

LDIA 2001 Program

October 18 (Thu) 9:00-9:20 Opening Ceremony

Chairperson: Prof. Ohsaki, H. (The University of Tokyo, Japan)

October 18 (Thu) 9:25-10:15 Keynote Speech

Chairperson: Prof. Hikihara, T. (Kyoto University, Japan)

PL-1. Linear Motor Direct Drives for Industrial Applications: State of the Art and Research at the Department of Electrical Machines (IEM), Aachen Institute of Technology (RWTH), Germany
Henneberger, G, *Aachen Institute of Technology, Germany*

October 18 (Thu) 10:30-11:50 Linear Induction Motor I (Oral)

Chairpersons: Prof. Canders, W.-R. (Technical University of Braunschweig, Germany)
Prof. Takeda, Y. (Osaka Prefecture University, Japan)

- A-1. Linear Induction Motor Demo-Track: a Tool for Renewed Motivation in Electrical Engineering
Strubin, J.-M., Veenstra, M., Rufer, A., *Ecole Polytechnique Federale de Lausanne, Switzerland*
- A-2. Evaluation Study of Velocity Characteristics of Linear Induction Motors using a Ring Model Device
Maki, N., Ohta, K., *Tokai University, Japan*
- A-3. Comparative Studies of Flux-Concentration Type and Normal Type Tubular Linear Induction Motor
Roy, D., Akiyama, Y., Yamada, S., Iwahara, M., *Kanazawa University, Japan*, Basak, B., *Bengal Engineering College, India*
- A-4. Design Optimization of Single-Sided Linear Induction Motors for Maglev Vehicles
Higuchi, T., Nishimoto, T., *Nagasaki University, Japan*, Nonaka, S., *Kyushu Electric College, Japan*, Muramoto, H., *Toyo Denki Seizo K. K., Japan*

October 18 (Thu) 10:30-11:50 Magnetic Levitation Technology I (Oral)

Chairpersons: Dr. Hull, J. R. (Argonne National Laboratory, USA)
Dr. Azukizawa, T. (Toshiba Corp., Japan)

- B-1. 3 Degrees of Freedom Semi-Zero-Power Maglev Scheme for Two-Dimensional Linear Motor
Liu, J., Koseki, T., *The University of Tokyo, Japan*
- B-2. Design of Zero-Power Controllers for Magnetic Suspension System by a Transfer Function Approach
Mizuno, T., *Saitama University, Japan*, Takemori, Y., *Honda Motor Company, Ltd., Japan*
- B-3. Magnetically Levitated Space Elevator to Low Earth Orbit
Hull, J. R., Mulcahy, T. M., *Argonne National Laboratory, USA*
- B-4. Design and Analysis of a Maglev Transportation System for Clean Room Applications
Wang, P.-J., *National Tsing Hua University, Taiwan*, Wang, L.-Y., *Nan-Yung Institute of Business and Technology, Taiwan*

October 18 (Thu) 13:20-15:00 Linear and Surface Motor (Oral)

Chairpersons: Prof. Rufer, A. (Ecole Polytechnique Federale de Lausanne, Switzerland)
Dr. Watanabe, T. (FDK Corp., Japan)

- A-5. DC Linear Actuator with Massive Iron as Secondary
Werle, Th., Binder, A., *Darmstadt University of Technology, Germany*
- A-6. Characteristic Comparisons of Recently Developed Two Moving-Magnet-Type Linear DC Motors
Mizuno, T., Matsumoto, N., *Shinshu University, Japan*, Anzai, T., *Amada Engineering Center Co., Ltd., Japan*, Yamada, H., *Doctors International Collaboration Institute, Japan*
- A-7. A Linear Microactuator with X-Y Stepping Motion
Komori, M., Tachihara, T., *Kyushu Institute of Technology, Japan*

- A-8. Position/Stroke Control of Moving Coil Linear Oscillatory Actuator for Springless Propulsion and Reciprocation
Jang, S.-M., Kwon, C., Chang, K.-W., *Chungnam National University, Korea*
- A-9. The Micro Step Drive of the Surface Motor with the Poles Distribution of Triangular Lattice
Katsuyama, N., Watada, M., Ebihara, D., *Musashi Institute of Technology, Japan*

October 18 (Thu) 13:20-15:00 Magnetic Field Analysis I (Oral)

Chairpersons: Prof. Jung, H.-K. (Seoul National University, Korea)
Prof. Koseki, T. (The University of Tokyo, Japan)

- B-5. Designing Methods for Multi-Coordinate Drives: From the Planar Multi-Coordinate Drive to the Spherical Motor
Busch, T., Henneberger, G., *Aachen Institute of Technology, Germany*
- B-6. Eigenvalues and Eigenfunctions: A Tool to Synthesize Different Models of Linear Induction Motors
Poloujadoff, M., *University of Paris IV, France*, El Khashab, H., *Electronics Research Institute, Egypt*
- B-7. Analysis and Design Optimisation of Slotless Tubular Permanent Magnet Linear Motors
Wang, J., Jewell, G. W., Howe, D., *University of Sheffield, UK*
- B-8. Linear Machine Eddy Current Braking Techniques
Benarous, M., *TRW Aeronautical Systems, UK*, Eastham, J. F., *EnigmaTEC Ltd., UK*, Proverbs, J., Foster, A., *Force Engineering Ltd., UK*
- B-9. 3-D MHD Calculation in Consideration of Free Surface, Heat Transfer and Solidification
Fujisaki, K., *Nippon Steel Corporation, Japan*

October 18 (Thu) 15:10-17:10 Linear Induction Motor II (Poster)

Chairpersons: Prof. Higuchi, T. (Nagasaki University, Japan)
Prof. Sanada, M. (Osaka Prefecture University, Japan)

- P1-1. End Effect Compensator based on New Concept for Linear Induction Motor
Fujii, N., Sakamoto, Y., Kayasuga, T., *Kyushu University, Japan*
- P1-2. Location of Short Circuit in Linear Induction Motor with Several Taps
Utsumi, T., Takahashi, T., Yamaguchi, I., *Tokai University, Japan*
- P1-3. Analysis of the Vertical Component of Airgap Magnetic Flux-Density of Single-sided LIM by Simplified Fourier Transform Method
Nonaka, S., *Kyushu Electric College, Japan*
- P1-4. Primary Leakage Magnetomotive Force of an Induction Actuator
Goncalves, J. G., *University of Algarve, Portugal*, Calado, M. R., Cabrita, C. P., *University of Beira Interior, Portugal*
- P1-5. The Design of Torus Induction Machine for the Analysis of Linear Induction Motor
Yabuuchi, M., Yabe, K., Torii, S., *Musashi Institute of Technology, Japan*
- P1-6. Design Study of Cylindrical Linear Induction Motor for Machine Tools
Hirano, A., Maki, N., *Tokai University, Japan*
- P1-7. Circular Inductor "Way" with Disc-Type Secondary: Experimental Equipment and Characterization
D'Ovidio, G., Lanzara, G., Villani, M., *University of L'Aquila, Italy*, Crisi, F., Navarra, A., *Science and Technology Park of Abruzzo, Italy*
- P1-8. Analysis of Different Models of Linear Induction Drives
Martinez-Iturralde, M., Atencia, J., Garcia Rico, A., Florez, J., *Universidad de Navarra, Spain*
- P1-9. Static and Kinetic Characteristics of Linear Oscillatory Actuator for Cryocooler Compressor
Yatuzuka, S., Takizawa, K., Nara, K., Hagiwara, Y., *Cryodevice Inc., Japan*, Watada, M., Ebihara, D., *Musashi Institute of Technology, Japan*

October 18 (Thu) 15:10-17:10 Linear Synchronous Motor I (Poster)

Chairpersons: Prof. Komori, M. (Kyushu Institute of Technology, Japan)
Prof. Torii, S. (Musashi Institute of Technology, Japan)

- P1-10. A Novel Linear Synchronous Motor with Half-Wave Rectified Self Excitation
Oyama, J., Higuchi, T., Abe, T., Tanaka, H., Yamada, E., *Nagasaki University, Japan*
- P1-11. Vertical Electromagnetic Force of a Superconducting LSM Vehicle Based on the Formulation in dq-axis
Sakamoto, T., *Kyushu Institute of Technology, Japan*
- P1-12. Influence of Permanent Magnet Materials on Performance Characteristics of a Linear Synchronous Motor
Gieras, J. F., *United Technologies Research Center, USA*, Gieras, I. A., *Beaumont Services Company, L.L.C., USA*
- P1-13. The Design of Positioning Control of Unitized Linear Synchronous Motor Considering the Robustness
Tsukada, M., Um, Y., Kano, Y., *Tokyo University of Agriculture and Technology, Japan*
- P1-14. Vector Control of Air-core PMLSM with Halbach Array
Jang, S.-M., Chang, K.-W., Lee, S.-H., Jeong, S.-S., *Chungnam National University, Korea*
- P1-15. Reduction of Detent Force in a Permanent Magnet Linear Synchronous Motor
Jang, S.-M., Yoon, I.-K., Lee, S.-H., Jeong, S.-S., *Chungnam National University, Korea*
- P1-16. Skew Effect of Core Type Permanent Magnet Linear Synchronous Motor With High Positioning Accuracy
Jung, S.-Y., Cho, S.-M., Jung, H.-K., *Seoul National University, Korea*, Chun, J.-S., *Mirae Corporation, Korea*
- P1-17. Joint Experimental and FEM Validation of Design Criteria for Tubular Linear Motors
Marignetti, F., Scarano, M., *Universita di Cassino, Italy*
- P1-18. Experimental Investigation of Thrust of an X-Y LSM
Inui, S., Naduka, M., Ohira, Y., *Nihon University, Japan*
- P1-19. Numerical Simulation of the Vehicle Dynamics of the Superconducting Maglev System Incorporating the LSM Data Interpolation Method
Early, R., Ohsaki, H., *The University of Tokyo, Japan*
- P1-20. Position Feedback Control of Permanent Magnet Type Tubular Linear Synchronous Motor for Vertical Transportation
Mano, R., Koseki, T., *The University of Tokyo, Japan*
- P1-21. The Efficiency of LSM for the Rope-less Elevator Considering Condition of LSM
Ohkubo, S., Watada, M., Torii, S., Ebihara, D., *Musashi Institute of Technology, Japan*

October 18 (Thu) 15:10-17:10 Magnetic Levitation Technology II (Poster)

Chairpersons: Prof. Mizuno, T. (Saitama University, Japan)
Dr. Sakamoto, S. (Hitachi, Ltd., Japan)

- P1-22. A Study of Lateral Motion Damping of Electromagnetic Levitation System without Guide Magnets for Streetcars and Subways
Jifuku, Y., Yamaguchi, H., Kakinoki, T., Tono-oka, R., Nomiyama, T., Watanabe, F., *Sojo University, Japan*
- P1-23. Levitation Control of Completely Passive 4-Pole Core Excited Solely by Armature Currents of a Linear Synchronous Motor
Koseki, T., Yamashita, K., Kohno, K., *The University of Tokyo, Japan*
- P1-24. Magnetic Levitation and Guidance Control of Very Thin Steel Plates by Means of Gap Length Change Commands
Sano, H., Fujimoto, S., Nakagawa, T., *Tokyo Denki University, Japan*
- P1-25. A Development of Bearingless Machine Adopts Disk Motor
Tomita, T., Oguri, K., Watada, M., Torii, S., Ebihara, D., *Musashi Institute of Technology, Japan*
- P1-26. A Proposal of the Magnetic Levitation System with Two Desired Values to Suppress the Elastic Vibration of the Thin Steel Sheets
Uchimido, G., Torii, S., *Musashi Institute of Technology, Japan*
- P1-27. Memory Effect in Dynamics of Rotor Suspended by HTS Magnetic Bearing under Revolution
Hikihara, T., *Kyoto University, Japan*
- P1-28. Levitation Characteristics of the Experimental Device for the Sidewall Electrodynamic Suspension
Ohashi, S., Masai, H., *Kansai University, Japan*
- P1-29. A Superconducting Stepping Motor by Two Excitation Methods

Komori, M., Nomura, S., *Kyushu Institute of Technology, Japan*

October 19 (Fri) 9:00-11:00 Linear Motor and Actuator (Poster)

Chairpersons: Prof. Kano, Y. (Tokyo University of Agriculture and Technology, Japan)
Dr. Morishita, M. (Toshiba Corp., Japan)

- P2-1. Development of Cylindrical Linear DC Motor for High Thrust
Kim, D., Um, Y., Kano, Y., *Tokyo University of Agriculture and Technology, Japan*
- P2-2. Reducing the Normal Force of a Slot Type Moving Magnet Linear Actuator
Wakiwaka, H., Norhisam, M., Kamiya, A., *Shinshu University, Japan*, Yajima, H., Tamura, K.,
Fujiwara, N., Hosono, M., Takada, S., *SMC Corporation, Japan*
- P2-3. The Proposal of EMG Servo System of the Linear Motor for the Meal Nursing
Odajima, K., Um, Y., Kano, Y., *Tokyo University of Agriculture and Technology, Japan*
- P2-4. Design of a High Thrust Interior Permanent Magnet Linear Synchronous Motor and its
Characteristics
Norhisam, M., Wakiwaka, H., Kamiya, A., *Shinshu University, Japan*, Yajima, H., Tamura, K.,
Fujiwara, N., Hosono, M., Takada, S., *SMC Corporation, Japan*
- P2-5. Optimal Design of Electromagnetic Linear Actuator for Mass Flow Controller
Chung, M.-J., Lee, S.-Q., Lee, M.-G., Gweon, D.-G., *Korea Advanced Institute of Science and
Technology, Korea*
- P2-6. Thrust Characteristics of Small Sized Cylindrical Type Solenoid for Water Valve in Full Automatic
Washing Machine
Yamamoto, Y., Nirei, M., *Nagano National College of Technology, Japan*
- P2-7. Influence of Mover Support Structure on Linear Oscillatory Actuator for Cellular Phones
Wakiwaka, H., Kato, H., Yoshimura, W., *Shinshu University, Japan*, Ito, H., Fukuda, N., Matsuhiro,
K., *Teikoku Tsushin Kogyo Co. Ltd., Japan*
- P2-8. Efficiency Characteristics of a Linear Oscillatory Actuator Under Simulated Compressor Load
Utsuno, M., Takai, M., Yaegashi, T., Mizuno, T., *Shinshu University, Japan*, Yamamoto, H., Shibuya,
K., *Matsushita Refrigeration Co., Ltd., Japan*, Yamada, H., *Doctors International Collaboration
Institute, Japan*
- P2-9. Analysis and Development of a New XY Actuator Based on Orthogonal Coils
Flores Filho, A. F., Susin, A. A., *Federal University of Rio Grande do Sul, Brazil*, Da Silveira, M. A.,
Lutheran University of Brazil, Brazil, Kano, Y., *Tokyo University of Agriculture and Technology,
Japan*
- P2-10. Improved Vibration Modelling of Reciprocating Air-Compressor
Rens, J., Clark, R. E., Howe, D., *University of Sheffield, UK*
- P2-11. Analytical Study of Double-side PM type X-Y Linear Synchronous Motor
Fujii, N., Tanaka, S., Okinaga, K., *Kyushu University, Japan*
- P2-12. Development of a Linear Motor for Compressors of Household Refrigerators
Park, K.-B., Hong, E.-P., Lee, H.-K., *LG Electronics Inc., Korea*
- P2-13. A Long Stroke Surface Acoustic Wave Linear Motor
Takasaki, M., Ishigami, Y., Higuchi, T., *The University of Tokyo, Japan*, Kurosawa, K. M., *Tokyo
Institute of Technology, Japan*
- P2-14. Actuation of SAW Linear Motor Using Multiple Identical Transducers
Ishigami, Y., Takasaki, M., Higuchi, T., *The University of Tokyo, Japan*, Kurosawa, K. M., *Tokyo
Institute of Technology, Japan*
- P2-15. Coarse Motion Performance of "Seal Mechanism" with Three Degrees of Freedom
Furutani, K., Furuichi, M., Mohri, N., *Toyota Technological Institute, Japan*

October 19 (Fri) 9:00-11:00 Magnetic Field Analysis II (Poster)

Chairperson: Dr. Fujisaki, K. (Nippon Steel Corp., Japan)

- P2-16. 3-D Finite Element Analysis of a Linear Induction Motor with Two Armatures
Yamaguchi, T., Kawase, Y., Yoshida, M., Nagai, M., *Gifu University, Japan*, Saito, Y., Ohdachi, Y.,
Toyoda Automatic Loom Works, Ltd., Japan

- P2-17. Analytical Prediction of Fringing Effect in Tubular Permanent Magnet Machines
Wang, J., Howe, D., Jewell, G. W., *University of Sheffield, UK*
- P2-18. An Establishment of the Wavelet Analysis of a Linear Induction Motor Aim at Analyzing the End Effect
Sugiyama, T., Torii, S., *Musashi Institute of Technology, Japan*
- P2-19. Electromagnetic Analysis of an Eddy Current Loss in Superconducting Magnet for Maglev
Hasegawa, H., Murai, T., Sasakawa, T., *Railway Technical Research Institute, Japan*

October 19 (Fri) 9:00-11:00 Transportation and Conveyance I (Poster)

Chairpersons: Prof. Sakamoto, T. (Kyushu Institute of Technology, Japan)
Prof. Sasakawa, T. (Railway Technical Research Institute, Japan)

- P2-20. Numerical Control Simulations of Hybrid Maglev Transportation Systems
Wang, P.-J., *National Tsing Hua University, Taiwan*, Wang, L.-Y., *Nan-Yung Institute of Business and Technology, Taiwan*
- P2-21. Coordinate Control between Running Characteristics and Riding Comforts of EMS - Magnetically Levitated Vehicle based on Genetic Algorithm
Kusagawa, S., Baba, J., Shutoh, K., Masada, E., *Science University of Tokyo, Japan*
- P2-22. Control of a Linear Drive Test Stand for the NBP Railway Carriage
Henke, M., Grotstollen, H., *University of Paderborn, Germany*
- P2-23. Realization of Pitch Control on the Test Stand for NBP Wheel-on-Rail System
Yang, B., Henke, M., Grotstollen, H., *University of Paderborn, Germany*
- P2-24. Analysis of Linear Induction Motor for Subway Automatic Door Engine
Jung, S.-Y., Jung, H.-K., *Seoul National University, Korea*, Chun, J.-S., *Mirae Corporation, Korea*
- P2-25. Electro-Hydrostatic and Electro-Mechanical Linear Actuators for Aircraft Flight Control Surfaces
Churn, P. M., Schofield, N., Powell, D. J., Atallah, K., Bingham, C. M., Howe, D., *University of Sheffield, UK*
- P2-26. Design of a Linear Homopolar Motor for a Magnetic Levitating Transportation Vehicle
Brakensiek, D., Henneberger, G., *Aachen Institute of Technology, Germany*
- P2-27. Linear Motor Suitable for High Frequency Drive and its Application
Muraguchi, Y., Karita, M., Nakagawa, H., Maeda, M., Muragishi, Y., Kimura, T., Kato, K., *Shinko Electric Co., Ltd., Japan*
- P2-28. Proposed Configuration of the Repulsive Type Thermo Balance Magnetic Levitation System Using Permanent Magnets
Ohji, T., *Toyama University, Japan*, Azuma, T., Yamada, S., Iwahara, M., *Kanazawa University, Japan*, Takata, Y., *Rigaku Co. Ltd., Japan*

October 19 (Fri) 9:00-11:00 Other Related Topics (Poster)

Chairperson: Prof. Ohashi, S. (Kansai University, Japan)

- P2-29. Analysis and Design of Permanent Magnet Linear Generator for Charging the Battery of Mobile Apparatus Considering Effect of Armature Reaction
Jung, S.-Y., Choi, H.-Y., Jung, H.-K., *Seoul National University, Korea*
- P2-30. Electromagnetic Measurement on Normal and Singular Joint Gaps in the Railways
Mizuno, T., Mochizuki, D., Kawasaki, S., Kondo, T., *Shinshu University, Japan*, Watanabe, S., *Nagano National College of Technology, Japan*, Enoki, S., Nagayasu, Y., *Shinkawa Sensor Technology Inc., Japan*, Yamada, H., *Doctors International Collaboration Institute, Japan*
- P2-31. Design and Dynamic Analysis of Linear Moving-Magnet Actuators
Clark, R. E., Jewell, G. W., Howe, D., *University of Sheffield, UK*
- P2-32. Activities of the IEEJ Investigation Committee for Review of Technical Terminology for Linear Drive Systems and Related Topics
Ohsaki, H., *The University of Tokyo, Japan*, Wakiwaka, H., *Shinshu University, Japan*, Shinzen, K., *Meidensha Corp., Japan*

October 19 (Fri) 12:30-15:10 Transportation and Conveyance II (Oral)

Chairpersons: Prof. Henneberger, G. (Aachen Institute of Technology, Germany)
Mr. Kitano, J. (Central Japan Railway Co., Japan)

- A-10. Urban Maglev Technology Development in the USA
Gurol, S., Baldi, B., Kim, I.-K., *General Atomics, USA*
- A-11. Propulsion System for the Magnetic Railway Line : Shanghai Pudong Airport - Long Yang Road Station
Nothhaft, J., Henning, U., *Siemens Transportation Systems, Germany*
- A-12. Operation Control System for the Magnetic Railway Line Pudong Airport - Long Yang Road Station
Plaza, B., Hamann, P., *Siemens Transportation Systems, Germany*
- A-13. Dynamic Characteristics of a Maglev Bogie Driven by One Side of the Both Sides LSM
Yamanaka, A., Kitano, J., *Central Japan Railway Company, Japan*, Ohashi, S., *Kansai University, Japan*
- A-14. High Thrust Permanent Magnet Excited Linear Synchronous Drive for Mass Acceleration
Siems, S. O., Meins, J., Deeg, C., Mosebach, H., *Technical University of Braunschweig, Germany*
- A-15. Evaluation of Air Suspended LIM Driven Transit System and Next Generation PRT
Shindoh, R., *Nippon Otis Elevator Company, Ltd., Japan*, Mizuma, T., *National Traffic Safety and Environment Laboratory, Japan*, Deguchi, A., *Kyushu University, Japan*
- A-16. Electromagnetic Non-contact Guide System for Elevator Cars
Morishita, M., Akashi, M., *Toshiba Corporation, Japan*

October 19 (Fri) 12:30-15:10 Linear Synchronous Motor II (Oral)

Chairpersons: Prof. Profumo, F. (Politecnico di Torino, Italy)
Prof. Maki, N. (Tokai University, Japan)

- B-10. PM Linear Synchronous Motor with a Very High Thrust/Normal Force Ratio
Profumo, F., Tenconi, A., Gianolio, G., Agliotti, A., *Politecnico di Torino, Italy*
- B-11. Theoretical Modeling and Operational Analysis of a Disc-type Permanent Magnet Linear Synchronous Machine
Liu, C.-T., Chuang, K.-C., *National Sun Yat-Sen University, Taiwan*
- B-12. Characteristic Analysis of PMLSM with Halbach Array for Short-Stroke Actuator
Jang, S.-M., Lee, S.-H., Yoon, I.-K., *Chungnam National University, Korea*, Lee, J.-H., *Chungbuk University of Science & Technology, Korea*
- B-13. High Thrust Double-Sided Permanent Magnet Excited Linear Synchronous Machine with Shifted Stators
Canders, W.-R., Laube, F., Mosebach, H., *Technical University of Braunschweig, Germany*
- B-14. Minimization of Cogging Force in Flat Permanent Magnet Linear Motors
Atencia, J., Martinez, G., Garcia Rico, A., Florez, J., *Universidad de Navarra, Spain*
- B-15. Static and Dynamic Characteristics of Slotless Permanent Magnet Linear Synchronous Motor Energized by Partially Excited Primary Current Considering End-Effect
Jung, S.-Y., Jung, H.-K., *Seoul National University, Korea*, Chun, J.-S., *Mirae Corporation, Korea*
- B-16. Thrust Ripple Improvement of Linear Synchronous Reluctance Motor with Segmented Mover Construction
Sanada, M., Morimoto, S., Takeda, Y., *Osaka Prefecture University, Japan*

October 19 (Fri) 15:20-16:50 Organized Session (Oral)

Linear Drives for Industry Applications

Chairpersons: Prof. Eastham, J. F. (EnigmaTEC Ltd., UK)
Prof. Ebihara, D. (Musashi Institute of Technology, Japan) *Organizer*

- A-17. Status of Permanent Magnet Linear Motors in the United States
Gieras, J. F., *United Technologies Research Center, USA*, Godkin, M., *BEI Technologies, Inc., USA*
- A-18. Present Status of Linear Drives for Industry Applications in Japan
Karita, M., *Shinko Electric Company, Ltd., Japan*
- A-19. Status of Linear Drive Technologies in Europe

Howe, D., Clark, R. E., Zhu, Z. Q., *University of Sheffield, UK*

October 19 (Fri) 15:20-16:50 Control (Oral)

Chairpersons: Dr. Kim, I.-K. (General Atomics, USA)
Prof. Yamada, S. (Kanazawa University, Japan)

- B-17. An MPC Application to the Linear RM Position Control System
Hirano, K., Um, Y., Kano, Y., *Tokyo University of Agriculture and Technology, Japan*
- B-18. Motion Control of Linear Permanent Magnet Motors with Force Ripple Compensation
Roehrig, Ch., *University of Hagen, Germany*, Jochheim, A., *Hesse & Knipps GmbH, Germany*
- B-19. Quick VSS Control for Magnetic Levitation
Horen, Y., Kaplan, B.-Z., *Ben-Gurion University of the Negev, Israel*
- B-20. Time-Optimal Control of Linear BLDCM under Physical Limitations
Kim, Y.-O., Choi, D.-S., Ha, I.-J., *Seoul National University, Korea*

October 19 (Fri) 17:00-17:30 Closing Remarks

Chairpersons: Prof. Hikihara, T. (Kyoto University, Japan)
Prof. Ohsaki, H. (The University of Tokyo, Japan)