Conference "Icebreaker":
(Malt Whisky Tasting + Beer & BBQ food & soft drinks)

Authors, All Delegates & Exhibitors invited
18.30 – 20.00 pm, Tuesday 2nd July 2019

Day 1: Wednesday 3rd July 2019

08.15: Registration - Exhibition Hall

09.00: Conference Opening by Chair: Professor Mike Forde, PhD, FREng, FRAe, Hon AcI, CEng, RICE, FIEE, FPM
University of Edinburgh + Keynote Papers

Keynote Papers: Lecture Room 'A':

HIGH SPEED RAIL TRACK INNOVATION, Niall Fagan, HS2 Ltd, Birmingham, UK

OVER VIEW OF WORLD TRENDS IN RAILWAYS, Chris Jackson, Railway Gazette International, Sutton, UK

11.00 - 13.00: Parallel Sessions

Lecture Room 'A':

High Speed Railways-1
- COMPARISON OF TECHNICAL PERFORMANCE OF A DISCRETELY SUPPORTED SLAB TRACK SYSTEM & EMBEDDED SLAB TRACK SYSTEM FOR HIGH-SPEED RAILWAY, M Alkhateeb, A Ali, M Miersustad, M Gun, M Waala, Network Rail London South Bank Unit, UK
- HOLISTIC ASSESSMENT APPROACH FOR HIGH-SPEED LINES MAINTENANCE & RENEWAL, A Dhemaited, G Saussehe, S D Japten, O A Ta, J M Comat, A Schwager Guillenmaert, A Hily, SCNF Réseau, La Plaine Saint Denis, France
- UNCERTAINTY BASED DECISION MAKING FOR TRACK SYSTEMS FOR HIGH-SPEED RAIL, V Sarik, Veronika, Sweco, Stockholm, Sweden
- BALLAST-LESS TRACK SYSTEM STA - INNOVATIVE CONTRIBUTION TO LOW NOISE & VIBRATION & LOW MAINTENANCE PERMANENT WAYS FOR HIGH-SPEED & HIGH-PERFORMANCE RAILWAY LINES, J Ford, PORR Bau GmbH, D Pichler, VCE, Vienna, Austria
- ASSESSMENT OF RAILWAY CRITICAL SPEED BASED ON AN EXPERIMENTAL ANALYTICAL APPROACH, P Alves Costa, P Soares & A Colaco, Univ of Porto, Portugal & D Connolly, Univ of Leeds, UK

Rail & Rail Maintenance-1
- BISTABLE MECHANISM IMPROVES SETTIGN OF SWITCH RAILS, J Bos, Jelte, Movares Nederlands BV, Utrecht, Netherlands
- NEW CONCEPTS OF RAILWAY SACS: SINGLE SLENDER SWITCH & VEHICLE BASED SWITCH, J Rail, DT - Vyhkyarkma a strojna, a.s., Prostivoj, Czech Republic & Brno Univ of Technology, O Plassl, Brno Univ of Technology, Czech Republic
- NON-DESTRUCTIVE TECHNOLOGIES & THEIR APPLICATION IN SFT MEASUREMENT FOR CWR TRACK – EXPERIENCES OBTAIN FROM AUSTRALIAN MAINLINE NETWORKS IN RECENT DECADE, R Zhang, H Xu, Rail Track CWR SFT Measurement, Sydney, Australia
- TRACK QUALITY ASSESSMENT & MAINTENANCE BASED ON VEHICLE/TRACK INTERACTION MEASUREMENTS WITH "VIT/MONITOR", S Jovanovic, Univ of Novi Sad, P Tedic, "Tangram projekt" d.o.o., Novi Sad, Serbia, M Dick, Ensco Inc., Springfield, USA
- NEW PROFILE OF CROSSING OPTIMIZED FOR 3 TYPES OF WHEEL TREAD SHAPES, Y Yonehara, S Yonehara, S Watanebe, I Aki, S Matsui, Tokyo Metro Co Ltd, N Kubo, Nippon Steiel & Sumikin Railway Technology Co Ltd, Osaka, T Nakada, Mi Ni Seisakuso Shio co Ltd, Fukushima, Japan
- ADJUSTABLE RAIL FASTENINGS ABATE MAINTENANCE OF TRANSITIONS, J Bos, Movares Nederlands BV, Utrecht, Netherlands

Railway Structures & Earthworks-1
- CASE HISTORIES OF TRAIN DERMENALS & REDUCING THE RISK OF STRUCTURAL COLLAPSE, R Bullett, Arup, Bristol, UK
- STABILITY OF THE TEIGNMOUTH SEA CLIFFS: THE PAST, PRESENT & FUTURE, T Lavery, Network Rail, Seindow, UK
- WHICH LOAD MODEL DO YOU USE FOR RAIL TRACK DESIGN?, L Moschen, D Pichler, VCE Vienna Consulting Engineers ZT GmbH, Wien, Austria, N Lesgidis, Aristotle Univ, Thessaloniki, Greece, J Lane, Rail Safety & Standards Board, London, UK
- INNOVATIVE LEVEL CROSSING, J P Frottier, Het Elastomertechnik GMBH, Wiebaden, Germany
- ROAD LEVEL CROSSING PROBLEMS & SOLUTIONS, L Losley, Tramway, Liverpool, UK
- EMBEDDED RAIL SYSTEMS ON BRIDGES: A PRACTICAL KEY TO INTEGRAL DESIGN, A de Man, edicion[za]BV, Haarlem, Netherlands
- STABILITY OF THE TEIGNMOUTH SEA CLIFFS: THE PAST, PRESENT & FUTURE, T Lavery, Network Rail, Seindow, UK
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- EMBEDDED RAIL SYSTEMS ON BRIDGES: A PRACTICAL KEY TO INTEGRAL DESIGN, A de Man, edicion[za]BV, Haarlem, Netherlands

13.00 – 14.00 Lunch – Exhibition Hall

14.00 – 16.00: Parallel Sessions
### Rail & Rail Maintenance - 2

- **DEVELOPING A HYBRID METHODOLOGY FOR MONITORING HEAD CHECKS IN RAILWAY INFRASTRUCTURE**, A Magno, R Londero, T Tinga, Univ of Twente, Enschede, A Jamshidi, StruktonRail, Utrecht, Netherlands.
- **TECHNICAL CONDITIONS OF CURVE TRACK SECTIONS BASED ON THE MEASUREMENT DATA FROM TRACK GEOMETRY INSPECTION CAR**, R Zhang, H Wu, Railway Track, Sydney, Australia.
- **ULTRASONIC RAIL INSPECTION WITH ARRAY PROBES**, T Heckel & R Boehm, BAM, Berlin, Germany.
- **NOISE REDUCTION OF 15 DB ON BALLAST WAGONS**, Fujioka, I Arai, Y Yonehara, Tokyo Metro, Japan.

### Rail & Rail Maintenance - 3

- **AN INTELLIGENT VISION SYSTEM FOR INCREASING SAFETY & CAPACITY ON RAILWAY PLATFORMS**, H Parkinson, Howard, Digital Rail Limited, Lancaster, UK.
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### Railway Structures & Earthworks-2

- **REDUCING THE IMPACT OF FLOODING ON RAILWAY OPERATIONS AT COWLEY BRIDGE JUNCTION, EXETER, UK**, S Lynch, One Asp & Partners, Bristol, UK.
- **INTEGRATED MULTI-PHASE INVESTIGATIONS TO DETERMINE THE POTENTIAL FOR REOPENING AN HISTORICAL RAILWAY EMBANKMENT FOR URBAN LIGHT RAIL SYSTEM G Buchtel**, JBA Consulting Ltd, Newcastle, D Gunn, B Dashwood, D Berino, BGS, Keyworth, UK.
- **COMPARISON OF MULTIPLE CRITERIA DECISION MAKING METHODS FOR GEOTECHNICAL ASSET MANAGEMENT OF RAILWAY EMBANKMENTS**, G Govan, G Sino, AECOM UK Ltd, Nottingham, D Lo Presti, A Dawson, Univ of Nottingham, UK.
- **ANALYSIS OF PRELOADED COHESIVE SUBGRADE SOILS SUBJECT TO CYCLIC LOADING**, N Whirl, X Gang, Univ of Warwicke, Coventry, UK.
- **USING HARD DURABLE ROCK FILL & MULTI LAYER GEOSYNTHETIC TO STRENGTHEN HEAVY HAUL TRACK SUBGRADE**, H Wu, R Zhang, Railway Track, Sydney, Australia.

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### High Speed Railways-2

- **EVALUATION OF FORMATION STIFFNESS USING DISTRIBUTED ACOUSTIC SENSING (DAS)**: A COMPARATIVE STUDY WITH EXISTING GEOPHONE TECHNOLOGY, B Dashwood, D Gunn, BGS, Keyworth, UK, M Kemenne, S Cole, Optasense, Brea, USA, C Minto, Optasense, Farnborough, B Nayyar, NanshaRail, Milton Keynes, UK.
- **UTILISING SYNCHRONOUS TRACKBED INSPECTION & DATA INTEGRATION FOR ROOT CAUSE ANALYSIS**, J Vorster, J Gascoyne, Zetica Rail, Oxford, UK.
- **LIGHTWEIGHT DEFLECTOMETER FOR TRACK ASSESSMENT USING DESIGN BASED MODEL FOR MAINTENANCE & REHABILITATION**, K Madala, T Sussmann, Univ of Hartford, West Hartford, USA.
- **EVALUATION OF FORMATION STIFFNESS USING DISTRIBUTED ACOUSTIC SENSING (DAS)**: A COMPARATIVE STUDY WITH EXISTING GEOPHONE TECHNOLOGY, B Dashwood, D Gunn, BGS, Keyworth, UK, M Kemenne, S Cole, Optasense, Brea, USA, C Minto, Optasense, Farnborough, B Nayyar, NanshaRail, Milton Keynes, UK.
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### Track Investigation

- **EVALUATING PERFORMANCE OF NEW CAPS BASED ON INTENSITY OF VIBRATIONS & NOISE**: I Arai, Y Yonehara, Tokyo Metro, Japan.
- **ANALYSIS OF FRACTURE MODE AND STRESS INTENSITY FACTOR FOR LONGITUDINAL CRACKS IN RAILHEAD USING FINE ELEMENT METHOD**, J Lee, K Oh, Y Park, Seoul National Univ of Sci & Tech, Nowon-gu, D Sung, Daewon Univ & S Kwon, KORAIL, Daejon, Korea.
- **NOISE REDUCTION OF 15 DB ON BALLAST WAGONS**, Fujioka, I Arai, Y Yonehara, Tokyo Metro, Japan.
- **NOISE REDUCTION OF 15 DB ON BALLAST WAGONS**, A de Grand Placitre, FIMOR, Le Mans, France.
- **ENHANCED TRACK ASSESSMENT USING DESIGN BASED MODEL FOR MAINTENANCE & REHABILITATION**, K Madala, T Sussmann, Univ of Hartford, West Hartford, USA.

### Trains & Light Rail

- **BEHAVIOUR & LIMITATIONS OF 4 WHEEL TRUCKS**, L Lesley, Trampower Ltd, Liverpool, UK.
- **KOREAN EXPERIENCE IN LIGHT RAILWAY DEVELOPMENT**, K Oh, Y Park, Seoul National Univ, Taito, Japan.
- **ENHANCED TRACK ASSESSMENT USING DESIGN BASED MODEL FOR MAINTENANCE & REHABILITATION**, K Madala, T Sussmann, Univ of Hartford, West Hartford, USA.

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### Social Event - Conference Banquet

19.15 for 19.45 Royal Scots Club, Abercromby Place, Edinburgh, UK

*(Please note the Royal Scots Club's Dress Code: Strictly no trainers or blue jeans; Men – Business Jacket with Tie, Ladies - dress/skirt or tailored trousers.)*
Day 2: Thursday 4th July 2019

08.15: Registration - Exhibition Hall

08.15 - 09.00 Coffee – Exhibition Hall

09.00 - 10.30: Parallel Sessions

Keynote Papers: Lecture Room ‘A’:

HIGH SPEED RAIL TRACK DEVELOPMENTS IN CHINA, Prof Xuecheng Bian, Zhejiang Univ, Hangzhou, China

RAILWAYS IN RURAL AREAS: SOCIAL SUPPORT OR FINANCIAL DRAIN? Prof Roderick Smith, Imperial College London, UK

10.30 – 11.00 Coffee – Exhibition Hall

11.00 - 13.00: Parallel Sessions

Lecture Room ‘A’:

Chair: Sauzéat, Univ of Lyon / ENTPE, Vaulx

- DESIGNS, APPLICATIONS, & PERFORMANCES OF ASPHALT TRACKBEDS IN EUROPEAN & STATES, J Rose, Univ of Kentucky, Lexington, KY USA
- BALLASTED TRACK MANAGEMENT OF RAILWAY PROJECTS, T Watts, E Russell, J Rose, Univ of Kentucky, Lexington, KY USA
- OPERATION, ROLLING STOCK & RAILWAY AERODYNAMICS, M Woné, SNCF Réseau, La Plaine Saint Denis cedex, France
- BALLASTED TRACK, I Sauzéat, Univ of Lyon / ENTPE, Vaulx

Lecture Room ‘B’:

Chair: E Russell

- BALLAST INTERFACIAL PRESSURE MEASUREMENTS USING A RAILWAY TRACK SIMULATION TOOL FOR DESIGNING OF LOW ORDER WHEEL POLYGONAL WEAR DETECTION FOR HIGH-SPEED TRAINS, Y Maki, Railway Technical Research Institute, Tokyo, Sophia Univ, Tokyo, Y Terumichi, Sophia Univ, Tokyo, Japan
- EMBEDDED RAIL SYSTEMS IN VARIOUS FORMS: KEY TO FAIR ASSESSMENTS ACCORDING TO THE EUROPEAN STANDARDS FOR FASTENING SYSTEMS, A de Man, editor/pavda BV, Haarlem, Netherlands
- EFFICIENT DESIGN OF WIND PROTECTION MEASURES FOR RAILWAY LINES – 12 YEARS OF APPLICATION OF THE GUIDELINE RIL 807.04, M Dumitra, R Volkert, P Deeg, DB Systemtechnik GmbH, Munich, Germany
- BALLASTED TRACK INTERFACIAL PRESSURE MEASUREMENTS USING PRA RESEARCH TEST TRAIN, T Watts, E Russell, J Rose, Jerry Univ of Kentucky, Lexington, KY USA
- EMBEDDED RAIL TRACK SYSTEMS IN VARIOUS FORMS: KEY TO FAIR ASSESSMENTS ACCORDING TO THE EUROPEAN STANDARDS FOR FASTENING SYSTEMS, A de Man, editor/pavda BV, Haarlem, Netherlands
- OPERATION OF RAILWAY STRUCTURES & EARTHWORKS
- BALLASTED TRACK, I Sauzéat, Univ of Lyon / ENTPE, Vaulx

Lecture Room ‘C’:

Chair: M Woné

- BALLASTED TRACK, I Sauzéat, Univ of Lyon / ENTPE, Vaulx
- BALLASTED TRACK INTERFACIAL PRESSURE MEASUREMENTS USING A RAILWAY TRACK SIMULATION TOOL FOR DESIGNING OF LOW ORDER WHEEL POLYGONAL WEAR DETECTION FOR HIGH-SPEED TRAINS, Y Maki, Railway Technical Research Institute, Tokyo, Sophia Univ, Tokyo, Y Terumichi, Sophia Univ, Tokyo, Japan
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- BALLASTED TRACK, I Sauzéat, Univ of Lyon / ENTPE, Vaulx

13.00 – 14.00 Lunch – Exhibition Hall

14.00 - 17.30: Parallel Sessions

Lecture Room ‘A’:

Chair: Sauzéat, Univ of Lyon / ENTPE, Vaulx

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Lecture Room ‘B’:

Chair: E Russell

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Lecture Room ‘C’:

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- BALLASTED TRACK, I Sauzéat, Univ of Lyon / ENTPE, Vaulx
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15.30 onwards: Tea & Coffee – Outside Lecture Rooms - 17.30 Conference Closures

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