

SISA2015 Program at a Glance

Wednesday, 26 August 2015 at Chiba Institute of Technology

14:30 - 18:00	Registration
15:30 - 17:30	<p>Tutorial Session (TS) Chair: Dr. Takayuki Nakachi (Nippon Telegraph and Telephone Corporation, Japan)</p> <p>[15:30-16:30] Title: Hardware Connectivity and Real-Time Processing with MATLAB and Simulink Speaker: Yoshio Okita (MathWorks Japan)</p> <p>[16:40-17:40] Title: Developing Video Signal Processing Algorithms for Embedded Vision Systems Speaker: Prof. Shogo Muramatsu (Niigata University, Japan)</p>
	Break/ Registration
18:00 - 20:00	Welcome Reception

Thursday, 27 August 2015 at Morisia Hall

9:00 - 17:30	Registration
9:30 - 9:40	Opening Ceremony
9:40 - 12:00	<p>Special Session 1 (SS1), Oral Session (7 papers) Title: Recent Advances in Digital Filter Design Chair: Prof. Kenji Suyama (Tokyo Denki University, Japan)</p>
12:00 - 13:00	Lunch Break
13:00 - 14:30	<p>Regular Session 1 (RS1), Poster Session (8 papers) Title: Smart Communication & Systems Chair: Prof. Hiroyuki Tsuji (Kanagawa Institute of Technology, Japan)</p>
14:30 - 14:50	Break
14:50 - 15:50	<p>Keynote Speech (KEY) Title: Three-Dimensional Sound Reproduction for Individual Listeners: Personalization of Head-Related Transfer Functions</p>

	Chair: Prof. Makoto Nakashizuka (Chiba Institute of Technology, Japan) Invited Speaker: Prof. Kazuhiro Iida (Chiba Institute of Technology, Japan)
15:50 - 16:00	Break
16:00 - 17:20	Special Session 2 (SS2) , Oral Session (4 papers) Title: Advanced Smart Acoustic Systems Chair: Prof. Arata Kawamura (Osaka University, Japan)
17:20 - 18:00	Break
18:00 - 20:00	Banquet at Ginza Aster, Morisia

Friday, 28 August 2015 at Morisia Hall

9:30 - 14:00	Registration
10:00 - 12:00	Regular Session 2 (RS2) and AVM Special Session: Poster Session (11 papers) Title: Intelligent Multimedia Processing Chair: Dr. Masayuki Kurosaki (Kyushu Institute of Technology, Japan)
12:00 - 13:00	Lunch Break
13:00 - 14:40	Regular Session 4 (RS4) Oral Session (5 papers) Title: Smart Color Image Processing Chair: Prof. Noriaki Suetake (Yamaguchi University, Japan), Go Tanaka (Nagoya City University, Japan)
14:40	Closing

SISA2015 Technical Program

1.1 Keynote Speech (KEY)

Thursday, 27 August 2015, 14:50–15:50 at Morisia Hall

Chair: Prof. Makoto Nakashizuka (Chiba Institute of Technology, Japan)

Invited Speaker: Prof. Kazuhiro Iida (Chiba Institute of Technology, Japan)

KEY **Three-Dimensional Sound Reproduction for Individual Listeners:
Personalization of Head-Related Transfer Functions**
Kazuhiro Iida (Chiba Institute of Technology, Japan)

1.2 Tutorial Session (TS)

Wednesday, 26 August 2015, 15:30 - 17:40 at Chiba Institute of Technology

Organizer: Prof. Makoto Nakashizuka (Chiba Institute of Technology, Japan)

Chair: Prof. Arata Kawamura (Osaka University, Japan)

TS-1 **Hardware Connectivity and Real-Time Processing with MATLAB
and Simulink**
Yoshio Okita (Mathworks, Japan)

TS-2 **Developing Video Signal Processing Algorithms for Embedded
Vision Systems**
Shogo Muramatsu (Niigata University, Japan)

1.3 Special Session 1 (SS1): Recent Advances in Digital Filter Design (Oral Session)

Thursday, 27 August 2015, 9:40 - 12:00 at Morisia Hall

Organizer: Prof. Kenji Suyama (Tokyo Denki University, Japan)

Chair: Prof. Kenji Suyama (Tokyo Denki University, Japan)

SS1-1 **Howling Canceler Using Adaptive Notch Cascade Filters with
Flexible Gain**
Kanji Mashita (Tokyo University of Science, Japan), Yosuke Sugiura (Saitama University, Japan), Naoyuki Aikawa (Tokyo University of Science, Japan)

SS1-2 **Performance Evaluation in Design of CSD Coefficient FIR Filters
Using ACO**
Tomohiro Sasahara (Tokyo Denki University, Japan), Kenji Suyama (Tokyo Denki University, Japan)

- SS1-3 Suitable Number of Swarms in Multi-Swarm PSO for Design of IIR Filters**
Haruna Aimi (Tokyo Denki University, Japan), Kenji Suyama (Tokyo Denki University, Japan)
- SS1-4 Low-delay IIR Approximation of FIR Digital Filters Based on System Identification**
Tomohiro Hirakawa (Hiroshima University, Japan), Masayoshi Nakamoto (Hiroshima University, Japan), Toru Yamamoto (Hiroshima University, Japan)
- SS1-5 Least-squares Design of FIR Digital Filters with Reduced-multipliers**
Yusuke Sato (Hiroshima University, Japan), Masayoshi Nakamoto (Hiroshima University, Japan), Toru Yamamoto (Hiroshima University, Japan)
- SS1-6 On Non-Unique Wiener Filters for Enhancement of Single Sinusoid in Noise-Free Case**
Shunsuke Koshita (Tohoku University, Japan), Masahide Abe (Tohoku University, Japan), Masayuki Kawamata (Tohoku University, Japan), Takaaki Ohnari (TOSHIBA Corporation, Japan), Tomoyuki Kawasaki (TOSHIBA Corporation, Japan), Shogo Miura (TOSHIBA Corporation, Japan)
- SS1-7 Performance Comparison of Adaptive Notch Filters With Respect to Output Power Due to the White Noise Input**
Hiroyuki Munakata (Tohoku University, Japan), Shunsuke Koshita (Tohoku University, Japan), Masahide Abe (Tohoku University, Japan), Masayuki Kawamata (Tohoku University, Japan)

1.4 Regular Session 1 (RS1): Smart Communication & Systems (Poster Session)

Thursday, 27 August 2015, 13:00 - 14:30 at Morisia Hall

Chair: Prof. Hiroyuki Tsuji (Kanagawa Institute of Technology, Japan)

- RS1-1 Propagation Characteristics Using Ray-Tracing Method for Spatial MIMO Adaptive Transmission in Street Microcell Environments**
Quang Ha Nguyen (Chiba Institute of Technology, Japan), Hiroaki Nakabayashi (Chiba Institute of Technology, Japan)
- RS1-2 Inter-Block Interference Suppression in Filter-and-Forward Relay Networks**
Satoshi Nagai (Ibaraki University, Japan), Teruyuki Miyajima (Ibaraki University, Japan)
- RS1-3 High-definition Video Transmission over MU-MIMO E-SDM System**

- Koji Tashiro (Kyushu Institute of Technology, Japan), Leonardo Lanante Jr. (Kyushu Institute of Technology, Japan), Masayuki Kurosaki (Kyushu Institute of Technology, Japan), Hiroshi Ochi (Kyushu Institute of Technology, Japan)
- RS1-4 Implementation and Field Experiments of an Open M2M Sensor Network for Smart Agriculture**
Toshiki Ishida (College of Information Science, University of Tsukuba, Japan), Satoshi Yamazaki (Numazu National College of Technology, Japan), Atsushi Daikoku (KOZO KEIKAKU ENGINEERING Inc., Japan)
- RS1-5 Footstep Classification Using Left to Right Type HMM and Cepstrum Parameters**
Akitoshi Itai (Chubu University, Japan), Hiroki Tanaka (Chubu University, Japan), Hiroshi Yasukawa (Aichi Prefectural University, Japan)
- RS1-6 A Modified Particle Swarm Optimization Considering Conflated Component of Personal and Global Best Positions**
Keita Sueyasu (National Institute of Technology, Ube College, Japan), Ryosuke Kubota (National Institute of Technology, Ube College, Japan)
- RS1-7 The Characteristics of SSVEP for Modulated Visual Stimuli**
Koji Nishimura (Chubu University, Japan), Syouya Ueda (Chubu University, Japan), Akitoshi Itai (Chubu University, Japan)
- RS1-8 Adaptive Neuro-Fuzzy Inference System for Automatic Traffic Incident Detection**
Jaraspatt La-inchuae (King Mongkut's Institute of Technology, Ladkrabang, Thai), Sorawat Chivapreecha (King Mongkut's Institute of Technology, Ladkrabang, Thai), Suttipong Thajchayapong (National Science and Technology Development Agency, Thai)

1.5 Special Session 2 (SS2): Advanced Smart Acoustic Systems (Oral Session)

Thursday, 27 August 2015, 16:00 - 17:20 at Morisia Hall

Organizer: Prof. Arata Kawamura (Osaka University, Japan)

Chair: Prof. Arata Kawamura (Osaka University, Japan)

- SS2-1 An Efficient Blind Source Separation Method Using Single Voice Activity Segments**
Arata Kawamura (Osaka University, Japan)
- SS2-2 An STSA Based Wind Noise Reduction using Morphological Operator**
Yosuke Sugiura (Saitama University, Japan), Naoyuki Aikawa (Tokyo University of Science, Japan)

SS2-3 *Speech Enhancement with p -th Power Amplitude Spectrum in Highly Noisy Environments*

Emiko Abe (Saitama University, Japan), Tetsuya Shimamura (Saitama University, Japan)

SS2-4 *Noise-Robust Scream Identification using Spectral Entropy and Multi-Condition GMM*

Noboru Hayasaka (Osaka Electro-Communication University, Japan)

1.6 Regular Session 2 (RS2) and AVM Special Session (SISA-AVM): Intelligent Multimedia Processing (Poster Session)

Friday, 28 August 2015, 10:00 - 12:00 at Morisia Hall

Chair: Dr. Masayuki Kurosaki (Kyushu Institute of Technology, Japan)

RS2-1 *Improvement of Generating Half-pixels for Image Enlargement*

Keita Kobayashi (Kanagawa Institute of Technology, Japan), Hiroyuki Tsuji (Kanagawa Institute of Technology, Japan), Tomoaki Kimura (Kanagawa Institute of Technology, Japan)

RS2-2 *Fast Noise Level Estimation from a Single Image Degraded with Gaussian Noise*

Takashi Suzuki (Kanagawa Institute of Technology, Japan), Keita Kobayashi (Kanagawa Institute of Technology, Jpana), Hiroyuki Tsuji, (Kanagawa Institute of Technology, Japan), Tomoaki Kimura (Kanagawa Institute of Technology, Japan)

RS2-3 *An Improvement of Data Detection Method from Data Embedding Image Considering Mobile Devices*

Aya Hiyama (Kansai University, Japan), Mitsuji Muneyasu (Kansai University, Japan)

RS2-4 *Magnification of Low-resolution Images with Noticeable Coding Artifacts*

Kota Takahara (Kanagawa Institute of Technology, Japan), Tomoaki Kimura (Kanagawa Institute of Technology, Japan), Hiroyuki Tsuji (Kanagawa Institute of Technology, Japan)

RS2-5 *Image Contrast Enhancement by Using Gradient Norm-based Multiscale Histogram Equalization*

Yoshiaki Ueda (Yamaguchi University, Japan), Takanori Koga (National Institute of Technology, Tokuyama College, Japan), Noriaki Suetake (Yamaguchi University, Japan), Eiji Uchino (Yamaguchi University, Japan)

RS2-6 *Image Denoising by Regularization with Morphological Gradient*

Makoto Nakashizuka (Chiba Institute of Technology, Japan)

RS2-7 *Chroma Enhancement Method Considering the Helmholtz-Kohlrausch Effect*

- Jintao Yan (Nagoya City University, Japan), Shi Bao (Nagoya City University, Japan), Go Tanaka (Nagoya City University, Japan)
- RS2-8 Improved LCU-Level Intra Refresh and Rate Control for HEVC Video Coding**
Htoo Maung Maung (Chulalongkorn University, Thai), Supavadee Aramvith (Chulalongkorn University, Thai), Yoshikazu Miyanaga (Hokkaiado University, Japan)
- RS2-9 Extraction of Road Networks from High-resolution Satellite Images using Image Processing**
Danica A. Soriano (University of the Philippines Diliman, Philippines), Angela Mercy R. Allena (University of the Philippines Diliman, Philippines), Rhandley D. Cajote (University of the Philippines Diliman, Philippines)
- RS2-10 Semantic Clustering Based on Context of Activity Events in Personal Photo Collections**
Nutchananun Chinpanthana (Dhurakij Pundit University, Thai), Tejtasin Phiasai (King Mongkut's University of Technology Thonburi, Thai), Kosin Chamnongthai (King Mongkut's of Technology Thonburi, Thai)
- RS2-11 Analysis of Eye Information in Mindless Reading (SISA-AVM-01)**
Weifeng Zhang (Waseda University, Japan), Mutsumi Suganuma (Waseda University, Japan), Wataru Kameyama (Waseda University, Japan)

1.7 Special Session 3 (SS3): Smart Color Image Processing (Oral Session)

Friday, 28 August 2015, 13:00 - 14:40 at Morisia Hall

Organizer: Prof. Noriaki Suetake (Yamaguchi University, Japan)

Prof. Go Tanaka (Nagoya City University)

Chairs: Prof. Noriaki Suetake (Yamaguchi University, Japan)

Prof. Go Tanaka (Nagoya City University)

- SS3-1 A Simplified Implementation of Multiscale Retinex for Contrast Enhancement**
Takehiko Sasaki (Niigata University, Japan), Hisakazu Kikuchi (Niigata University, Japan)
- SS3-2 Color Image Processing System Based on Color/Brightness Constancy**
Shiori Arii (Tokyo City University, Japan), Akira Taguchi (Tokyo City University, Japan)
- SS3-3 HSI Color Model with Same Gamut of RGB Color Model**
Akira Taguchi (Tokyo City University, Japan), Naoki Nakajima (Tokyo City University, Japan), Takamasa Munekane (Tokyo City University, Japan)

SS3-4 **Balanced Multiscale Retinex Using Lightness Adjustment for Color Images**

Yi Ru (Nagoya City University, Japan), Go Tanaka (Nagoya City University, Japan)

SS3-5 **A Color Transfer Method with Lightness Correction Based on Helmholtz-Kohlrausch Effect**

Chiaki Ueda (Yamaguchi University, Japan), Tadahiro Azetsu (Yamaguchi Prefectural University, Japan), Noriaki Suetake (Yamaguchi University, Japan), Eiji Uchino (Yamaguchi University, Japan)