

### Program at Glance

Monday, 6. Sep	Tuesday, 7. Sep	Wednesday, 8. Sep	Thursday, 9. Sep
	9:00 – 9:40 Keynote Speech <i>Prof. Michiharu Tabe</i>	9:00 – 10:00 Oral Session SA	
9:30 – 9:50 Opening	9:40 – 10:00 Coffee Break		9:00 – 10:40 Oral Session MD
9:50 – 11:00 Japanese Industry in Europe <i>Presentations of Representatives of Japanese Industry</i> Education and Research in Japan and Europe <i>Presentations of University Representatives</i>	10:00 – 12:00 Oral Session MU	10:00: 10:40 Oral Session DB	
11:00 – 11:20 Coffee Break		10:40 – 11:00 Coffee Break	10:40 – 11:00 Coffee Break
11:20 – 12:40 Oral Session TF	12:00 – 12:10 Break	11:00 – 13:00 Dialog Session <i>Introduction to Depts. of BUTE Exhibition of Japanese Companies E-Learning Seminar Presentations</i>	11:00 – 12:00 Oral Session PP
12:40 – 14:20 Lunch	12:10 – 14:30 Dialog Session <i>Introduction to Depts. of BUTE Exhibition of Japanese Companies E-Learning Seminar Presentations</i>		12:00 – 13:40 Lunch
	Sandwich and Coffee	13:00 – 14:40 Lunch	13:40 – 14:40 Oral Session EL
14:20 – 16:20 Oral Session TM		14:40 – 15:40 Oral Session AM	14:40 – 15:00 Coffee Break
16:20 – 16:40 Coffee Break	15:45 Visit to the Royal Palace of Gödöllő	15:40 – 16:00 Coffee Break	15:00 Round Table Discussion <i>Asian-European Academic Bridge Closing</i>
16:40-18:00 Oral Session LO	17:10 Horse Show and Dinner at Lázár Horse Farm	16:00 – 17:00 Oral Session GC	
19:00 Welcome Reception at Hotel Gellért		18:00 Visit to the Hungarian Parliament 19:30 Dinner and Cruising at the Danube	19:00 Visit to the Castle Hill Dinner 20:00 Concert of Ghymes Ban

**Oral Sessions:**

**Thin Films (TF),  
Transportation, Modeling and Mobile Robots (TM),  
Laser and Optics (LO),  
Modeling and Uncertainty (MU),  
Signal Processing, Sensors and Actuators (SA),  
Databases (DB),  
Analysis and Separation of Chemical Materials (AM),  
Growth of Crystals (GC),  
Measurement and Diagnostics (MD),  
Plasma Production (PP),  
E-learning (EL)**

## Detailed Program of the Sessions

**Monday, 6. Sep, 9:30 – 9:50**

**Opening Ceremony**

**Monday, 6. Sep, 9:50 – 11:00**

**Japanese Industry in Europe,**

Chair Persons: N. Araki (Japan), A.R. Várkonyi-Kóczy (Hungary)

*Presentations of Representatives of Japanese Industry*

9:50-10:15		The SUZUKI group: Suzuki Motor Corporation, Denso Corporation, Stanley Electric Co., Ltd., Sumitomo Electric Industries Ltd., U-Shin Ltd.	Japan
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**Education and Research in Japan and Europe**

Chair Persons: N. Araki (Japan), A.R. Várkonyi-Kóczy (Hungary)

*Presentations of University Representatives*

10:15-10:30	Hitoshi Ishii, Vice-President	Shizuoka University	Japan
10:30-10:45	Miklós Zrínyi, Vice-Rector	Budapest University of Technology and Economics	Hungary
10:45-11:00	Péter Korondi, Annamária R. Várkonyi-Kóczy, Péter Baranyi, Hideki Hashimoto	Intelligent Integrated Systems Japanese-Hungarian Joint Laboratory as an European-Asian Academic Bridge	Japan Hungary

## Monday, 6. Sep, 11:20 – 12:40

### Thin Films (TF)

Chair Persons: M. Ogita (Japan), J. Madarász (Hungary)

11:20-11:40	Shoji Kaneko, G.R.A. Kumara, M. Okuya	Enlargement of Active Area on Dye-Sensitized TiO <sub>2</sub> Solar Cell	72	Shizuoka University	Japan
11:40-12:00	Masahito Shintomi, Tomoaki Egami, Atsushi Makino, Nobuyuki Araki	Effects of Substrate Temperature in Flame CVD of Diamond Films	24	Shizuoka University	Japan
12:00-12:20	Masayuki Okuya , Takafumi Nakano, Masatoshi Nakamura, G.R. Asoka Kumara, Shoji Kaneko	Porous TiO <sub>2</sub> Thin Films Prepared by Spray Pyrolysis Deposition (SPD) Technique and their Application to Dye-sensitized Solar Cells	27	Shizuoka University	Japan
12:20-12:40	Yoichiro Nakanishi , Hiroko Kominami, Yoshinori Hatanaka	Preparation of Fine Particle and Thin Film Phosphors for Field Emission Displays	33	Shizuoka University	Japan

## Monday, 6. Sep, 14:20 – 16:20

### Transportation, Modeling and Mobile Robots (TM)

Chair Persons: M. Yamashita (Japan), R.E. Precup (Romania)

14:20-14:40	István Lakatos	Optimisation of the charge replace process of uncharged Otto engines of OHC control	37	Széchenyi István University of Applied Sciences	Hungary
14:40-15:00	Stefan Preitl , Radu-Emil Precup	Sensitivity Study of a Class of Fuzzy Controlled Servo Systems	44	University of Timisoara	Romania
15:00-15:20	Tamás Bécsi, Tamás Péter	An Adaptive Approach to Modeling Traffic Flow and Incident Detection on Highways	29	Budapest University of Technology and Economics	Hungary
15:20-15:40	Gergely Hidegkuti , Károly Gyenes, Tamás Péter	Highly modular system for vehicle fleet tracking	68	Budapest University of Technology and Economics	Hungary
15:40-16:00	András Rövid, Annamária R. Várkonyi-Kóczy	Car Body Deformation Modeling based on Soft Computing Techniques and Image Processing	52	Budapest University of Technology and Economics	Hungary
16:00-16:20	Balázs Karlócai, Noémi Csepeli, Antal Szlacsin	Comparison of Global Navigation Algorithms in Dynamically Changing Environment – A Case	50	Pazmany Peter Catholic University	Hungary

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## Monday, 6. Sep, 16:40 – 18:00

### Laser and Optics (LO)

Chair Persons: Y. Nakanishi (Japan), L. Kudla (Poland)

16:40-17:00	Ryszard Jablonski , Julian Kuśnieruk, Maciej Ligowski	The Safety of LASER Shows	40	Warsaw University of Technology	Poland
17:00-17:20	Kensaku Mizoguchi, Takao Asabe, Shigetoshi Matsui, Tadae Yamanaka, Toshiaki Sakai	Excimer Laser Irradiation onto Poly(ethylene terephthalate) Surface -Considerations on Roll-Like Structure Formation-	71	1)Shizuoka University, 2)National Institute of Advanced Industrial Science and Technology, 3) Hamamatsu Photonics Co., Hamamatsu,	Japan
17:20-17:40	Jürgen Engemann, Darius Korzec, S. Kyzia	Cooperation of a German University with Japanese industry: A success story	42	University of Wuppertal	Germany
17:40-18:00	Makoto Minakata, Jungo Kondo, Atuo Kondo, Kenji Aoki, Osamu Mitomi, Minoru Imaeda, Yoshinari Kozuka	40 Gb/s Backslot Type LiNbO3 Optical Modulator with a Low-driving-voltage of 2.8V	82	1)Research Institute of Electronics, Shizuoka University, Hamamatsu, Japan 2)NGK Insulators,LTD, Nagoya,	Japan

## Tuesday, 7. Sep, 9:00-9:40

### Keynote Speech

Chair Persons: H. Ishii (Japan), P. Korondi (Hungary)

Michiharu Tabe, Yasuhiko Ishikawa, Ratno Nuryadi, Hiroya Ikeda	Si Single-Electron and Single-Hole Tunneling Devices	Shizuoka University, Hamamatsu	Japan
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## Tuesday, 7. Sep, 10:00-12:00

### Modeling and Uncertainty (MU)

Chair Persons: T. Mieno (Japan), S. Preitl (Romania)

10:00-10:20	58	László Horváth, Imre J. Rudas	Behavior Method for Adaptive and Associative Modeling of Objects for Shape Intensive Engineering	John von Neumann Faculty of Informatics, Budapest Polytechnic,	Hungary
10:20-10:40	25	Damas P. Gruska	Security Models	Comenius University	Slovakia
10:40-11:00	45	Gábor Mátyássy, Balázs Vödrös, István Kollár	Temperature Dependent Modeling of a Furnace	Budapest University of Technology and Economics	Hungary
11:00-11:20	47	Péter Antal, András Millinghoffer	Learning Causal Bayesian networks from Literature Data	Budapest University of Technology and Economics	Hungary
11:20-11:40	23	Szegő Dániel	Representing Links and Linked Documents in Logical Web Document Processing	Budapest University of Technology and Economics	Hungary
11:40-12:00	62	Peter Májek, Hiroyuki Iida	Uncertainty of Game Outcome	Comenius University, Shizuoka University, PRESTO,	Slovakia, Japan

## Tuesday, 7. Sep, 12:10-14:30

### Dialog Session I.

Chair Persons: M. Nagatsu (Japan), L. Horváth (Hungary)

### *Introduction to the Departments of BUTE*

### *Exhibition of Japanese Companies*

Suzuki Motor Corporation, Denso Corporation Stanley Electric Co., Ltd. Sumitomo Electric Industries Ltd. U-Shin Ltd.	"Activities on the research and development of car production in 21st century"
Yamaha Corporation	
Nissei Electric Co.,Ltd.	

## *Seminar on Interactive e-Learning in Electrical Engineering*

### *Presentations*

V. Fedák, P. Bauer, V. Hajek, H. Weiss, B. Davat, S. Manias, I. Nagy, P. Korondi, R. Miksiewicz, P. van Duijsen, P. Smékal	Interactive e-Learning in Electrical Engineering	53	Budapest University of Technology and Economics	Slovak Republic Hungary Germany Netherlands
Péter Szemes, Andor Gaudia, Péter Korondi, Hideki Hashimoto	Intelligent Space, as a new paradigm of information and physical support to humans	54	The University of Tokyo Budapest University of Technology and Economics	Hungary Japan
G. Kovacs, R.-E. Precup, S. Preitl, Z. Gyurko	Time Delay Compensation for Networked Control Systems	55	Budapest University of Technology and Economic	Hungary Romania
Jun Nagashima , Tsuyoshi Hashimoto , Hiroyuki Iida	An enhancement for realization-probability search using machine learning	59	Shizuoka University, PRESTO, Japan Science and Technology Agency	Japan
Sinnya Iida, Motoomi Shimazaki, Hiroyuki Iida	The Origin Concept and Group Accommodative Event - Four cases studies in an elementary school -	66	Fukude Elementary School, Shizuoka, PRESTO, Japan, Shizuoka University	Japan
Kazuki Kinomura, Shinya Saito, Hitoshi Saji	Tracking of Field Players in Image Sequences Taken by a Hand-held Video Camera	78	1) Shizuoka University,	Japan
Szász Csaba , Korondi Péter	Sliding Mode Simplified Vector Control Strategy for PM-Hybrid Stepper Motor	79	Technical University of Cluj	Romania
Hidenari Makino, Shigehiro Yamamoto, Teruo Azukizawa, Takeshi Hashimoto	A Basic Study on Path Teaching Method for a Mobile Robot Using a Digital Camera	81	1) Kobe University, 2) Kobe University, 3) Shizuoka University,	Japan

**Wednesday, 8. Sep, 9:00-10:00**

### **Signal Processing, Sensors and Actuators (SA)**

Chair Persons: M. Minakata (Japan), R. Jabłoński (Poland)

9:00-9:20	51	Annamária R. Várkonyi-Kóczy, Gábor Samu	Anytime Fourier Analysis		
9:20-9:40	41	Kenji Murakami, Qian Xiang, Kenzo Watanabe	NO2 Gas Sensor Based on the Aluminumfluoro Phthalocyanine Thin Films	Shizuoka University	Japan
9:40-10:00	35	Liviu Ciupitu, Shigeki Toyama, Eko Purwanto	The Spherical Ultrasonic Motor	University of Bucharest, Tokyo University of Agriculture and Technology	Romania, Japan

### Wednesday, 8. Sep, 10:00-10:40

#### Databases (DB)

Chair Persons: Y. Hayakawa (Japan), D. Gruska (Slovakia)

10:00-10:20	80	Kayo Suzuki , Hiroaki Ikeda, Katsuhiro Ishimaru, Junji Suzuki, Fumio Adachi	Image Database System for Japanese KOSODE Garments on Japan Gigabit Networks	1) IKEDA Technologies, Inc., 2) MAKUHARI Gigabit Research Center, Telecommunications Advancement Organization of Japan 3) The National Museum of Japanese History,	Japan
10:20-10:40	49	Szegő Dániel	A Modal Database for XML Documents	Budapest University of Technology and Economics	Hungary

### Wednesday, 8. Sep, 11:00-13:00

#### Dialog Session II.

Chair Persons: M. Kumagawa (Japan), T. Dobrowiecki (Hungary)

*Introduction to the Departments of BUTE*

*Exhibition of Japanese Companies*



Suzuki Motor Corporation, Denso Corporation Stanley Electric Co., Ltd. Sumitomo Electric Industries Ltd. U-Shin Ltd.	"Activities on the research and development of car production in 21st century"
Yamaha Corporation	
Nissei Electric Co.,Ltd.	

### ***Seminar on Interactive e-Learning in Electrical Engineering***

#### ***Presentations***

Yoshihiro Kawaguchi, Matsumoto Koichi, Mitsuru Aoyama, Tomuo Yamaguchi	Spectroscopic Ellipsometry of Carbon Nanotube Formation in SiC Surface Decomposition	22	Shizuoka University	Japan
Y. Okamoto , T. Fujinami, M. Ogita	Ultra-small laser beam spot by phase-shifting Light interference and a cover glass	63	Shizuoka University	Japan
Toru Aoki , Yu Ishida, Daisuke Sakashita, Volodymyr. A. Gnatyuk, Atsushi Nakamura, Yasuhiro Tormita, Yoshinori Hatanaka, Jiro Temmyo	Energy discriminative CdTe hard X-ray imaging device	64	Shizuoka University, V.Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences of Ukraine, Shizuoka, Aichi University of Technology Aichi	Japan, Ukraine
Susana Mihaiu, Ana Brăileanu , Constantin Radovici, Margit Bán, Janos Madarász, Gyorgy Pokol	Phase Evolution in Sn-Ce-O Materials obtained by the thermal Decomposition of some Precursors	70	1)Institute of Physical Chemistry, 2)ICECHIM 3)Budapest University of Technology and Economics,	Romania, Hungary
Milan Siry , Akihiro Yoshikawa, Tibor Terebessy, Masashi Kando	Estimation Of Hot Electron Beam In Planar Surface Wave Plasmas From Measured Magnetic Field	73	1) Science and Technology, Shizuoka University, 2) Shizuoka University,	Japan
Akihiro Eto , Shinsuke Kimura, Masashi Kando	Carbon-nano-tube Production in the High-pressure Microwave Discharge Assisted by A Carbon Electrode	75	1), Shizuoka University, 2, Shizuoka University,	Japan
T. Yamamura , H. Kanai, K. Fujiwake, M. Kando	Spectroscopic Measurement of Atmospheric Microwave Plasma Torch	76	1) Shizuoka University, 2) Shizuoka University,	Japan
Tatsuhiko Sugiyama, Satoshi Yoneyama, Kazufumi Shiozawa, Makoto Minakata	Fabrication of Evaluation Chart for Super-Resolving Fluorescence Microscopy	77	Research Institute of Electronics, Shizuoka	Japan

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### Wednesday, 8. Sep, 14:40-15:40

#### Analysis and Separation of Chemical Materials (AM)

Chair Persons: M. Kando (Japan), J. Madarász (Hungary)

14:40-15:00	34	Tetsu Mieno , Mito Kanai, Hisanori Shinohara	Thermal Properties of the Gravity-free Gas-Arc Discharge and its Application to the Efficient Production of Carbon Clusters	Shizuoka University, Univ. London, Nagoya Univ	Japan, UK
15:00-15:20	60	Hiroya Ikeda, Ratno Nuryadi, Yasuhiko Ishikawa, Michiharu Tabe	Transition of a Single-Charge-Tunneling Mode in Two-Dimensional Multidot Structures from Quasi-Crystal to Quasi-Amorphous System	Shizuoka University, Research Institute of Electronics, Hamamatsu	Japan
15:20-15:40	57	Shigetoshi Matsui , Madoka Ikeda, Shuji Shinma, Manabu Arano, Kensaku Mizoguchi, Shiro Ikeda, Toshiaki Sawasaki, Takashi Nakane	Pervaporation Separation of Water/Ethanol Mixture through Tubular Zeolite Membrane	Shizuoka University, Bussan Nanotech Research Institute Inc.,	Japan

### Wednesday, 8. Sep, 16:00-17:00

#### Growth of Crystals (GC)

Chair Persons: S. Kaneko (Japan), I. Simonics (Hungary)

16:00-16:20	30	Noriaki Murakami, Koji Arafune, Tadanobu Koyama, Yoshimi Momose, Tetsuo Ozawa, Yasunori Okano, Sadik Dost, Le.H.Dao, Masashi Kumagawa, Yasuhiro Hayakawa	Gravitational Effect on Growth of InGaSb Ternary Bulk Crystals	Shizuoka University, Shizuoka, University of Victoria, Univ. du Quebec	Japan, Canada
16:20-16:40	32	Guoqiang Zhang, Tadanobu Koyama, Masashi Kumagawa, Yasuhiro Hayakawa	Influence of Te impurity on GaSb epilayer grown on GaSb (001) patterned substrate by liquid phase epitaxy	Shizuoka University	Japan
16:40-17:00	31	Shingo Nakamura, Tadanobu Koyama, Masashi Kumagawa, Yasuhiro Hayakawa	Growth of InAs <sub>x</sub> Sb <sub>1-x</sub> Layers on GaAs Substrates by Hot Wall Epitaxy	Shizuoka University	Japan

## Thursday, 9. Sep, 9:00-10:40

### Measurement and Diagnostics (MD)

Chair Persons: M. Tabe (Japan), T. Péter (Hungary)

9:00-9:20	74	Masami Ogita, Takanori Ito, Masaaki Isai, Iwao Mogi, Satoshi Awaji, Kuniyoshi Yokoo	Simultaneous measurement of Hall and Magnetoresistance effect at low and high magnetic field and comparison with solid semiconductors Si and InSb	1) Shizuoka University, 2) Tohoku University, 3) Tohoku University,	Japan
9:20-9:40	83	Ryszard Jabłoński, Piotr Orzechowski, Krzysztof Gutowski	Measurement of aerosol particles size and concentration in a flowing gas applying the photon counting method	Warsaw University of Technology,	Poland
9:40-10:00	84	Prof. Y. Hatanaka H.Naito, K.Sakaguchi, M.Kando	Photoconduction measurements of Hydro-oxygenated Amorphous Titanium Oxide Films	Aichi University of Technology	Japan
10:00-10:20	36	Leszek Kudla	Preventing of Breakage of Miniature Drills	Warsaw University of Technology	Poland
10:20-10:40	69	Mitsuji Yamashita, Kengo Aoshima, Masatsugu Kobayashi, Tatsunori Kato, Nao Kamikage, Hisao Takayanagi, Tatsuo Oshikawa, Masaki Takahashi, Sofie Laurent, Carmen Burtea, L. Vander Elst, Robert N. Muller	Studies on Development and Novel Preparation of MRI Contrast Agents for Targeting Organs and Blood Vessels	Shizuoka University, Shizuoka University, <sup>3)</sup> Mitsubishi-Tokyo Pharmacy, <sup>4)</sup> Numazu College of Technology, <sup>5)</sup> University of Mons-Hainaut,	Japan, Belgium

## Thursday, 9. Sep, 11:00-12:00

### Plasma Production (PP)

Chair Persons: K. Mizoguchi (Japan), J. Engemann (Germany)

11:00-11:20	67	Masaaki Nagatsu, K. Naito, M. Miyake, S. Nanko	Planar Cylindrical Cavity Type of Microwave Launchers for Production of Large-Area Processing	Shizuoka University, Nissin Inc.	Japan
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			Plasma		
11:20-11:40	38	Darius Korzec, M. Teschke, E. G. Finantu-Dinu, J. Engemann	Applications of atmospheric pressure plasmas generated by tandem dielectric barrier discharge	University of Wuppertal	Germany
11:40-12:00	65	Masaaki Nagatsu, Fumie Terashita, Lei Xu, Hiroyuki Nonaka, Toshi Nagata, Yukio Koide	Effect of Oxygen Radicals on Plasma Sterilization Using Low-pressure Surface-wave Plasmas	Shizuoka University, Shizuoka University, Hamamatsu University School of Medicine	Japan

### Thursday, 9. Sep, 13:40-14:40

#### E-learning (EL)

Chair Persons: Y. Hatanaka (Japan), I. Rudas (Hungary)

13:40-14:00	21	Zhao Xin-you , Gu Tian-long	A Real-time Interactive Prototype System of Distance Learning	Guilin Univ. of Electronic Technology	China
14:00-14:20	28	Lubomír Fasianok, Csaba Szabó	Learning Design Templates	Technical University of Košice	Slovak Republic
14:20-14:40	46	Ottó Hutter, Terézia Sárváry, István Simonics and Balázs Wagner	Standard-Based E-Learning Solutions in the Higher Education	Hungarian Academy of Sciences	Hungary

### Thursday, 9. Sep, 15:00-

#### Round Table Discussion

Moderators: M. Kando (Japan) and R. Jabłoński (Poland)

#### *Asian-European Academic Bridge*

#### Closing Ceremony