The 21st International Conference on Magnetically Levitated Systems and Linear Drives

October 10-13, 2011, Daejeon Convention Center, Daejeon, Korea

October 11 (Tue.)

DPO 1 (MAGLEV Development, Projects and Operational Results of High Speed and Urban	n Applications Worldwide 1) Room 101
Chairs: Mr. Laurence Elvin Blow (MaglevTransport, Inc., USA)	13:30-15:10
Prof. Feel Soon Kang (Hanbat National University, Korea)	

DPO-01 13:30-13:50	Urban Maglev in the United States— A Vision of the Future Richard D. Thornton, James G. Wieler MagneMotion, Inc., USA	
DPO-02 13:50-14:10	Application Research on Maglev Transportation in Shanghai Xiangming Wu, Guobin Lin Shanghai Maglev Transportation Engineering R&D Center, China	
DPO-03 14:10-14:30	The SwissRapide Express: Progress and Economical Aspects Niklaus H. König, Matthias Kummer, Anja G. Ludzuweit SwissRapide AG, Switzerland	
DPO-04 14:30-14:50	The Maglev America Project: A 28,800 Mile National Maglev Network for the United States James R. Powell ¹ , Gordon Danby ¹ , James C. Jordan ² , F.H. (Bud) Griffis ³ , Hyunchul Choi ³ ¹ Maglev 2000, USA, ² Maglev Interstate Project, USA, ³ Polytechnic Institute of New York University, USA	
DPO-05 14:50-15:10	Technical Comparison of Maglev and Rail Rapid Transit Systems Hamid Yaghoubi, Nariman Barazi, Keyvan Kahkeshan, Alireza Zare, Hossein Ghazanfari Iran Maglev Technology (IMT), Iran	

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DPO 2 (MAGLEV Development, Projects and Operational Results of High Speed and Urban Applications Worldwide 2)	Room 101
Chairs: Mr. James Grant Wieler (MagneMotion, Inc., USA)	15:30-17:10

Prof. Han-Wook Cho (Chungnam National University, Korea)

DPO-06 15:30-15:50	Outlook of the Superconducting Maglev Kazuo Sawada JR Central, Japan	
DPO-07 15:50-16:10	Will the U.S. Miss its Opportunity for Maglev? Laurence E. Blow U.S. Maglev Coalition, USA	
DPO-08 16:10-16:30	The First Full Scale Functional Prototype of the Superconducting Magnetically Levitated Vehicle MagLev-Cobra R. M. Stephan ¹ , R. de Andrade Jr. ¹ , A. C. Ferreira ¹ , O. J. Machado ¹ , M. D. A. dos Santos ¹ , G. G. Sotelo ² , D. H. N. Dias ² 1 Federal University of Rio de Janeiro (UFRJ), Brazil, 2 Fluminense Federal University (UFF), Brazil	
DPO-09 16:30-16:50	Urban Maglev – Development Plans and Prospects James G. Wieler, Richard D. Thornton MagneMotion, Inc., USA	
DPO-10 16:50-17:10	Review on Incheon Internation Airpor & Urban Maglev Interface C. H. SONG, K. S. Park, C. K. Kim Incheon International Airport, Korea	

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VLG (Vehicles and Levitation/Guidance)Room 102Chairs: Prof. Eisuke Masada (Railway Technical Research Institute, Japan)13:30-15:10

Prof. Jang Young Choi (Chungnam National University, Korea)

VLG-01 13:30-13:50	Design of An Integrated Gap Sensor for Urban Maglev Train Jun Wu, Xiaorong Zeng, Wenwu Zhou, Wensen Chang National University of Defense Technology, China		
VLG-02 13:50-14:10	Superconducting Self-balancing System for Vehicle Suspension and Guide Gino D'Ovidio, Francesco Crisi, Giovanni Lanzara University of L'Aquila, Italy		
VLG-03 14:10-14:30	Modeling and Optimization of EMS Maglev Tracks to Avoid TrackInduced Self-Excited Vibration Danfeng Zhou, Kun Zhang% Yaozong Liu, Jie Li National University of Defense Technology, China		
VLG-04 14:30-14:50	Experimental Investigation of a High-Temperature Superconducting Magnet for Maglev Ken Nagashima, Masafumi Ogata, Katsutoshi Mizuno, Yuuki Arai, Hitoshi Hasegawa, Takashi Sasakawa Railway Tenchnical Research Institute (RTRI), Japan		
VLG-05	Research on Electromagnetic Suspension (EMS) Control Method Based on Force Balance		
14:50-15:10	Junqi Xu, Yuan Zhou, Xiaodong Wu, Lijun Rong, Tao Qu		

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Shanghai Maglev Transportation Engineering R&D Center, China

October 11 (Tue.)

GAI (Guideway and Infrastructure) Room 102

Chairs: Prof. Gino D'Ovidio (University of L'Aquila, Italy)

15:30-17:10

Dr. Hyungchul Kim (Korea Railroad Research Institute, Korea)

GAI-01 15:30-15:50	Ansaar Sudina ¹ . Ik Pvo Hona ²		
GAI-02	Research on High Speed Maglev Guideway System		
15:50-16:10	Guangwei Cheng, Feng Ye, Dingxiang Chen		
	Shanghai Maglev Transportation Engineering R&D Center, China		
CAL 02	Development of Ground Coil Type of PLG for Maglev		
GAI-03 16:10-16:30	Noriyuki Takahashi, Masao Suzuki, Masayuki Aiba		
	Railway Technical Research Institute, Japan		
	Adaptation of Existing Railroad Trackage for Levitated Maglev Vehicle Operations		
GAI-04	F.H. (Bud) Griffis ¹ , James R. Powell ² , Gordon Danby ² , James C. Jordan ³ , Hyunchul Choi ⁴		
16:30-16:50	¹ Polytechnic Institute of New York University, USA, ² Maglev 2000, USA, ³ Maglev Interstate Project, USA, ⁴ Polytechnic Institute of New York		
	University, USA		

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GAI-05	Maglev Guideway Structure Development by Max Bögl
16:50-17:10	Gerhard Hofstätter
10.50-17.10	Max Bögl Bauunternehmen & CoKG, Germany

October 12 (Wed.)

EPF (Economic and Planning/Feasibility Studies), ORT (Other Related Topics)

Room 101 13:30-14:50

Chairs: Dr. Friedrich Loeser (ThyssenKrupp Transrapid GmbH, Germany)

Dr. Young-Jae Han (Korea Railroad Research Institute, Korea)

EPF-01 13:30-13:50	Comparison of Maglev and Wheel-rail Track Design Parameters with Focus on Routing, Operation, and Cost-efficiency Martin Retzmann International Maglevboard e.V., Germany
EPF-02 13:50-14:10	Maglev System on the Island of Tenerife Eckert Fritz ¹ , Peter Mnich ² ¹ Institute of Railway Engineering, Germany, ² Institute of Railway Engineering, Berlin University of Technology, Germany
ORT-01 14:10-14:30	Stability Analysis of the Dynamic Behavior of Railway Vehicle System Kyung Seok Sim, Jin Hee Lee, Tae Won Park Ajou University, Korea
ORT-02 14:30-14:50	Development of the Integrated Railway Vehicle Model considering Catenary, Bogie and Wheel-Rail Contact Jin Hee Lee, Kyung Seok Sim, Tae Won Park Ajou University, Korea

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Room 101

16:00-17:40

October 12 (Wed.)

MNI (MAGLEV - New Ideas)

Chairs: Prof. Richard Magdalena Stephan (Federal University of Rio de Janeiro, Brazil)

Dr. Chang-Young Lee (Korea Railroad Research Institute, Korea)

MNI-01 16:00-16:20	Teaching Magnetic Levitation at Graduate Level Jacek F. Gieras University of Technology and Life Sciences, Poland
MNI-02 16:20-16:40	System Requirements Verification Based on Requirement Traceability Management System Kyung-Ryul Chung, Chun-Ho Choi, Chan Young Park Korea Institute of Industrial Technology, Korea
MNI-03 16:40-17:00	The MaglevTube Puckpodcar for Mass Urban Transportation Andries A Louw MLT Holdings, South Africa

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MNI-04	Status of MSBS Study at KAIST
17:00-17:20	Dong-Kyu Lee ¹ , Jun-Seong Lee ¹ , Jae-Hung Han ¹ , Yoshiyuki Kawamura ²
17.00-17.20	¹ KAIST, Korea, ² FIT, Japan

October 12 (Wed.)

PLE 1 (Propulsion, Linear Motors and Energy Supply 1)

Room 102

Chairs: Dr. Jiarong Fang (Magplane Technology, Inc., USA)

13:30-14:50

Dr. Hyung-Suk Han (Korea Institute of Machinery & Materials, Korea)

PLE-01 13:30-13:50	Recent Advancement in Linear Drives Applied to Traction in Japanese Subways; Linear Metros Takafumi Koseki ¹ , Eisuke Isobe ² ¹ The University of Tokyo, Japan), ² Japan Subway Association, Japan
PLE-02 13:50-14:10	Proposal of Double-sided Type Transverse Flux Linear Synchronous Motor Shin Jung-Seob ¹ , Takafumi Koseki ¹ , Kim Houng-Joong ² ¹ The University of Tokyo, Japan), ² Sung-Jin Royal Motion Co. Ltd, Korea
PLE-03 14:10-14:30	Block Switches for LSM Driven Transportation System In-Kun Kim, Phil Jeter General Atomics, USA

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P	LE-	04
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Inverter-Fed Multiphase AC Linear Motor under Non-Traditional Control

14:30-14:50

A. V. Brazhnikov, I. R. Belozyorov, S. A. Molokitin *Siberian Federal University, Russia*

October 12 (Wed.)

PLE 2 (Propulsion, Linear Motors and Energy Supply 2), SOC (Safety and Operational Control)

Room 102 16:00-18:00

Chairs: Mr. Martin Retzmann (The International Maglevboard, USA)

Dr. Doh Young Park (Korea Institute of Machinery & Materials, Korea)

PLE-05 16:00-16:20	Design of a Position Detection Sensor for Linear Synchronous Motors
	Jun Wu, Wenwu Zhou, Lu Li, Wensen Chang
	National University of Defense Technology, China
PLE-06 16:20-16:40	Energy Efficiency Invariance Laws Acting in the Field of Multiphase Inverter-Fed AC Linear Motors
	A. V. Brazhnikov, I. R. Belozyorov, S. A. Molokitin
	Siberian Federal University, Russia
PLE-07 16:40-17:00	A New Pipeline System Transporting Coal Ores
	Jiarong Fang, John Lawson, D Bruce Montgomery
	Magplane Technology, Inc, USA

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PLE-08 17:00-17:20	Research on the Technology of Power Filter and Compensation System for High Speed Maglev System Jin Yu Shanghai Maglev Transportation Engineering R&D Center, China
PLE-09 17:20-17:40	Full Speed Range DTC Scheme of LIM for Maglev Vehicle with Efficiency Optimization Ke Wang, Yaohua Li, Liming Shi, Qiongxuan Ge Institute of Electrical Engineering, Chinese Academy of Science, China
SOC-01 17:40-18:00	Safety Management of Maglev Transportation Focusing on Risk Identification & Control Tao Wu Shanghai Maglev Transportation Engineering R&D Center, China