita, Y. Nakajima, M. Ishida</i> In-situ X-ray analysis of rail surface contamination
17.30			

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	PLENARY ROOM (1st floor)	PARALLEL 1 (3rd floor)	PARALLEL 2 (3rd floor)
	SESSION 25 Vehicle dynamics and vehicle/track interaction	SESSION 26 Surface defects on wheels and rails (2)	SESSION 27 Friction modifier and its application
8.40	<i>CHAIRMAN: JENS NIELSEN</i>	<i>CHAIRMAN: BIRGER KARLSSON</i>	<i>CHAIRMAN: ULF OLOFSSON</i>
	S10-Tournay <i>H. Tournay</i> The influence of wheel/rail interaction on loaded car hunting	S03-Li2 <i>Z. Li, X. Zhao, R. Dollevoet</i> The determination of a critical size for rail top surface defects to grow into squats	S05-Lewis <i>R. Lewis, E.A. Gallardo, J. Cotter, D.T. Eadie</i> The effect of friction modifiers on wheel/rail isolation
9.00	S10-Zakharov <i>S.M. Zakharov, I.G. Goryaceva, D.Yu. Pogorelov, I.A. Zharov, S.N. Soshenkov, V.A. Simonov, V.N. Yasikov</i> Computer-aided simulation of the influence of track and vehicle parameters on the wheel/rail	S09-Sasaki <i>T. Sasaki, O. Yaguchi, Y. Kobayashi</i> Application of area detector type diffraction residuals stress measurement of shelling problem in railway tracks	S08-Stock <i>R. Stock, D.T. Eadie, D. Elvidge, K. Oldknow</i> Influencing rolling contact fatigue through top of rail friction modifier application- a full scale wheel rail test rig study
9.20	S10-Mazzola <i>L. Mazzola, S. Alfi, S. Bruni</i> Bogie design optimization to minimize wheel wear	S01-Kato <i>T. Kato, A. Sugeta, E. Nakayama</i> Investigation of influence factors on spalling property in railway wheel steel	S08-Kusuda <i>M. Kusuda, Y. Yamaguchi, S. Fukagai</i> The effect of friction modifiers on reducing lateral force and rail renewal cost in Shinkansen track
9.40	S10-Sun <i>Y.Q. Sun, C. Cole, P. Boyd</i> A numerical method using Vampire modelling for prediction of turnout curve wheel-rail wear	S09-Takahashi <i>S. Takahashi, T. Kato, H. Suzuki, T. Sasaki</i> Residual hoop stress evaluation of railway wheels	S02-Horst <i>J.J. Horst, E.J.M. Hiensch</i> Experimental evaluation of friction modifiers for integral network wheel/rail interface friction management
10.00			

	SESSION 28 Rolling contact fatigue: influences and observations	SESSION 29 Vehicle dynamics and multi-body modelling	SESSION 30 Material behaviour: wear, plastic flow and fatigue
	<i>CHAIRMAN: SERGEY ZAKHAROV</i>	<i>CHAIRMAN: HARRY TOURNAY</i>	<i>CHAIRMAN: WERNER DAVES</i>
10.30	S03-Mutton <i>P.J. Mutton, M. Tan, P. Bartle, A. Kapoor</i> The effect of severe head wear on rolling contact fatigue in heavy haul operations	S10-Cantone <i>L. Cantone, D. Negretti, L. Vita, V. Vullo</i> Effect of train longitudinal dynamics on wheel-rail forces	S01-Jaiswal <i>J. Jaiswal, D. Wilcox</i> An objective measurement of the microstructural damage resulting from rail wheel contact
10.50	S03-Cookson <i>J.M. Cookson, P.J. Mutton</i> The role of the environment in rolling contact fatigue cracking of rails	S10-Manashkin <i>A. Manashkin, S. V. Myamlin, A.N. Pshinko, V.I. Prikhodko</i> Simulation of wheelset movement in car dynamics problems	S01-Ahlstrom2 <i>J. Ahlström, B. Karlsson</i> Stiffness changes during fatigue of railway steels R8/R8T at ambient and subzero temperatures
11.10	S03-Matsuda <i>H. Matsuda, Y. Satoh, Y. Kanematsu, K. Iwafuchi</i> Effect of grease lubrication on wear and rolling contact fatigue of high rail	S10-Fisette <i>P. Fisette, N. Doquier, L. Ganovski</i> Tramway/track interaction: dynamic analysis and performance evaluation of an articulated bogie with independent wheels	S09-Brouzoulis <i>J. Brouzoulis, P. Torstensson, R. Stock, M. Ekh</i> Prediction of wear and plastic flow in rails - test rig results, model calibration and numerical prediction
11.30	S01-Kobayashi <i>J. Kobayashi</i> Experimental study on gauge corner crack of high rail in gentle curves	S09-Magheri <i>S. Magheri, M. Malvezzi, E. Meli, A. Rindi</i> An innovative wheel-rail contact model for multibody applications	S01-Vasic <i>G. Vasic, F.J. Franklin, D.I. Fletcher</i> Influence of partial slip and direction of traction on wear rate in wheel-rail contact
11.50	S08-Schoech <i>W. Schoech, R. Heyder, R. Dollevoet</i> Specific railhead profiles to control rolling contact fatigue - design and maintenance, the European approach	S09-Falomi <i>S. Falomi, M. Malvezzi, E. Meli, M. Rinchi</i> Multibody modeling of railway vehicles: innovative algorithms for the detection of wheel-rail contact points	S09-Mandal1 + S09-Mandal2 <i>N.K. Mandal, M. Dhanasekar, P. Boyd</i> Elasto-plastic stress analysis of an IRJ with a loading below shakedown limit / Shakedown stress analysis of an IRJ
12.10			

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PLENARY ROOM (1st floor)

PARALLEL 1 (3rd floor)

PARALLEL 2 (3rd floor)

	SESSION 31 Design of railway axles	SESSION 32 Track and network design and monitoring	SESSION 33 Rail corrugation and vehicle / track dynamics
	<i>CHAIRMAN: ROGER LEWIS</i>	<i>CHAIRMAN: DANIEL STONE</i>	<i>CHAIRMAN: PAUL MEEHAN</i>
13.40	S10-Bruni <i>S. Bruni, R. Corradi, L. Mazzola</i> Wheel rail contact forces as input for optimal and robust axle design	S04-Kalivoda <i>M. Kalivoda, B. Knoll</i> Enhanced methods for the assessment of rolling noise and rail vibrations	S01-Pieringer <i>A. Pieringer, W. Kropp, D. Thompson</i> Investigation of the dynamic contact filter effect in vertical wheel/rail interaction using a 2D and a 3D non-Hertzian contact model
14.00	S05-Luke <i>M. Luke, I. Varfolomeev</i> Fracture mechanics assessment of crack propagation behaviour in railway axles	S04-Brugola <i>M. Brugola</i> Rail wear reduction using low vibration "embedded rail" system chosen for the tramway lines 2 and 3 in Florence-Italy	S01-Bellette <i>P.A. Bellette, P.A. Meehan, W.J. Daniel</i> Tangent track corrugation model validation with a two disk test rig
14.20	S05-Varfolomeev <i>I. Varfolomeev, M. Luke, M. Burdack</i> Fatigue and fretting fatigue behaviour of a railway axle steel A4T	S04-Mannara <i>G. Mannara, M. Autiero, N. Barbati, N. Ciancia, F. Devoto, S. Infante</i> Innovative MEMS accelerometric wireless network for dynamic investigations on railways: application on a subway tunnel of Naples	S08-Kanematsu <i>Y. Kanematsu, Y. Satoh, K. Iwafuchi</i> Influence of type of grinding stones on efficiency of rail grinding
14.40		S04-Panzeri <i>P. Panzeri, A. Bonaldi</i> An experimental numerical combined approach to forecast groundborne vibrations and noise due to trains in underground lines	
15.00			



