

Transportation and Electric Railway Technical Meeting

[General Chair]	Tomoki Watanabe (National Traffic Safety and Environment Laboratory)
[Organizing Chair]	Hiroaki Sakai (West Japan Railway Company), Yuya Tanaka (Central Japan Railway Company)
[Organizing co-chair]	Takahiro Okasawa (Bureau of Transportation Tokyo Metropolitan Government), Keiichi Takeuchi (Railway Technical Research Institute)

Sponsors : Suranaree University of Technology, Langsit University
University of Tokyo, Nihon University

Date	31 st Jan, 2018 (Wed)	13:00 - 20:30	
	1 st Feb, 2018 (Thu)	10:00 - 16:20	
	2 nd Feb, 2018 (Fri)	10:00 - 14:30	
Venue	Meeting space in Viphavadee Center , TST Tower, 21 st floor, Viphawadee Rangsit Soi 9, Chompol, Chatuchak, Bangkok, Thailand		
Topics of interest	Railway Technology		

Wednesday January 31st, 2018

Keynote Sessions

Room Auditorium, 2201

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12:00 – 13:00	Registration
13:00 – 13:05	Theme: Opening Ceremony & Keynote Speech Tomoki Watanabe (Chair of IEEJ TER TC)
13:05 – 13:10	Message from Conference Chair: Santi Maensiri, Vice Rector of Suranaree University of Technology
13:10 – 13:15	Message from Rangsit University: Thammasak Rujiranyong, Dean, College of Engineering, Rangsit University
13:15 – 13:45	Keynote Speaker 1: Hidetoshi Oka, Marubeni Transport Engineering Topic: Development along a railway line & Transport by railway
13:45 – 14:15	Keynote Speaker 2: Shigeki Miyake, JICA Topic: JICA's Railway Sector Cooperation in Thailand
14:15 – 14:45	Keynote Speaker 3: Hitoshi Hayashiya, East Japan Railway Topic: Electric energy utilization in railway and recent trends in Japan to improve it
14:45 – 15:15	Keynote Speaker 4: Hideo Nakamura, Nihon university Topic: The current state of the train control system and prospect in the future

15:15 – 15:45	Coffee Break
15:45 – 16:00	Introduction of Japanese Professors
16:00 – 16:30	Keynote Speaker 5: Shinichiro Kon, Meidensha Topic: Traction power supply system in Purple line, and condition monitoring technology
16:30 – 17:00	Keynote Speaker 6: Tomoki Watanabe (Chair of IEEJ TER TC) Topic: Nation wide activities for failure prevention of onboard electronic equipment of EMUs in Japan
17:00 – 17:30	Keynote Speaker 7: Sarawut Sujitjorn, Synchrotron Light Research Institute Topic: Application of Synchrotron Lights in Railways
17:30 – 18:00	Keynote Speaker 8: Sujin Suwannakitborihan, Engineering Institute of Thailand Topic: Lesson Learned in Thai Railway Industry
18:00 – 18:30	Keynote Speaker 10: Peerawut Yutthagowith, KMITL Topic: High voltage engineering applications related to lightning protection in power systems
18:30 – 20:30	Conference Dinner

Thursday February 1st, 2018

Parallel Technical Sessions

Lecture Room 1, 2204, Theme: Transport Planning e.t.c	
Session Chair: Tomoki Watanabe	
Co-Chair: Tosaphol Ratniyomchai	
10:00 – 10:25	TER-18-001 A Rolling Grey System for Railway Passenger Volume Forecast *Jukkrit Kluabwang (Rajamangala University of Technology Lanna Tak)
10:25 – 10:50	TER-18-002 Reservation-Compulsory Commuting Railways: Potentials and Challenges *Ryo Takagi (Kogakuin University)
10:50 – 11:15	TER-18-003 High Speed Railway Project between Bangkok and Chiang Mai *Masaaki HARA (Japan International Consultants for transportation Co., Ltd.)
11:15 – 11:40	TER-18-004 Suggestion of Technical Training for Railway Burgeoning countries *Hideharu IGARASHI (Japan Transport Engineering Company)
11:40 – 13:00	Lunch
Lecture Room 1, 2204, Theme: Railway Vehicles	
Session Chair: Ryo Takagi, Kogakuin University	
Co-Chair: Kittaya Somsai	
13:00 – 13:25	TER-18-005 Modeling and Simulation of Traction Motor Drive with Different PWM Techniques *Jeerapong Srivichai, Thanatchai Kulworawanichpong (Suranaree University of Technology)
13:25 – 13:50	TER-18-006 Characteristics development of induction motor applying 6-phase theory by using the 3-D finite element method Padej Pao-la-or, *Somsak Vatcharakupt (Suranaree University of Technology)
13:50 – 14:15	TER-18-007 Investigation of a Running Simulation Method Using Multiple Time Intervals in Loss Analysis of Traction Inverter *Tsubasa Mineyoshi, Kenji Natori, Kiichiro Kondo (Chiba university)
14:15 – 14:40	TER-18-008 A Fault Diagnosis Method of Plug Doors Based on Sound Recognition *Yongkui Sun, Yuan Cau, Yuzhuo Zhang (Beijing Jiaotong University)
14:40 – 15:05	TER-18-010 Development of a battery and catenary hybrid light rail vehicle simulator for vehicle and battery performance analysis: Version_01 Thanatchai Kulworawanichpong, *Joachim Mwambeleko (Suranaree University of Technology)

15:05 – 15:30	Break
Lecture Room 1, 2204, Theme: Energy Issues	
Session Chair: Thanatchai Kulworawanichpong	
Co-Chair: Jukkrit Kluabwang	
15:30 – 15:55	TER-18-012 Energy Efficient Train Trajectory in High-Frequency Line with Moving Block Signaling System *Shun Ichikawa, Masafumi Miyatake (Sophia University)
15:55 – 16:20	TER-18-013 Control of Peak Power and Energy By Means of Tractive Power Restriction in DC Electrified Railways *Daisuke Igarashi, Masafumi Miyatake (Sophia University)

Lecture Room 2, 2205, Theme: Power Supply	
Chair: Keerati Chayakulkeeree (SUT, Thailand)	
Co-Chair: Uthen Leeton	
10:00 – 10:25	TER-18-015 Enhancement of Substation Reliability for Electric Railway Based on Preventive Maintenance *Sovann Ang, Uthen Leeton, Thanatchai Kulworawanichpong (Suranaree University of Technology)
10:25 – 10:50	TER-18-016 Reducing Contact Wire Wear through Height Adjustment in Overlap Sections *Atsushi Shiogai (EAST JAPAN RAILWAY COMPANY)
10:50 – 11:15	TER-18-017 Simulation on Voltage Balancing in Electric Railway System by Using of Unified Power Quality Conditioner *Kittaya Somsai (Rajamangala University of Technology Isan, Sakon Nakhon Campus)
11:15 – 11:40	TER-18-018 A Probabilistic Load Flow Framework for Investigation of Traction Substation Load Impact to Distribution System *Udom Chhor, Keerati Chayakulkeeree, Thanatchai Kulworawanichpong, Uthen Leeton (Suranaree University of Technology)
11:40 – 12:05	TER-18-019 AC railway power flow modelling integrated with RPC *Kritsada Mongkoldee, Thanatchai Kulworawanichpong (Suranaree University of Technology)
12:05 – 13:00	Lunch
Lecture Room 2, 2205, Theme: Signaling	
Chair: Yuan Cao	
Co-Chair: Chaiyut Sumpavakup	
13:00 – 13:25	TER-18-020 Track Condition Monitoring using Machine Learning Technique for Regional Railways *Hitoshi Tsunashima (College of Industrial Technology, Nihon University), Yuichi Hayashida, Mai Odashima (Graduate School of Nihon University)
13:25 – 13:50	TER-18-021 Safety Evaluation of Level Crossing Control System using STAMP *Tetsuya Takata, Takaaki Sugiyama, Yoshihisa Saito (Kyosan Electric Manufacturing Co.,Ltd.)
13:50 – 14:15	TER-18-022 Verification of a Support System for collision prevention at Level Crossings Using Image Analysis Technology and Communication Technology *Toshihiro Takeuchi (National Traffic Safety and Environment Laboratory), Takeshi Mizuma (The University of Tokyo)

14:15 – 14:40	TER-18-023 Robust CBTC communication network against Wi-Fi from outside *Makoto Yagi (Nippon Signal Company, Limited)
14:40 – 15:05	TER-18-024 The development of a thin client type condition monitoring system using high-speed baseband transmission *Yuya Tanaka (Central Japan Railway Company)
15:05 – 15:30	Coffee Break
15:30 – 15:55	TER-18-025 The Research of Hierarchical Synchronization Mechanism about 2-vote-2 safety computer *Yan Gao, lianchuan Ma, Yuan Cao (Beijing Jiaotong University)

*[Regular Session] 20 minutes plus 5 minutes' Q&A

Friday February 2nd, 2018 Technical Tour (include lunch)

9:00 – 12:00 **MRT Purple Line Depot, Nonthaburi**

13:00 – 14:30 **SRT Red Line, Bang Sue Grand Station construction site**