

19th Nordic Seminar on Railway Technology - Programme

14-15 September 2016, Hotell Clarion Sense, Luleå, Sweden



Wednesday 14 September

Organised by:



09.30-10.30 Registration, coffee and sandwich

10.30-12.10 Plenary session in The Sunset (Moderator: Uday Kumar, LTU)

10.30 Welcome to NSRT 2016

10.35 Trends in railway maintenance technology and management. Uday Kumar, Järnvägstekniskt Center (JVTC), Luleå University of Technology (LTU).

10.55 Digital Twin: Enabling PHM at industrial scale. A. Saxena, General Electric Global Research Center.

11.20 Making big data risk analysis work for the GB Railways. Peter Hughes, Institute of Railway Research, University of Huddersfield

11.45 Assessment and upgrading of railway bridges. Lennart Elfgren, Järnvägstekniskt Center (JVTC), Luleå University of Technology (LTU).

12.10-13.30 Lunch at Kitchen & Table, Clarion

13.30-15.10 Parallel sessions

	Room The Sunset Track - Chair: Wolfgang Schoech	Room The Sky Rolling Stock - Chair: Uday Kumar	Room The Horizon S&C - Chair: Jan Lundberg
13.30	Stiffness Variations in Track systems. Paul Abrahamsson, Vossloh Nordic Switch Systems AB.	EN 14363:2016 – a new and feasible way of homologating vehicles from a running dynamics point of view. Mikael Wrang, MiW Rail Technology AB.	Numerical optimisation of railway crossing designs. Chang Wan, NTNU.
13.55	Track irregularities and vehicle response. Tomas Karis, Mats Berg & Sebastian Stichel, KTH.	Dynamics of SCA Logistics Wagons and its Influence on Wheel Damage. Robin Prevornik, Carlos Casanueva and Saeed Hossein Nia, KTH.	Kinematic Principles in Switches & Crossings. Björn Pålsson, Chalmers.
14.20	The influence of corrugation on tangential forces and rolling contact fatigue. Roger Lundén, Jens Nielsen and Anders Ekberg, Chalmers.	Increased Axle Load to 32.5 tonnes – what Operational and Maintenance effects will it have for the Rolling Stock? Thomas Nordmark, LTU.	A case study on Railway Infrastructure Robustness for Switches and Crossings. Per Norrbin, Sweco Rail AB and Jing Lin, LTU.
14.45	Recent advances in numerical prediction of rail corrugation growth. Chang Wan and Elias Kassa, NTNU.	Nytt EU-direktiv med krav på järnvägsfordon och andra delsystem för järnväg. Stefan Sollander, Transportstyrelsen.	Simulation of material degradation in track switches. R. Skrypnik, J. Brouzoulis, M. Ekh and J. C. O. Nielsen, Chalmers.

15.10-15.40 Coffee

15.40-17.20 Parallel sessions

	Room The Sunset Track - Chair: Hallstein Gåsemyr, JBV	Room The Sky Planning - Chair: Aditya Parida, LTU	Room The Horizon Signal & Power - Chair: Stefan Sollander, Transportstyrelsen
15.40	Numerical prediction of rail corrugation growth on curves. Andreas Carlberger & Anders Frid, ÅF Industry AB; Peter Torstensson, Björn Pålsson and Jens Nielsen, Chalmers.	Efficient coordination of railway infrastructure activities. Martin P. Kidd, Richard M. Lusby and Jesper Larsen, Technical University of Denmark.	Sliding Window-based Fault Detection from High-dimensional Data Streams. Liangwei Zhang, LTU.
16.05	Corrective and Preventative Rail Maintenance by Grinding – Competing or Complementing Activities? Wolfgang Schoech, Speno International SA.	Traffic Management System (TMS) for the Future. Ole Torp Sejersen, NIRAS.	Structural challenges with railway catenary systems. Anders Rønquist and Petter Nåvik, NTNU.
16.30	Crack initiation at martensite surface layers from profile grinding. Hilmar K. Danielsen, Technical University of Denmark.	Passenger train delays in southern Sweden. Carl-William Palmqvist, Teknik och Samhälle på LTH.	New Concept for Higher Speed on Existing Catenary System: Auxiliary Pantograph Operation. Zhendong Liu and Sebastian Stichel, KTH.
16.55	Long term modeling of track geometry degradation. Iman Soleimanmeigouni, Alireza Ahmadi, Xiao Xun, Arne Nissen and Uday Kumar, LTU.	Weather related train delays. Peter Hagberg, Göteborgs Universitet.	Modern feeding methods for railways electrified with 50 – 60 Hz. Radu Belea, Bertil Klerfors, Thorsten Schütte and Bruce Warner.

17.30-18.00 Plenary session in The Sunset (Moderator: Uday Kumar, LTU)

17.30 **Mekaniska bromssystem - utveckling och utmaningar.** Roger Lundén och Tore Vernersson, CHARMEC, Chalmers.

19.30 Dinner at Kitchen & Table, Clarion

Thursday 15 September

08.30-10.00 Plenary session in the Sunset (Moderator: Uday Kumar, LTU)

08.30 **Universal cost model for innovative vehicle design.** Mats Berg, Sebastian Stichel and Carlos Casanueva, KTH.

09.00 **eMaintenance for railway.** Ramin Karim, Järnvägstekniskt Center (JVTC), Luleå University of Technology (LTU).

09.30 **Next generation of wagon design.** Prof. Vyas, Chairman of Technology Mission of Indian Railway.

10.00-10.30 Coffee

10.30-11.45 Parallel sessions

	Room The Sunset Track - Chair: Helge Voldsund, JBV	Room The Sky Wheels - Chair: Roger Lundén, Chalmers	Room The Horizon Track - Chair: Mats Berg, KTH
10.30	Under Sleeper Pads on the Ofoten Line. Bjørn Gunnar Larsen, Alf Helge Løhren, Jernbaneverket.	A mathematical model for train wheel maintenance. Efraim Laksman, Ann-Brith Strömberg, and Michael Patriksson, Chalmers University of Technology.	Hand held appartus for friction and wear mesurements of railway tracks. Jan Lundberg, LTU.
10.55	Heavy transport on existing lines: the assessment of bearing capacity of track-bed based on track stiffness measurements and theoretical studies. Martin Li, Alexander Smekal, Trafikverket.	Wheel life prediction model considering wear and RCF: LKAB Iron-Ore Loco. Saeed Hossein Nia, Carlos Casanueva and Sebastian Stichel, KTH.	Effects of Top-Of-Rail Friction-Modifier (TOR-FM) on wear, cracks and friction. Saad Ahmed Khan, LTU.
11.20	Elasticity in track gives increased availability. Magnus Sköld, Vibration Technology Christian Berner AS, Norway.	Improved maintenance of the wheel-rail system of Sweden's Iron Ore Line. Matthias Asplund, LTU and Trafikverket; Per Gustafsson, LKAB.	Estimation of wheel-rail friction at vehicle certification measurements. Marton Palinko, Mats Berg, KTH; Lars Andersson, SNC Lavalin.

11.45-12.45 Lunch at Kitchen & Table, Clarion

12.45-14.25 Parallel sessions

	Room The Sunset Maintenance & CM - Chair: Uday Kumar, LTU	Room The Sky Övrigt - Chair: Christer Stenström, LTU	Room The Horizon Rolling stock - Chair: Alf Helge Løhren, JBV
12.45	Consequences regarding an increase of the axle load in heavy haul operation in a test period on Ofotbanen. Hallstein Gåsemyr, JBV.	ePilot119: Uppföljning av nulägeanalysen (delprojekt 036). Christer Stenström, LTU.	A Novel Flowchart for Studying Active Suspension Failures in Rail Vehicles. A. Qazizadeh & S. Stichel, KTH; R. Persson, Bombardier Transportation.
13.10	Data analytics for rail maintenance management. Stephen Mayowa Famurewa, LTU.	Working together to find better solutions: Methods facilitating collaboration in the context of a deregulated railway market. Anna Malou Petersson, LTU.	Service management 4.0 och dess applicerbarhet i svensk järnvägsindustri. Mirka Kans and Anders Ingwald, Linnéuniversitetet.
13.35	Using trains in traffic for condition monitoring of infrastructure – results from demo, examples from catenaries, and implications for further innovation. Peter Larsson, Trafikverket; Peter Melander, UPPSAMT.	Lessons learned from the ePilot - a railway development and innovation project. Ulla Juntti, LTU/Performance in Cold.	Novel articulated wagon designs for increased capacity. Carlos Casanueva & Visakh V Krishna, KTH; Roger Jönsson, NTnet AB, Malmö; Bo-Lennart Nelldal, KTH.
14.00	Monitoring to extend service life of steel railway bridges. Gunnstein T. Frøseth, Anders Rønning and Ole Øiseth, NTNU.	The Swedish procurement strategy – a literature review. Jens Modig, LTU.	ReRail - rail with replaceable tread in hardened steel. Anders Sundgren, ReRail AB.

14.30-15.00 Plenary session in The Sunset (Moderator: Uday Kumar, LTU)

14.30 Closure, next seminar

15.00 Coffee