SICE Annual Conference 2010 in Taiwan

Technical Program

Program at a Glance

SICE 2010 Technical Program Wednesday August 18, 2010

| 13:00–17:00 Auditorium (10F) Workshop A The Future Aspect of Industrial Process Measurement, Control and Automation Industry | 13:00–17:00 Song Bo Room (10F) Workshop B ITRI-Academia Collaboration Project on Intelligent Robot Technology | 13:00–17:00 Chang Chin Room (10F) Workshop C Mobiligence |

| 17:30–19:30 Sky Lounge (12F) Welcome Reception |

SICE 2010 Technical Program Thursday August 19, 2010

| 8:40–9:00 Grand Ballroom (12F) Opening Ceremony |
| 9:00–9:50 Grand Ballroom (12F) Plenary Talk I: Graham Goodwin |

Track 01	Track 02	Track 03	Track 04	Track 05	Track 06	Track 07	Track 08	Track 09	Track 10
12F			10F			VF			
Sky Lounge	North Foyer	South Foyer	Auditorium	Chang Chin Room	Song Bo Room	101	102	103	104
10:20–11:50 TA01 Nanoscale Servo Control	10:20–11:50 TA02 Service Robots and Their Execution Environments	10:20–11:50 TA03 Biological and Physiological Engineering	10:20–11:50 TA04 Advanced Pattern Measurement I	10:20–11:50 TA05 Control for Industrial Applications	10:20–11:50 TA06 Adaptive & Learning Control I	10:20–11:50 TA07 Recent Development on Robustness Analysis, Estimation, Robust and Sampled-Data Control	10:20–11:50 TA08 Model Predictive Control	10:20–11:50 TA09 Neural Networks and Computational Intelligence	10:20–11:50 TA10 International Standardization on Automation System

| 13:20–14:10 Grand Ballroom (12F) Invited Lecture I: Jae-Hoon Kim | 13:20–14:10 Auditorium (10F) Invited Lecture II: Chin-Teng Lin |

Track 01	Track 02	Track 03	Track 04	Track 05	Track 06	Track 07	Track 08	Track 09	Track 10
14:30–16:00 TB01 Control Applications I	14:30–16:00 TB02 Service Engineering and Interface to Support High-Quality Life I	14:30–16:00 TB03 Autonomous Decentralized Systems	14:30–16:00 TB04 Advanced Pattern Measurement II	14:30–16:00 TB05 Sponsored Workshop	14:30–16:00 TB06 Adaptive & Learning Control II	14:30–16:00 TB07 Tracking Control with Some Control Issues	14:30–16:00 TB08 Networked Sensing and Control Systems I	14:30–16:00 TB09 Evolutionary Technology and its Applications I	14:30–16:00 TB10 Challenges for Information Sharing on Industrial Network I
16:30–18:00 TC01 Control Applications II	16:30–18:00 TC02 Service Engineering and Interface to Support High-Quality Life II	16:30–18:00 TC03 Autonomous Decentralized Approaches for Systems Management	16:30–18:00 TC04 Advanced Pattern Measurement III	16:30–18:00 TC05 *Sponsored Workshop in SICE Week* (in Mandarin)	16:30–18:00 TC06 Adaptive & Learning Control III	16:30–18:00 TC07 Control Theoretic Approaches to Future Control Technology	16:30–18:00 TC08 Networked Sensing and Control Systems II	16:30–18:00 TC09 Evolutionary Technology and its Applications II	16:30–18:00 TC10 Challenges for Information Sharing on Industrial Network II

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Track 11	Track 12	Track 13	Track 14	Track 15	Track 16		Track 17	Track 18	Track 19
			VF					BF	
105	107	108	109	110	West Gallery	International Reception Hall	Fu-Chuon Room	Der-Hou Room East	Der-Hou Room West
10:20–11:50 TA11 Advances in Measurement	10:20–11:50 TA12 Electrical Systems	10:20–11:50 TA13 Applications of Satellite Navigations	10:20–11:50 TA14 Human Interfaces	10:20–11:50 TA15 Kukanchi	10:20–11:50 TA16 Interactive Session I		10:20–11:50 TA17 Robotic System Control	10:20–11:50 TA18 Man-Machine Systems and Human-Robot Interactions	10:20–11:50 TA19 Vehicle Control

13:20–14:10 Grand Ballroom (12F) Invited Lecture I: Jae-Hoon Kim	13:20–14:10 Auditorium (10F) Invited Lecture II: Chin-Teng Lin

14:30–16:00 TB11 Image Processing	14:30–16:00 TB12 Mechatronic Systems and Control I	14:30–16:00 TB13 Navigation, Guidance, and Control in Aerospace Systems I	14:30–16:00 TB14 System Theory and Engineering	14:30–16:00 TB15 Disaster Response Robotics I			14:30–16:00 TB17 Mobile Robots I	14:30–16:00 TB18 Intelligent Human-Machine Systems I	14:30–16:00 TB19 Advances in Control I
16:30–18:00 TC11 Signal Processing	16:30–18:00 TC12 Mechatronic Systems and Control II	16:30–18:00 TC13 Navigation, Guidance, and Control in Aerospace Systems II	16:30–18:00 TC14 Advances in System and Information	16:30–18:00 TC15 Disaster Response Robotics II			16:30–18:00 TC17 Mobile Robots II	16:30–18:00 TC18 Intelligent Human-Machine Systems II	16:30–18:00 TC19 Advances in Control II

SICE 2010 Technical Program Friday August 20, 2010

9:00–9:50 Grand Ballroom (12F) Plenary Talk II: Roberto Tempo

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12F			10F			VF			
Sky Lounge	North Foyer	South Foyer	Auditorium	Chang Chin Room	Song Bo Room	101	102	103	104

10:20–11:50 FA01	10:20–11:50 FA02	10:20–11:50 FA03	10:20–11:50 FA04	10:20–11:50 FA05	10:20–11:50 FA06	10:20–11:50 FA07	10:20–11:50 FA08	10:20–11:50 FA09	10:20–11:50 FA10
Robot Therapy System	Designing the Service Engineering in Post Ubiquitous Society I	Computational Intelligence and its Applications I	Process Control and Process Automation	Vision Systems I	Healthcare and Welfare I	Nonlinear System Control	Fuzzy System Analysis and Control Applications I	Evolutionary Algorithm	FLUCOME-J

14:30–16:00 FB01	14:30–16:00 FB02	14:30–16:00 FB03	14:30–16:00 FB04	14:30–16:00 FB05	14:30–16:00 FB06	14:30–16:00 FB07	14:30–16:00 FB08	14:30–16:00 FB09	14:30–16:00 FB10
New Design and Methods in Domestic and Assistive Robotics	Designing the Service Engineering in Post Ubiquitous Society II	Computational Intelligence and its Applications II	Panel Discussion: Glocal Control	Vision Systems II	Healthcare and Welfare II	Advances in Nonlinear Systems Analysis and Controller Design	Fuzzy System Analysis and Control Applications II	Applications of Evolutionary Optimization	Monitoring and Diagnosis

16:10–17:20 Auditorium (10F) *SICE Awards Ceremony* (in Japanese)
17:30–18:45 Auditorium (10F) SICE History Session: Episodes in a Half Century of SICE

19:15–21:15 Grand Ballroom (12F) Banquet

SICE 2010 Technical Program Friday August 20, 2010

9:00–9:50 Grand Ballroom (12F) Plenary Talk II: Roberto Tempo

Track 11	Track 12	Track 13	Track 14	Track 15	Track 16		Track 17	Track 18	Track 19
VF							BF		
105	107	108	109	110	West Gallery	International Reception Hall	Fu-Chuon Room	Der-Hou Room East	Der-Hou Room West
10:20–11:50 FA11 Analytical Measurement	10:20–11:50 FA12 System Design based on "Further Benefit of a Kind of Inconvenience" I	10:20–11:50 FA13 Identification and Estimation	10:20–11:50 FA14 Application of Actuator and Sensor in Intelligent Technology	10:20–11:50 FA15 Robot Walking	10:20–11:50 FA16 Interactive Session II	11:00–17:00 *SICE Week* *Robot Demo and Operation Experiences*	10:20–11:50 FA17 Motion/ Function Control in Biological and Mechanical Systems I	10:20–11:50 FA18 Robotic Control and Robots	10:20–11:50 FA19 Measurement and Control
14:30–16:00 FB11 Pattern Analysis	14:30–16:00 FB12 System Design based on "Further Benefit of a Kind of Inconvenience" II	14:30–16:00 FB13 Estimation	14:30–16:00 FB14 Petri Nets and Discrete Event Systems	14:30–16:00 FB15 Humanoid Robot System Design			14:30–16:00 FB17 Motion/ Function Control in Biological and Mechanical Systems II	14:30–16:00 FB18 Robot Control and Sensing	14:30–16:00 FB19 Sensing, Control and Safety System for Intelligent Vehicle

16:10–17:20 Auditorium (10F) *SICE Awards Ceremony* (in Japanese)
17:30–18:45 Auditorium (10F) SICE History Session: Episodes in a Half Century of SICE

19:15–21:15 Grand Ballroom (12F) Banquet

SICE 2010 Technical Program Saturday August 21, 2010

9:00–9:50 Grand Ballroom (12F) Plenary Talk III: Masayoshi Tomizuka

Track 01	Track 02	Track 03	Track 04	Track 05	Track 06	Track 07	Track 08	Track 09	Track 10
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10:20–11:50 SA01	10:20–11:50 SA02	10:20–11:50 SA03	10:20–11:50 SA04	10:20–11:50 SA05	10:20–11:50 SA06	10:20–11:50 SA07	10:20–11:50 SA08	10:20–11:50 SA09	10:20–11:50 SA10
Advanced Industrial Control I	Information Systems for Transportation I	Image-based Applications in Food and Agriculture	Plant Modeling	Vision System III	Healthcare and Welfare III	Control Synthesis for Robustness, Synchronization, and Intelligent Adaptation	Fuzzy Systems Analysis and Control	Genetic Network Programming I	Recent Development of Core Technology for Energy-saving Wheel Motors in Taiwan

13:20–14:10 Grand Ballroom (12F) Invited Lecture III: Masami Hagiya	13:20–14:10 Auditorium (10F) Invited Lecture IV: Kenichi Fujii

14:30–16:00 SB01	14:30–16:00 SB02	14:30–16:00 SB03	14:30–16:00 SB04	14:30–16:00 SB05	14:30–16:00 SB06	14:30–16:00 SB07	14:30–16:00 SB08	14:30–16:00 SB09	14:30–16:00 SB10
Advanced Industrial Control II	Information Systems for Transportation II	ICT Applications in Food and Agriculture	Advances in Industrial Applications	Vision System IV	Healthcare and Welfare IV	Robust Control	Applications of Sliding Mode and T-S Fuzzy Control	Genetic Network Programming II	Manufacturing Systems and Development Support

16:20–17:20 Auditorium (10F) Closing Ceremony

18:00–20:00 Sky Lounge (12F) Farewell Reception

SICE 2010 Technical Program Saturday August 21, 2010

9:00–9:50 Grand Ballroom (12F)
Plenary Talk III: Masayoshi Tomizuka

Track 11	Track 12	Track 13	Track 14	Track 15	Track 16		Track 17	Track 18	Track 19
VF							BF		
105	107	108	109	110	West Gallery	International Reception Hall	Fu-Chuon Room	Der-Hou Room East	Der-Hou Room West
10:20–11:50 SA11	10:20–11:50 SA12	10:20–11:50 SA13	10:20–11:50 SA14	10:20–11:50 SA15	10:20–11:50 SA16	11:00-11:30 *SICE Week Robot Demo*	10:20–11:50 SA17	10:20–11:50 SA18	10:20–11:50 SA19
Recent Advances in Temperature Measurement	Recent Progress in Mechanical Metrology I	Modeling and System Identification I	Inverse Problems I	Nexus System Design: New Interaction among Humans, Agents, and Robots I	Interactive Session III		Passive Dynamic Walk	Networked and/or Embedded Systems	Intelligent System and Control

12:30–13:30
SICE Week Lecture

13:20–14:10 Grand Ballroom (12F)	13:20–14:10 Auditorium (10F)
Invited Lecture III: Masami Hagiya	Invited Lecture IV: Kenichi Fujii

14:30–16:00 SB11	14:30–16:00 SB12	14:30–16:00 SB13	14:30–16:00 SB14	14:30–16:00 SB15	14:00–16:00	14:30–16:00 SB17	14:30–16:00 SB18	14:30–16:00 SB19
Sensors and Transducers	Recent Progress in Mechanical Metrology II	Modeling and System Identification II	Inverse Problems II	Nexus System Design: New Interaction among Humans, Agents, and Robots II	*SICE Week Robot Demo and Operation Experiences*	Biomimetic Approach in Robotics and Machines	Advances in System Integration	Nonlinear Control and Information Systems

16:20–17:20 Auditorium (10F)
Closing Ceremony

18:00–20:00 Sky Lounge (12F)
Farewell Reception