CM2025 Final Program

CM2025 – Sophia University

13th International Conference on Contact Mechanics and Wear of Rail/Wheel Systems

Sophia University, Tokyo, Japan
22 – 26 September 2025

Venue : Sophia University, Yotsuya Campus
7 – 1 Kioi-cho, Chiyoda-ku, Tokyo, 102-8554

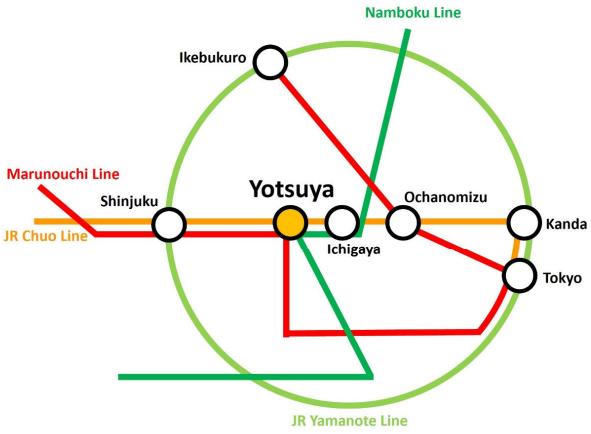
Access and Campus Map →
(Tap or Scan to see the venue location)

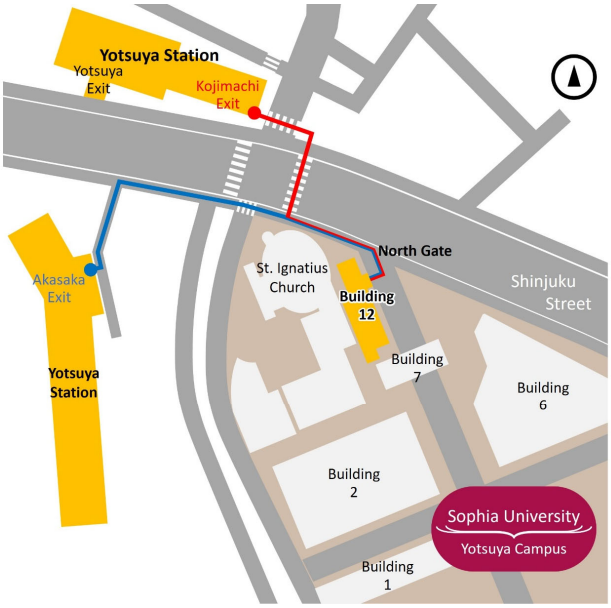
University Website

↓Route from your location↓
(Tap or Scan the QR code below)

Google Maps

Sophia University Yotsuya Campus
7-1 Kioicho,Chiyoda-ku Tokyo,102-8554
5 min. walk from Kojimachi Exit or Akasaka Exit of Yotsuya Station (JR Chuo Line, Marunouchi Line and Namboku Line)





MONDAY 22 SEPTEMBER

Time schedule (GMT+09:00)

9:00 …
15:00 …
16:00 …
17:00 …
18:00 …

ICRI Workshop

15:00-17:00
CM2025 Registration
Venue: Building 12, Ground Floor

17:30-19:30 Welcome Party

Final Program

TUESDAY 23 SEPTEMBER

Time Schedule (GMT+09:00)

8:15-	**Registration (*Venue: Building 12, Ground Floor*)**
9:00-9:30	**Opening Ceremony (*Venue: Building 6, Ground Floor*)**
9:30-10:20	**Special Lecture by Mr. Katsumi Ise (President &CEO, Totetsu Kogyo Co., Ltd.)**
10:20 - 10:30	**Group Photo**

Transition to Oral Session (OS) rooms (*Venue: Building 12*)

	ROOM A			ROOM B			ROOM C		
11:00-12:20	OS 1.1a	OS1.1a-1	U00027	OS 1.1b	OS1.1b-1	U00127	OS 1.1c	OS1.1c-1	U00053
		OS1.1a-2	U00043		OS1.1b-2	U00041		OS1.1c-2	U00146
		OS1.1a-3	U00047		OS1.1b-3	U00042		OS1.1c-3	U00092
		OS1.1a-4	U00165		OS1.1b-4	U00012		OS1.1c-4	U00103
12:20-13:00	Lunch Break								
13:00-14:40	OS 1.2a	OS1.2a-1	U00064	OS 1.2b	OS1.2b-1	U00019	OS 1.2c	OS1.2c-1	U00105
		OS1.2a-2	U00099		OS1.2b-2	U00089		OS1.2c-2	U00157
		OS1.2a-3	U00149		OS1.2b-3	U00130		OS1.2c-3	U00109
		OS1.2a-4	U00181		OS1.2b-4	U00124		OS1.2c-4	U00014
		OS1.2a-5	U00104		OS1.2b-5	U00169		OS1.2c-5	U00112
14:40-15:10	Coffee break								
15:10-16:50	OS 1.3a	OS1.3a-1	U00008	OS 1.3b	OS1.3b-1	U00022	OS 1.3c	OS1.3c-1	U00036
		OS1.3a-2	U00045		OS1.3b-2	U00029		OS1.3c-2	U00161
		OS1.3a-3	U00075		OS1.3b-3	U00154		OS1.3c-3	U00119
		OS1.3a-4	U00079		OS1.3b-4	U00195		OS1.3c-4	U00201
		OS1.3a-5	U00193		OS1.3b-5	U00200		OS1.3c-5	U00202

Final Program

WEDNESDAY 24 SEPTEMBER

Time Schedule (GMT+09:00)

8:15-	**Registration (*Venue: Building 12, Ground Floor*)**									
9:00-9:50	**Keynote Lecture 1 by Prof. Anders Ekberg, Chalmers University of Technology, Sweden** ***Contact mechanics and wear in train and rail asset management*** ***Venue: Building 12***									
	ROOM A			**ROOM B**			**ROOM C**			
10:20-12:00	OS 2.1a	OS2.1a-1	U00003	OS 2.1b	OS2.1b-1	U00131	OS 2.1c	OS2.1c-1	U00010	
		OS2.1a-2	U00090		OS2.1b-2	U00102		OS2.1c-2	U00017	
		OS2.1a-3	U00023		OS2.1b-3	U00034		OS2.1c-3	U00164	
		OS2.1a-4	U00033		OS2.1b-4	U00175		OS2.1c-4	U00184	
		OS2.1a-5	U00082		OS2.1b-5	U00179		OS2.1c-5	U00035	
12:00-12:40	Lunch Break									
12:40-14:00	OS 2.2a	OS2.2a-1	U00009	OS 2.2b	OS2.2b-1	U00068	OS 2.2c	OS2.2c-1	U00011	
		OS2.2a-2	U00132		OS2.2b-2	U00084		OS2.2c-2	U00097	
		OS2.2a-3	U00018		OS2.2b-3	U00153		OS2.2c-3	U00101	
		OS2.2a-4	U00185		OS2.2b-4	U00021				
14:00-14:30	Coffee break									

Poster Sessions (Shotgun and Poster presentations)

	ROOM A（Group A）		**ROOM B（Group B）**	
Shotgun sessions 14:30-15:10	Part 1	PS.A-1 ~ PS.A-25	Part 2	PS.B-1 ~ PS.B-27
15:10-15:20	Transition to poster area			
	ROOM D			
15:20-16:30	Poster presentations Part 1（Group A）			
16:40-17:50	Poster presentations Part 2（Group B）			

18:30 ~	**Banquet** ***Venue: Arcadia Ichigaya (Fuji Hall)*** 4-2-25 Kudankita, Chiyoda-ku, Tokyo 102-0073, Japan (About 2 minutes on foot from JR Ichigaya Station. About 15 minutes on foot from Sophia University)	Google Maps

Final Program

THURSDAY 25 SEPTEMBER

Time Schedule (GMT+09:00)

8:15-	**Registration(Venue: Building 12, Ground Floor)**								
9:00-9:50	**Keynote Lecture 2 by Prof. Zili Li, Delft University of Technology, The Netherlands** ***RCF Explained by Contact Mechanics in Statics and Dynamics*** ***Venue: Building 12***								
	ROOM A			**ROOM B**			**ROOM C**		
10:20-12:00	OS 3.1a	OS3.1a-1	U00117	OS 3.1b	OS3.1b-1	U00136	OS 3.1c	OS3.1c-1	U00125
		OS3.1a-2	U00182		OS3.1b-2	U00015		OS3.1c-2	U00113
		OS3.1a-3	U00083		OS3.1b-3	U00166		OS3.1c-3	U00143
		OS3.1a-4	U00180		OS3.1b-4	U00062		OS3.1c-4	U00006
		OS3.1a-5	U00016		OS3.1b-5	U00007			
12:00-12:30	Lunch Break								
12:30-14:10	OS 3.2a	OS3.2a-1	U00072	OS 3.2b	OS3.2b-1	U00056	OS 3.2c	OS3.2c-1	U00031
		OS3.2a-2	U00110		OS3.2b-2	U00066		OS3.2c-2	U00111
		OS3.2a-3	U00114		OS3.2b-3	U00145		OS3.2c-3	U00032
		OS3.2a-4	U00137		OS3.2b-4	U00120		OS3.2c-4	U00046
		OS3.2a-5	U00054		OS3.2b-5	U00126		OS3.2c-5	U00048
14:10-14:40	Coffee Break								
14:40-16:00	OS 3.3a	OS3.3a-1	U00118	OS 3.3b	OS3.3b-1	U00160	OS 3.3c	OS3.3c-1	U00024
		OS3.3a-2	U00030		OS3.3b-2	U00199		OS3.3c-2	U00037
		OS3.3a-3	U00039		OS3.3b-3	U00028		OS3.3c-3	U00050
					OS3.3b-4	U00067			
16:15-17:00	**Closing Celemony** *Venue: Building 12*								

List of Technical Visits

FRIDAY 26 SEPTEMBER

Time Schedule (GMT+09:00)

9:30-12:30	Technical Visits

General Notes:
All technical visits will conclude between 12:00 and 12:30. It is advisable to assume that you will return to central Tokyo (Tokyo Station area) by around 14:00. Large luggage is not permitted on any of the technical visits. Lunch is not included. Those planning to travel internationally on the same day are advised to take this schedule into careful consideration. A list of technical visits is provided below.The detailed meeting time and map will be provided once your technical visit assignment has been determined.

TV.1: JR East R&D Center in Omiya

This technical visit will take place at the Research and Development Center of East Japan Railway Company (JR East), located in Omiya, Saitama. The facility can be reached fromTokyo Station in approximately 45 minutes and serves as a key hub for research on rolling stock, maintenance technologies, and passenger service systems. Participants are kindly requested to meet at Tetsudō-Hakubutsukan Station. From there, they will walk to the research center. The visit will conclude on site. After the technical visit, participants who have spare time on the day may choose, at their own discretion, to visit the Railway Museum.

Website	https://www.jreast.co.jp/e/development/section/
Google Maps	https://www.google.com/maps/search/?api=1&query=35.924839,139.610785

TV.2: Tokyo Metro Training Center

The Tokyo Metro Training Center is one of the most advanced railway training facilities in Japan, offering highly realistic and comprehensive training environments for subway operations. Located in Shin-Kiba, about 30 minutes from Tokyo Station, the center provides training for subway operators, station staff, and track maintenance crews. It features driving simulators as well as facilities for emergency response and track-related training. Participants are kindly requested to meet at Shin-Kiba Station. From there, they will travel to the training center by a shuttle bus.The visit will conclude with a return by shuttle bus to Shin-Kiba Station.

Website	https://cm2025.jscmr.org/img/TMTC.pdf
Google Maps	https://maps.app.goo.gl/j5keqR679ewNvtqu6

TV.3: Railway Technical Research Institute (RTRI)

This technical visit will take place at the Railway Technical Research Institute (RTRI), Japan's leading center for railway research and innovation. Located in Kunitachi, Tokyo, the institute conducts advanced research in areas such as vehicle dynamics, contact mechanics, track systems, safety, and energy efficiency, contributing to the development of cutting-edge railway technologies. The departure point is Sophia University, from which participants will travel by bus to the site. The visit will conclude with a return by bus to Sophia University.

Website	https://www.rtri.or.jp/eng/
Google Maps	https://maps.app.goo.gl/jsQTdzhAeuQJwWgT8

TV.4: National Traffic Safety and Environment Laboratory(NTSEL)

This technical visit is scheduled to take place at the National Traffic Safety and Environment Laboratory (NTSEL), a national research institute specializing in traffic safety, vehicle regulations, and environmental impact assessment. NTSEL conducts research on vehicle safety standards, emissions testing, and advanced mobility systems.This research institute possesses Japan's only wheel–rail test rig capable of simulating sharp curve negotiation. Participants are kindly requested to meet at Mitaka Station, the nearest station to NTSEL. From there, they will travel to the laboratory by chartered bus. The visit will conclude with a return by bus to Mitaka Station.

Website	https://www.ntsel.go.jp/e/index.html
Google Maps	https://maps.app.goo.gl/3XnNdc5dtEgNaoAZA

Final List of Oral Session (OS) Presenters

The following list shows the final order and presentation time of the speakers. Paper IDs are kept here for the presenters' convenience, but they will be omitted in the printed program distributed at the Registration desk. The printed program will also list not only the presenters but their co-authors, and the Session IDs will correspond to the filenames of the full papers distributed online.

Time	OS	OS title	Session ID	Paper ID	Paper Title	Presenter	Affiliation
Tue. 23 11:00 – 12:20	1.1a	Polygonal wear 1	OS1.1a-1	U00027	EXPERIMENTAL STUDY ON RAILWAY WHEEL POLYGONAL WEAR: INFLUENCE OF WHEEL HARDNESS	Haohao Ding	Southwest Jiaotong University
			OS1.1a-2	U00043	MECHANISM OF POLYGONAL WEAR OF HEAVY-HAUL LOCOMOTIVE WHEELS CAUSED BY SELF-EXCITED VIBRATION	Huanyun Dai	Southwest Jiaotong University
			OS1.1a-3	U00047	FORMATION MECHANISM OF HIGH-ORDER WHEEL POLYGONIZATION OF HIGH-SPEED TRAINS IN CHINA	Yunguang Ye	Southwest Jiaotong University
			OS1.1a-4	U00165	INVESTIGATION ON THE MECHANISM OF WHEEL POLYGONISATION BASED ON FRICTION INDUCED TORSIONAL VIBRATION	Xiaogang Liu	Wuhan University of Technology
	1.1b	Contact mechanics and modelling	OS1.1b-1	U00127	APPLICABILITY OF STEADY STATE ROLLING CONTACT THEORIES ON HIGH-FREQUENCY VEHICLE-TRACK DYNAMICS ANALYSES	Xin Zhao	Southwest Jiaotong University
			OS1.1b-2	U00041	A FINITE ELEMENT ANALYSIS OF RAIL RATCHETING EFFECTS ON V-TRACK	Fang Ren	Delft University of Technology
			OS1.1b-3	U00042	FLAME GPU AGENT BASED MODELLING FOR RAIL-WHEEL MATERIALS	David Fletcher	The University of Sheffield
			OS1.1b-4	U00012	FIELD TEST ON WHEEL FLATS DYNAMIC EFFECTS ON HIGH-SPEED TRAIN	Dong Xiaoqing	China Academy of Railway Sciences
	1.1c	Damage and wear of brake	OS1.1c-1	U00053	NOVEL SMALL-SCALE TESTS TO STUDY THERMO-MECHANICAL DAMAGE IN TREAD-BRAKED RAILWAY WHEEL STEEL PAIRED WITH VARIOUS ORGANIC COMPOSITE BRAKE BLOCKS	Lorenzo Ghidini	Lucchini RS
			OS1.1c-2	U00146	EXPERIMENTAL VALIDATION OF A NUMERICAL THERMAL MODEL FOR RAILWAY BRAKE BLOCKS WITH EXPERIMENTAL DATA OBTAINED ON A TWIN-DISC RIG	Rosario Pagano	Politecnico di Torino
			OS1.1c-3	U00092	PARTICLE EMISSIONS FROM FREIGHT TRAIN TREAD BRAKE AND DISC BRAKE SYSTEMS	Yezhe Lyu	Lund University
			OS1.1c-4	U00103	PARTICLE EMISSION CHARACTERISTICS OF VARIOUS BRAKE BLOCKS AND THEIR EFFECTS ON THE WHEEL FOR TREAD BRAKES	Ryo Ozaki	Railway Technical Research Institute
Tue. 23 13:00 – 14:40	1.2a	Rail lubrication and management	OS1.2a-1	U00064	PREDICTION OF WHEEL/RAIL INTERFACE FRICTION IN CASE OF TOP-OF-RAIL FRICTION MANAGEMENT FOR OPERATIONAL SCENARIOS	Gerald Trummer	Virtual Vehicle Research GmbH
			OS1.2a-2	U00099	DEVELOPMENT OF MONITORING TECHNOLOGY ON WHEEL FLANGE LUBRICATION CONDITION WITH PQ MONITORING BOGIE IN OPERATION	Takuto Ueda	Tokyo Metro Co., Ltd.
			OS1.2a-3	U00149	MODELLING GREASE RETENTIVITY FOR INTELLIGENT LUBRICATION SYSTEM	Daniel Kvarda	Brno University of Technology
			OS1.2a-4	U00181	COMPREHENSIVE ASSESSMENT OF SOLID STICK FRICTION MODIFIERS IN WHEEL/RAIL CONTACT	Tomas Jordan	Brno University of Technology
			OS1.2a-5	U00104	DEVELOPMENT AND PERFORMANCE OF AN INTEGRATED FRICTION BLOCK FOR WHEEL FLANGE LUBRICATION UNDER IN-SERVICE CONDITIONS	Kazuyuki Handa	Railway Technical Research Institute
	1.2b	Turnout and crossing 1	OS1.2b-1	U00019	RESEARCH OF GAP IN THE FROG VIBRATION ABSORBER BASED ON MOPSO ALGORITHM	Jiaxin Lei	Southwest Jiaotong University
			OS1.2b-2	U00089	ANALYSIS OF WHEEL-TURNOUT CONTACT AND IMPACT NOISE WHEN THE HIGH-SPEED TRAIN PASSES THROUGH TURNOUT	Xinwen Yang	Tongji University
			OS1.2b-3	U00130	STUDY ON THE DYNAMICS OF VEHICLE-TURNOUT COUPLING SYSTEM CONSIDERING HIGH-DIMENSIONAL STOCHASTIC DISTRIBUTION OF WHEEL TREAD WEAR AND RAIL LIGHT BAND DETERMINATION	Zheng Yan	Southwest Jiaotong University
			OS1.2b-4	U00124	EFFECT OF STRUCTURAL IRREGULARITY IN TURNOUTS ON WHEEL-RAIL CREEPAGE CALCULATION AND VEHICLE SWAYING	Jiayin Chen	Guangzhou Maritime University
			OS1.2b-5	U00169	A SCIENTIFIC APPROACH TO IMPROVE WHEEL-RAIL CONTACT PERFORMANCE IN TURNOUTS	Jerome Pun	Monash University
	1.2c	Management of rail and infrastructure	OS1.2c-1	U00105	MANAGEMENT OF WHEEL-RAIL DAMAGE IN A TIGHT METRO CURVE	Gianluca Megna	Università di Pisa
			OS1.2c-2	U00157	RESOURCE-EFFICIENT TRACK MAINTENANCE AND RENEWAL STRATEGIES VIA LOOK-UP TABLES	Jonathan Leung	Department of Engineering Mechanics
			OS1.2c-3	U00109	SIMULATIONS AND FIELD MEASUREMENTS OF LONG-TERM RAIL PROFILE WEAR IN CURVES	Caroline Ansin	Chalmers University of Technology
			OS1.2c-4	U00014	SUSTAINABILITY OF THE RAILWAY-TRACK SYSTEM: UNINTENDED CONSEQUENCES	Jacob Whittle	University of Sheffield
			OS1.2c-5	U00112	A TOOL FOR WHEEL-RAIL CONTACT HOTSPOTS ASSESSMENT	Alfredo Gay Neto	University of São Paulo
Tue. 23 15:10 – 16:50	1.3a	Polygonal wear 2	OS1.3a-1	U00008	AXLE BOX ACCELERATION-BASED MONITORING OF WHEEL–RAIL ROUGHNESS: AN APPLICATION FOR QUANTITATIVE DETECTION OF WHEEL POLYGON IN THE PRESENCE OF RAIL CORRUGATION	Qinglin Xie	Southwest Jiaotong University
			OS1.3a-2	U00045	ONLINE MONITORING OF WHEEL POLYGONAL WEAR UNDER WHEEL-RAIL COUPLED RESONANCE	Dadi Li	Southwest Jiaotong University
			OS1.3a-3	U00075	EFFECT OF ABRASIVE BLOCK ON TRANSVERSE PROFILE WEAR AND POLYGONAL WEAR OF WHEEL	Peng Wang	Southwest Jiaotong University
			OS1.3a-4	U00079	STUDY ON POLYGONAL WEAR FORMATION OF LOCOMOTIVE WHEELS INDUCED BY ELECTROMECHANICAL COUPLING VIBRATION	Wubin Cai	Southwest Jiaotong University
			OS1.3a-5	U00193	EXPERIMENTAL STUDY ON THE EFFECTS OF SPEED CHANGING ON MITIGATION OF WHEEL POLYGONAL WEAR	Hengyu Wang	Southwest Jiaotong University
	1.3b	Turnout and crossing 2	OS1.3b-1	U00022	ROLLING CONTACT FATIGUE PROPERTIES OF MANGANESE STEELS USED IN CROSSINGS	Fusayoshi Aoki	East Japan Railway Company
			OS1.3b-2	U00029	LONG-LIFE TONGUE RAIL PROFILE FOR REDUCING WEAR AND PREVENTING CRACKS	Masahiro Miwa	Central Japan Railway Company
			OS1.3b-3	U00154	PRACTICAL ROLLING CONDITIONS ON DYNAMIC RESPONSE AND WEAR OF SWING NOSE CROSSINGS IN HEAVY HAUL RAILWAYS	Enhui Zhang	Monash Univeristy
			OS1.3b-4	U00195	ROLLING CONTACT FATIGUE INITIATION IN ADVANCED CROSSING MATERIALS R400, MN13 AND CRB1400	Kazim Yildirimli	The University of Sheffield
			OS1.3b-5	U00200	AN INVESTIGATION OF WEAR AND RCF DAMAGE MECHANISM ON REVERSING TURNOUTS OF AN URBAN INTERCITY RAILWAY LINE	Lizuo Xin	Zhejiang Rail Transit Operation Management Group CO.,LTD.
	1.3c	Measurement and Monitoring	OS1.3c-1	U00036	TOWARDS REAL-TIME ASSESSMENT OF FLANGE CLIMB DERAILMENT RISK USING MACHINE LEARNING	Nisal Sugathapala	Monash University
			OS1.3c-2	U00161	DERAILMENT COEFFICIENT PREDICTION USING LONG-SHORT TERM MEMORY NETWORK	Kenji Ejiri	The University of Tokyo
			OS1.3c-3	U00119	WHEEL-MOUNTED ULTRASONIC WHEEL/RAIL INTERFACE MONITORING	Ruby Kempka	The University of Sheffield
			OS1.3c-4	U00201	A QUANTUM-ENHANCED VIRTUAL MEASUREMENT OF TGAMMA AT WHEEL RAIL CONTACT	Sanjar Ahmad	Central Queensland University
			OS1.3c-5	U00202	DEVELOPMENT OF A TRIBOMETER REAL-TIME DIGITAL TWIN	Esteban Bernal	Central Queensland University

Time	OS	OS title	Session ID	Paper ID	Paper Title	Presenter	Affiliation
Wed. 24 10:20 – 12:00	2.1a	Wheel–rail contact simulation	OS2.1a–1	U00003	PRE–PROCESSING OF WHEEL–RAIL PROFILES FOR CONTACT SIMULATION. HOW SMOOTH IS SMOOTH ENOUGH?	Kevin Oldknow	Simon Fraser University
			OS2.1a–2	U00090	IMPLEMENTING REALISTIC TRACTION–CREEPAGE CURVES IN RAIL VEHICLE DYNAMICS SIMULATIONS USING AN ELASTO–PLASTIC THIRD BODY LAYER	Kevin Oldknow	Simon Fraser University
			OS2.1a–3	U00023	FURTHER NUMERICAL MODELING OF MEASURED RAILWAY CREEP FORCE CURVES USING CONTACT	Edwin Vollebregt	Vtech CMCC
			OS2.1a–4	U00033	A NEW GLOBAL APPROACH FOR WHEEL–RAIL CONTACT PATCH WEAR CALCULATION	Binbin Liu	Politecnico di Milano
			OS2.1a–5	U00082	VERIFICATION OF NON–HERTZIAN WHEEL–RAIL CREEP FORCE MODEL BASED ON FIELD TEST	Baoan Zhang	CRRC Qingdao Sifang Co., Ltd
	2.1b	Wheel–rail interface 1	OS2.1b–1	U00131	THE COMBINED EVALUATION FOR WHEEL AND RAIL PROFILE OF HIGH–SPEED TRAIN TO REDUCING MAINTENANCE COST	Gang Shen	Tongji University
			OS2.1b–2	U00102	FINISHING WHEEL SHAPE TO SUPPRESS DEPTH OF CUT BASED ON MODIFIED ARC WHEEL PROFILE	Jun Fujiwara	East Japan Railway Company
			OS2.1b–3	U00034	DYNAMICS PERFORMANCE AND WHEEL WEAR PREDICTION FOR A GAUGE–CHANGEABLE RAILWAY LOCOMOTIVE	Huailong Shi	Southwest Jiaotong University
			OS2.1b–4	U00175	EVALUATION OF WHEEL PROFILE WEAR WITH SCALED ROLLER TEST RIG CONSIDERING FULL–SCALE VEHICLE TEST CONDITIONS	Yosuke Yamazaki	Nippon Steel Corporation
			OS2.1b–5	U00179	A DIGITAL TWIN–BASED WHEEL WEAR PREDICTION FRAMEWORK	Dayuan Zhuang	Southwest Jiaotong University
	2.1c	Friction and adhesion 1	OS2.1c–1	U00010	MEASUREMENT EXPERIMENT OF TANGENTIAL CONTACT FORCE BASED ON WATER FLOW RATE USING TWIN–DISK MACHINE	Daisuke Yamamoto	Railway Technical Research Institute
			OS2.1c–2	U00017	A NUMERICAL STUDY OF WHEEL–RAIL DYNAMIC ADHESION UNDER WET CONDITION WITH SPINNING CONSIDERING TEMPERATURE AND SURFACE ROUGHNESS	Bing Wu	Soochow University
			OS2.1c–3	U00164	ON THE TRANSIENT MECHANISM OF WATER–PARTICLE INDUCED LOW–ADHESION PHENOMENON	Milan Omasta	Brno University of Technology
			OS2.1c–4	U00184	INVESTIGATION OF THE ADHESION BETWEEN RAILS AND WHEELS IN WINTER	Shinichi Saga	Railway Technical Research Institute
			OS2.1c–5	U00035	EXPERIMENTAL STUDY ON EXTREMELY LOW ADHESION OF WHEEL–RAIL BRAKE LARGE CREEPAGE UNDER VARIOUS MEDIUM CONDITIONS AT 400 KM/H	Chongyi Chang	China Academy of Railway Sciences Corporation Limited

Wed. 24 12:40 – 14:00	2.2a	Rail grinding and milling 1	OS2.2a–1	U00009	EFFECTS OF RAIL GRINDING FACETS ON SURFACE INITIATED ROLLING CONTACT FATIGUE	Ulrich Spangenberg	MxV Rail
			OS2.2a–2	U00132	RAIL GRINDING – A LABORATORY STUDY FOCUSED ON MATERIAL TRANSFORMATIONS DURING FACET GRINDING	Wangmo Tsering	Chalmers University of Technology
			OS2.2a–3	U00018	INVESTIGATING THE DEVELOPMENT OF EQUIVALENT CONICITY IN–SERVICE AND GRADIENT INDEX PROFILES WITH FOCUS ON THE INFLUENCE OF RAIL GRINDING	Ingemar Persson	Swedish Transport Administration (Trafikverket)
			OS2.2a–4	U00185	IMPACT OF GRINDING LIMITATIONS ON RAIL PROFILE OPTIMIZATION	Carlos Casanueva	KTH Royal Institute of Technology
	2.2b	Corrugation 1	OS2.2b–1	U00068	OBSERVATION OF RAIL VIBRATION CHARACTERISTICS IN RAIL CORRUGATION GROWTH PROCESS	Kazuhiro Kajihara	Railway Technical Research Institute
			OS2.2b–2	U00084	THE EFFECTS OF PLASTIC DEFORMATION ON WEAR–TYPE CORRUGATION GROWTH	Paul Meehan	The University of Queensland
			OS2.2b–3	U00153	PERIODIC WEAR OF HIGH–SPEED WHEEL AND RAIL UNDER THE WAVE INTERFERENCE OF MULTIPLE WHEELS	Qinghua Guan	Southwest Jiaotong University
			OS2.2b–4	U00021	A FURTHER STUDY ON THE BASIC RAIL CORRUGATION THEORY SYSTEM	Guangxiong Chen	Southwest Jiaotong University
	2.2c	Rail wear and damage 1	OS2.2c–1	U00011	WEAR AND FATIGUE OF THREE PEARLITIC RAIL STEELS IN A BONDED BRICK MODEL FOR RAIL FAILURE	Philomenah Holladay	The University of Sheffield
			OS2.2c–2	U00097	METALLURGICAL RESPONSE OF VARIOUS RAIL GRADES TO FLASH BUTT WELDING IN HEAVY HAUL APPLICATIONS	Huijun Li	University of Wollongong
			OS2.2c–3	U00101	FROM WELD TO SETTLEMENT: A COMPREHENSIVE APPROACH TO EVALUATE THE INFLUENCE OF DIPPED WELDS ON TRACK PERFORMANCE	Lukas Prettner	voestalpine Rail Technology GmbH

Time	OS	OS title	Session ID	Paper ID	Paper Title	Presenter	Affiliation
Thu. 25 10:20 – 12:00	3.1a	RCF 1	OS3.1a-1	U00117	MODELING PLASTIC DEFORMATION AND STRAIN ACCUMULATION AROUND WEL IN RAIL-WHEEL CONTACT THROUGH FORMING MODELLING	Pattarapong Nuasri	The University of Sheffield
			OS3.1a-2	U00182	FINITE ELEMENT ANALYSIS OF CRACK INITIATION AND PROPAGATION IN BELGROSPI RAIL DEFECT UNDER WHEEL-RAIL CYCLIC ROLLING CONTACT	Zhijun Zhou	Southwest Jiaotong University
			OS3.1a-3	U00083	MACHINE LEARNING-BASED FATIGUE CRACK SEVERITY ASSESSMENT IN RAILWAY RAILS COMBINING IMAGE ANALYSIS WITH FINITE ELEMENT SIMULATIONS	Khaled Janada	Monash University
			OS3.1a-4	U00180	RESIDUAL STRESS CHANGES IN RAIL STEEL SUBJECTED TO ROLLING CONTACT FATIGUE IN LABORATORY TESTS	Yoshikazu Kanematsu	Railway Technical Research Institute
			OS3.1a-5	U00016	INFLUENCE OF AXLE LOAD ON ROLLING CONTACT FATIGUE	Anders Ekberg	Chalmers University of Technology
	3.1b	Friction and adhesion 2	OS3.1b-1	U00136	A LABORATORY METHODOLOGY FOR EVALUATING THE PERFORMANCE OF ADHESION RESTORATION MATERIALS UNDER LOW ADHESION CONDITION	Radovan Galas	Brno University of Technology
			OS3.1b-2	U00015	THE ROLE OF HARD PARTICLES AT THE WHEEL-RAIL ROLLING-SLIDING CONTACT INTERFACE: DURING TRAIN SANDING PROCESS FOR ADHESION IMPROVEMENT	Shuyue Zhang	Southwest Jiaotong University
			OS3.1b-3	U00166	APPLICATION OF CAST IRON PARTICLES AS AN ADHESION MATERIAL FOR WHEELS AND RAILS	Shinya Fukagai	Railway Technical Research Institute
			OS3.1b-4	U00062	A DEM BASED APPROACH TO UNDERSTAND THE PHYSICS IN SANDED WHEEL-RAIL CONTACTS	Klaus Six	Virtual Vehicle Research GmbH
			OS3.1b-5	U00007	TRACK TRIALS TO ASSESS THE EFFECT OF CONDUCTIVE ALTERNATIVES TO SAND ON BRAKING & TRACK CIRCUIT OPERATION	William Skipper	University of Sheffield
	3.1c	Rail grinding and milling 2	OS3.1c-1	U00125	EFFICIENT RAIL GRINDING IN URBAN ENVIRONMENTS	Richard Stock	Plasser Canada Inc
			OS3.1c-2	U00113	MODELING HIGH-SPEED MILLING OF RAILS FOR COST EFFICIENT MAINTENANCE	Ashok Ambig	Montanuniversität Leoben
			OS3.1c-3	U00143	MULTI-SCALE CHARACTERISATION OF NEW AND USED FIELD RAIL GRINDING STONES	Lucas Biazon	The University of Sheffield
			OS3.1c-4	U00006	RESEARCH ON THE COUPLING DEVELOPMENT OF PERIODIC DEFECTS ON THE RAIL SURFACE	Xiaodi Xu	China Academy of Railway Sciences Corporation Limited
Thu. 25 12:30 – 14:10	3.2a	RCF 2	OS3.2a-1	U00072	CONSTRUCTION AND SIGNAL CHARACTERISTIC STUDY OF RAIL FATIGUE CRACK ACFM DETECTION SYSTEM BY USING ARC-SHAPED ARRAY PROBE	Qiang Lin	Tribology Research Institute, State Key Laboratory of Rail Transit Vehicle System
			OS3.2a-2	U00110	INFLUENCE OF WHITE ETCHING LAYER CREATED ON R260 RAILS USING LASERS ON DAMAGE BEHAVIOUR DURING ROLLING/SLIDING CONTACT TESTS	Yue Yang	The University of Sheffield
			OS3.2a-3	U00114	QUANTIFYING ROLLING CONTACT FATIGUE IN RAILS THROUGH EDDY CURRENT AND MICROSTRUCTURAL ASSESSMENT	Sylvie Chenier	National Research Council (NRC) Canada
			OS3.2a-4	U00137	INSIDE RCF CRACKS: OXIDATION AS A FACTOR IN RAIL DAMAGE	Simon Skurka	Brno University of Technology
			OS3.2a-5	U00054	EVOLUTION OF WHITE ETCHING LAYERS AND BROWN ETCHING LAYERS ON RAILS DURING MULTIPLE THERMAL CYCLES	Hongtao Zhu	University of Wollongong
	3.2b	Wheel-rail interface 2	OS3.2b-1	U00056	DEGRADATION DUE TO WHEEL DISTORTION AND EXTREME TEMPERATURE LOCALISATION UNDER HEAVY BRAKING	John Cookson	Monash University
			OS3.2b-2	U00066	NUMERICAL ASSESSMENT OF ROLLING CONTACT TESTING OF TREAD BRAKED WHEELS	Eric Voortman Landström	Chalmers University of Technology
			OS3.2b-3	U00145	THERMO-MECHANICAL CYCLING OF WHEEL AND RAIL STEELS WITH APPLICATION TO BLOCK BRAKING AND RAIL WELDING	Johan Ahlström	Chalmers University of Technology
			OS3.2b-4	U00120	WHEEL WEAR PREDICTION OF FREIGHT WAGON CONSIDERING THE IMPACT OF BRAKING TEMPERATURE RISE	Xing Li	Southwest Jiaotong University
			OS3.2b-5	U00126	WHEEL/RAIL THERMO-MECHANICAL INTERACTIONS SUBJECTED TO TREAD WEAR EVOLUTION	Xinru Guo	Southwest Jiaotong University
	3.2c	Friction and adhesion 3	OS3.2c-1	U00031	MOISTURE: THE MOST IMPORTANT FACTOR IN LEAF LOW ADHESION?	Roger Lewis	University of Sheffield
			OS3.2c-2	U00111	CREATION OF A CONTAMINATION LAYER WITH LEAF LAYER CHARACTERISTICS FOR RAIL CLEANING TRIALS	Oluwatamilore Adenipekun	University of Sheffield
			OS3.2c-3	U00032	TRACTION ADHESION COEFFICIENT TEST FOR HEAVY-DUTY LOCOMOTIVES	Yuanwu Cai	China Academy of Railway Sciences Corporation Limited
			OS3.2c-4	U00046	EXPERIMENTAL AND SIMULATION-BASED RHEOLOGICAL FRICTION MODELING FOR LOCOMOTIVE TRACTION IN DRY RAIL CONDITIONS	Maksym Spiryagin	Central Queensland University
			OS3.2c-5	U00048	EFFECT OF WHEEL-RAIL SURFACE CONDITIONS ON FREIGHT TRAIN BRAKING: A SIMULATION STUDY	Yan Quan Sun	Central Queensland University
Thu. 25 14:40 – 16:00	3.3a	Rail wear and damage 2	OS3.3a-1	U00118	"TURTLE SHELLING", A NEW TYPE OF DEFECT OF HEAD-HARDENED LOW RAILS IN TIGHT CURVES	Andrea Bracciali	University of Florence
			OS3.3a-2	U00030	INVESTIGATION ON CHARACTERISTICS AND MECHANISMS OF PLASTIC FLOW IN INNER RAILS OF HEAVY-HAUL RAILWAYS	Shaofeng Wang	East China Jiaotong University
			OS3.3a-3	U00039	QUANTIFYING THE SIZE DISTRIBUTION AND ELEMENTAL COMPOSITION OF RAIL-WHEEL WEAR PARTICLES FOR IMPROVED AIR QUALITY	Forbes Gusha	University of Sheffield
	3.3b	Wheel-rail dynamics, noise and vibration	OS3.3b-1	U00160	THE INFLUENCE OF ELECTROMECHANICAL COUPLING VIBRATIONS IN PERMANENT MAGNET DIRECT-DRIVE INBOARD BEARING BOGIES ON WHEELRAIL CONTACT BEHAVIOUR AND WHEEL DAMAGE	Chen Yang	Southwest Jiaotong University
			OS3.3b-2	U00199	MODELLING AND CONTROLLING A RAILWAY BRAKE CONTACT MECHANICS VIBRATION INSTABILITY	Paul Meehan	The University of Queensland
			OS3.3b-3	U00028	PREDICTION OF WHEEL SQUEAL NOISE AMPLITUDE UNDER COMBINED LATERAL AND LONGITUDINAL CREEPAGE	Ratabhat Wangtawesap	The University of Queensland
			OS3.3b-4	U00067	RESONANT DAMAGE TO RAILWAY CLIPS CAUSED BY WHEEL-RAIL HIGH-FREQUENCY INTERACTION AND CORRESPONDING COUNTERMEASURES	Linlin Sun	China Academy of Railway Sciences Corporation Limited
	3.3c	Corrugation 2	OS3.3c-1	U00024	FIELD VERIFICATION OF EFFECT OF RAIL PADS ON RAIL CORRUGATION GROWTH	Hirofumi Tanaka	Railway Technical Research Institute
			OS3.3c-2	U00037	MECHANISM AND PARAMETER OPTIMIZATION DESIGN OF RAIL VIBRATION ABSORBERS IN SUPPRESSING SHORT-PITCH RAIL CORRUGATION	Qingjie Liu	East China Jiaotong University
			OS3.3c-3	U00050	EFFECT OF METRO RESILIENT FASTENER TRACKS EQUIPPED WITH A RAIL DAMPER ON THE FORMATION OF RAIL CORRUGATION	Wei Li	Southwest Jiaotong University

Final List of Poster Session (PS) Presenters

Poster presentations are sorted into two groups. After a one-minute shotgun presentation per person, the poster presentations will be held in two separate groups. Paper IDs are kept here for the presenters' convenience, but they will be omitted in the printed program distributed at the Registration desk. The printed program will also list not only the presenters but their co-authors, and the Session IDs will correspond to the filenames of the full papers distributed online.

Poster Session Group A: Wheel-Rail Contact, Wear, Vehicle Measurement and Dynamics

Session ID	Paper ID	Paper Title	Presenter	Affiliation
PS.A-1	U00013	RESEARCH ON WHEEL POLYGONAL WEAR OF METRO VEHICLES BASED ON WHEELRAIL VERTICAL COUPLING	Yixuan Shi	Wuhan University
PS.A-2	U00051	INVESTIGATION OF HUNTING MOTION IN EMUS DURING CROSS-LINE OPERATION USING WHEEL WEAR PREDICTION	Zhenhuan Yang	Southwest Jiaotong University
PS.A-3	U00059	LATERAL CREEP FORCE DECOUPLING ANALYSIS IN INDIRECT WHEEL-RAIL FORCE MEASUREMENT	Zhanfei Zhang	Tongji University
PS.A-4	U00061	ANALYSIS OF BRAKING STABILITY AND WHEEL WEAR OF TRAIN UNDER DIFFERENT TRACK CONDITIONS	Yuhang Zhang	Tongji University
PS.A-5	U00063	PREDICTION AND OPTIMIZATION OF WHEEL TREAD HOLLOW WEAR UNDER TRACTION CONDITION	Yiyang Song	Tongji University
PS.A-6	U00069	WHEEL PROFILE CLUSTERING OF HIGH-SPEED TRAINS BASED ON GEOMETRIC AND DYNAMIC FEATURES	Lin Gan	Southwest Jiaotong University
PS.A-7	U00081	FAST NON-HERTZIAN WHEEL-RAIL THERMAL CONTACT MODELS INTEGRATED WITH TREAD BRAKE IN TRAIN DYNAMIC SIMULATIONS	Riccardo Siniscalchi	Tor Vergata University of Rome
PS.A-8	U00088	STUDY OF WHEEL WEARS BASED ON FIELD DATA AND DEVELOPMENT OF WHEEL PROFILE MEASURMENT DEVICE	Shigemitsu Kita	Central Japan Railway Company
PS.A-9	U00093	ASYMMETRIC WEAR EVOLUTION OF POLYGONAL WHEEL IN RAILWAY VEHICLE SYSTEMS USING A RIGID-FLEXIBLE COUPLING MODEL	Peng Lu	Beijing Jiaotong University
PS.A-10	U00100	IMPROVED WHEEL LOAD ESTIMATION FOR PQ MONITORING BOGIE CONSIDERING LATERAL DYNAMICS	Yuzuki Endo	Ibaraki University
PS.A-11	U00108	A PARAMETRIC STUDY ON FLAT-INDUCED IMPACT RESPONSES FOR WHEEL CONDITION MONITORING	Zhen Yang	Delft University of Technology
PS.A-12	U00115	STUDY OF WHEEL-RAIL ADHESION EXPLOITATION OF HIGH-SPEED TRAIN IN THE PRESENCE OF WIDE-WAVELENGTH IRREGULARITIES	Shuangchao Huang	Southwest Jiaotong University
PS.A-13	U00121	EFFECT OF YAW DAMPER PERFORMANCE DETERIORATION ON WHEEL-RAIL CONTACT BEHAVIOR AND WHEEL WEAR	Chenchen Jiang	Southwest Jiaotong University
PS.A-14	U00128	A SPATIAL DOMAIN-BASED ONLINE IDENTIFICATION ALGORITHM FOR WHEEL POLYGONIZATION	Haoyu Zhou	Shanghai University of Engineering Science
PS.A-15	U00152	COMPARATIVE ANALYSIS ON THE CONTACT BEHAVIOUR OF HIGH-SPEED WHEEL/RAIL PROFILES	Qinghua Guan	Southwest Jiaotong University
PS.A-16	U00155	A COMPARATIVE STUDY OF THE VIBROACOUSTIC PROPERTIES ON TWO DIFFERENT TYPES OF TRAMWAY BOGIES	Kresimir Burnac	University of Zagreb
PS.A-17	U00158	DEVELOPMENT OF A COUPLED ANALYSIS METHOD FOR LARGE-SCALE PARALLEL FINITE ELEMENT ANALYSIS AND MULTI-BODY SIMULATION	Hirotaka Sakai	Railway Technical Research Institute
PS.A-18	U00162	METRO WHEEL-RAIL INTERACTION EVOLUTION DUE TO WHEEL PROFILE WEAR	Peibin Jiang	Southwest Jiaotong University
PS.A-19	U00173	DEVELOPMENT OF A SINGLE-AXLE STEERING BOGIE USING REAR AXLE CREEP FORCE (PART 1: STEERING MECHANISM)	Satoshi Kikko	Nippon Steel Corporation
PS.A-20	U00178	DEVELOPING A SINGLE-AXLE STEERING BOGIE USING REAR AXLE CREEP FORCE (PART 2: EVALUATION IN FIELD TESTS AND MASS PRODUCTION)	Tomofumi Toide	Nippon Steel Corporation
PS.A-21	U00176	EVALUATION OF A STEERING BOGIE ABOUT RUNNING RESISTANCE AND POWER CONSUMPTION	Hirotaka Mori	National Traffic Safety and Environment Laboratory
PS.A-22	U00187	IDENTIFICATION OF EARLY SIGNS FOR FLANGE CLIMB DERAILMENT WITH EXPERIMENT DATA	Kenji Ejiri	The University of Tokyo
PS.A-23	U00188	EFFORTS TO REDUCE WHEEL FLANGE WEAR AND RAIL SIDE WEAR	Takuya Matsuda	Tokyo Metro
PS.A-24	U00189	VEHICLE DYNAMICS SIMULATION CONSIDERING MULTI-POINT CONTACT BETWEEN WHEEL AND RAIL DURING EARTHQUAKES	Masahito Kuzuta	Railway Technical Research Institute
PS.A-25	U00020	A STUDY OF THE WHEEL WEAR PHENOMENON RESULTING FROM TREAD MODIFICATION FOR HIGH-SPEED TRAINS: MECHANISM AND APPLICATION	Yuchen Xie	Southwest Jiaotong University

Poster Session Group B:
Rail Damage, Material Degradation, Grinding and Lubrication, Track Monitoring and Maintenance

Session ID	Paper ID	Paper Title	Presenter	Affiliation
PS.B-1	U00038	ANALYSIS OF CAUSES OF BELGROSPI DAMAGE ON HIGH-SPEED RAILS USING 3D CYCLIC ROLLING CONTACT FINITE ELEMENT MODEL	Chenyu Yang	Southwest Jiaotong University
PS.B-2	U00055	STUDY ON THE INFLUENCE OF THREE-DIMENSIONAL PROFILE OF RAIL WELD ON WHEEL-RAIL IMPACT RESPONSE IN SMALL RADIUS CURVE OF METRO	Shi Duojia	Southwest Jiaotong University
PS.B-3	U00057	ANALYSIS OF THE INTERACTION BETWEEN BALLASTLESS TRACK DISENGAGING LENGTH AND TRACK SLAB DEFLECTION SLOPE	Guangqi Wang	Wuhan University
PS.B-4	U00065	UNDERSTANDING THE FORMATION MECHANISMS OF LEAF LAYERS ON THE RAIL SURFACE USING A HIGH-PRESSURE TORSION TEST	Tianhao Xie	The University of Sheffield
PS.B-5	U00070	THE EFFECT OF FATIGUE LAYER FORMATION ON WEAR DEVELOPMENT AND CRACK INITIATION	Masahiro Tsujie	Railway Technical Research Institute
PS.B-6	U00080	SIMULATION OF WHEEL WEAR AND ROLLING CONTACT FATIGUE CRACK PROPAGATION USING CALIBRATED MATERIAL PARAMETERS BY NEURAL NETWORK	Gongquan Tao	Southwest Jiaotong University
PS.B-7	U00085	RAIL LUBRICATION MANAGEMENT CONSIDERING MULTIPLE CURVES WITH PQ MONITORING BOGIE	Yusaku Shimizu	Tokyo Metro Co., Ltd.
PS.B-8	U00086	CONTACT BEHAVIOR AND JAMMING THRESHOLDS OF BEAM-END EXPANSION DEVICES IN LONG-SPAN RAILWAY BRIDGES	Min Xue	Southwest Jiaotong University
PS.B-9	U00087	RAIL PROFILE OPTIMIZATION – COSTS AND BENEFITS OF ACHIEVING "PERFECT" PROFILES	Eric Magel	EM-WRI Consulting Inc.
PS.B-10	U00094	TEMPERATURE IN THE WHEEL-RAIL CONTACT: MEASUREMENT AND MODEL	David Künstner	voestalpine Rail Technology GmbH
PS.B-11	U00095	ACHIEVING PRECISE CONTROL OF THE WHEEL/RAIL INTERFACE THROUGH THE APPLICATION OF DYNAMIC GRIND PLANNING	Christopher Hartsough	Harsco Rail
PS.B-12	U00098	A THREE-DIMENSIONAL SEMI-ANALYTICAL ELASTOPLASTIC CONTACT MODEL FOR WHEEL-RAIL INTERACTION WITH SPIN-ROLLING	Hongxiang Lai	Southwest Jiaotong University
PS.B-13	U00107	MITIGATING WHEEL-RAIL IMPACT LOADS AND DAMAGE IN RAILWAY CROSSINGS BY CROSSING RAIL TOPOLOGY MODIFICATION	Henrik Vilhelmson	Chalmers University of Technology
PS.B-14	U00129	PIXEL LEVEL SEGMENTATION AND SURFACE WEAR EVALUATION OF RAIL SURFACE RUNNING BAND	Mingjing Yue	Southwest Jiaotong University
PS.B-15	U00133	CORRELATION ANALYSIS BETWEEN AXLE-BOX ACCELERATION AND RAIL CORRUGATION FOR CONDITION-BASED MONITORING	Naomi Kubo	Nippon Steel Railway Technology Co., Ltd.
PS.B-16	U00135	IN-SITU FATIGUE CRACK PROPAGATION OF PEARLITIC RAIL STEEL SUBJECTED TO LARGE SHEAR DEFORMATION	Johan Ahlström	Chalmers University of Technology
PS.B-17	U00138	PREDICTING RAIL WEAR USING A HYBRID APPROACH: MODEL SELECTION AND OPTIMIZATION	Yu Chen	Chengdu University
PS.B-18	U00139	ON BOARD DETECTION METHOD FOR DYNAMIC GAUGE WIDENING	Yosuke Ichiyanagi	National Traffic Safety and Environment Laboratory
PS.B-19	U00147	COMPARATIVE ANALYSIS OF BRAKE SHOE MATERIALS FOR RAILWAY INDUSTRY USING A NOVEL TWIN-DISC TEST RIG	Rosario Pagano	Politecnico di Torino
PS.B-20	U00150	OPTIMISING WHEEL AND RAIL ECONOMY BY NON-UNIFORM RAIL GRINDING	Ingemar Persson	AB DEsolver
PS.B-21	U00163	DIGITAL TWIN TECHNOLOGY FOR VERTICAL SPLIT HEAD RISK MANAGEMENT IN RAILWAY TRACKS	Ankur Ashtekar	Loram Maintenance of Way, Inc.
PS.B-22	U00167	STUDY ON RAIL CORRUGATION CHARACTERISTICS OF FLOATING SLAB TRACK	Yunlong Yang	Ningxia University
PS.B-23	U00171	TRANSFER FUNCTION-BASED DIAGNOSIS OF ISOLATOR FAILURES IN STEEL SPRING FLOATING SLAB TRACK SYSTEMS	Qingmin Hui	Southwest Jiaotong University
PS.B-24	U00174	RESEARCH ON STATISTICAL CHARACTERISTICS OF RAIL ROLLING CONTACT FATIGUE LIFE UNDER DRY FRICTION: SCALED TESTS AND SIMULATIONS	Weng Zhiyi	Key Laboratory of Road and Traffic Engineering of the Ministry of Education
PS.B-25	U00190	EVALUATING THE EFFECT OF RAIL GRINDING ON WHITE ETCHING LAYER AND ROLLING CONTACT FATIGUE IN THE BELGIAN RAILWAY NETWORK	Zili Li	Delft University of Technology
PS.B-26	U00198	MULTI-OBJECTIVE OPTIMIZATION OF WHEEL PROFILE CONSIDERING RAIL WEAR ON CURVED SECTIONS	Tomoaki Shimada	Nihon University
PS.B-27	U00168	THEORETICAL AND EXPERIMENTAL STUDY ON ELASTIC WAVE PROPAGATION IN THREE-DIMENSIONAL PERIODIC BALLASTED TRACK OF HIGH-SPEED RAILWAY: BAND-GAP FORMATION MECHANISMS AND CHARACTERISTICS	Mingjing Geng	Southwest Jiaotong University