

Conference Program of ISMAC 2015

September 23-25, 2015

Day 1 : Wednesday 23 September 2015

IEICE Technical Seminar : How to Write High Quality Papers

Room	ZONE A Restaurant Room	First Floor
14:00 – 14:30	Registration	
14:30 – 15:15	How to write a "quality paper" for international journal publication. Lecturer: Prof. Takao Onoye, Osaka University, Japan	
15:15 - 16:00	IEICE Editorial and Review System Lecturer: Prof. Akira Taguchi, Tokyo City University, Japan	
16.00 - 16.10	Coffee/Tea Break	
16:10 - 15:55	How to write a revised paper when a paper is conditionally accepted or rejected. Lecturer: Prof. Yoshikazu Miyanaga, Hokkaido University, Japan	
16:55 - 17:15	Open Forum	

Day 2 : Thursday 24 September 2015

Room	Yodia Room	Second Floor
08.00 – 16.00	Registration	
09.00 - 9.30	Opening Ceremony	
09.30 - 10.20	Keynote Speech I : <i>Color image enhancement in matching with the visual characteristics of human beings</i> <i>by Prof. Akira Taguchi , Professor, Department of Computer Science, Tokyo City University, Japan</i>	
10.20 - 10.40	Coffee/Tea Break	

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Day 2 : Thursday 24 September 2015

10.40 - 12.20

Session Room	PRADU	SAI	MAKHAM
Session Title THM1-2	THM1: Communication Circuit Design I	Phranakhon Si Ayutthaya Rajabhat University Council Meeting	THM2: Signal and Image Processing
10.40 – 11.00	THM1-1		THM2-1
11.00 – 11.20	THM1-2		THM2-2
11.20 – 11.40	THM1-3		THM2-3
11.40 – 12.00	THM1-4		THM2-4
12.00 – 12.20	THM1-5		THM2-5

12.20 - 13.30 **Lunch**

Room **Yodia Room** **Second Floor**

13.30 – 14.20 **Keynote Speech II : *Research in Communications and Related Technology for Sustainable Development of Thai Industry***
by Prof. Prayoot Akkaraekthalin, Professor, Faculty of Engineering, King Mongkut's University of Technology North Bangkok (KMUTNB), Thailand

Session Room	PRADU	SAI	MAKHAM
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14.20 – 16.20

Session Title THA1-3	THA1: Wireless Communication Systems I	THA2: Engineering Business	THA3: Biomedical Engineering and Applications I
14.20 – 14.40	THA1-1	THA2-1	THA3-1
14.40 – 15.00	THA1-2	THA2-2	THA3-2
15.00 – 15.20	THA1-3	THA2-3	THA3-3
15.20 – 15.40	THA1-4	THA2-4	THA3-4
15.40 – 16.00	THA1-5	THA2-5	THA3-5

16.00 – 16.20 **Coffee/Tea Break**

16.20 - 18.20

Session Room	PRADU	SAI	MAKHAM
Session Title THA4-6	THA4: Communication Circuits Design II	THA5: Wireless Communication Systems II	THA6: Body Area Network-Ultra Wideband Technology
16.20 – 16.40	THA4-1	THA5-1	THA6-1
16.40 – 17.00	THA4-2	THA5-2	THA6-2
17.00 – 17.20	THA4-3	THA5-3	THA6-3
17.20 – 17.40	THA4-4	THA5-4	THA6-4
17.40 – 18.00	THA4-5	THA5-5	THA6-5
18.00 - 18.20		THA5-6	THA6-6

18.30 - 21.30 **Banquet**

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Day 3 : Friday 25 September 2015

Room	Yodia Room	Second Floor	
8.00 - 13.00	Registration		
09.30 - 10.20	Keynote Speech III : Development of a collaboration environment on the cloud services <i>by Prof. Hiroshi Masui, Professor, Information Processing Center, Kitami Institute of Technology, Japan</i>		
10.20 - 10.40	Coffee/Tea Break		
10.40 - 12.20			
Session Room	PRADU	SAI	MAKHAM
Session Title FRM1-3	FRM1: IC Packaging Technology	FRM2: Biomedical Engineering and Applications II	FRM3: Natural Language Understanding for Big Data
10.40 - 11.00	FRM1-1	FRM2-1	FRM3-1
11.00 - 11.20	FRM1-2	FRM2-2	FRM3-2
11.20 - 11.40	FRM1-3	FRM2-3	FRM3-3
11.40 - 12.00	FRM1-4		FRM3-4
12.00 - 12.20	FRM1-5		FRM3-5
12.20 - 13.30	Lunch		
13.30 - 16.00			
Session Title FRA1-3	FRA1: Engineering Evolution and Management	FRA2: Analog Signal Processing and Circuits	FRA3: Communication Signal Processing & IC Packaging Technology
13.30 - 13.50	FRA1-1	FRA2-1	FRA3-1
13.50 - 14.10	FRA1-2	FRA2-2	FRA3-2
14.10 - 14.30	FRA1-3	FRA2-3	FRA3-3
14.30 - 14.50	FRA1-4	FRA2-4	FRA3-4
14.50 - 15.10	FRA1-5	FRA2-5	FRA3-5
15.10 - 15.30			FRA3-6
15.30 - 16.00	Coffee/Tea Break		
Day 4 : Saturday 26 September 2015			
9.30 - 16.00	Technical Tours		

Keynote Speaker I : Prof. Akira Taguchi

Topic: Color image enhancement in matching with the visual characteristics of human beings.

Session Chair: Prof. Mitsuji Muneyasu, Kansai University, Japan

Keynote Speaker II : Prof. Prayoot Akkaraekthalin

Topic: Research in communications and related technology for sustainable development of Thai industry .

Session Chair: Dr. Sathaporn Promwong, KMITL, Thailand

Keynote Speaker III : Prof. Hiroshi Masui

Topic: Development of a collaboration environment on the cloud services.

Session Chair: Prof. Masakiyo Suzuki, Kitami Institute of Technology, Japan

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THM1: Communication Circuit Design I

Session Chair: Asst. Prof. Dr. Winai Jaikla, KMITL

THM1-1	A Sinusoidal Oscillator with Voltage-mode Quadrature Output and Amplitude Controllability Current-mode Outputs using VDCCs
THM1-2	Simple Voltage-Mode Multifunction Filter Using Single DDCCTA
THM1-3	Design of High-order Current-mode Ladder Low-pass Filter Using MOCCCIIs
THM1-4	Gm-C Realization of Floating Capacitance Multiplier
THM1-5	Realization of Electronically Tunable Current-mode Quadrature Oscillator using CFTAs

THM2: Signal and Image Processing

Session Chair: Dr. Sathaporn Promwong, KMITL

THM2-1	Simultaneous Enumeration of the Number of Coherent Signals Impinging on a Sensor Array and the Number of Their Independent Components
THM2-2	A New FM Demodulation Scheme Based On SAGC
THM2-3	Automatic blob-based Glistening Detection
THM2-4	Improvement of Data Extraction from Data-Embedded Printed Image Using Embedding Markers for Image Correction
THM2-5	Automatic Determination of the Angle Information parameter Value in Color2Gray Algorithm

THA1: Wireless Communication Systems I
Session Chair: Asst. Prof. Dr. Pattarapong Phasukkit, KMITL

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| THA1-1 | Application of Reduced-Complexity 3D Indoor Localization System in CDMA-based Visible Light Communication System |
| THA1-2 | Carrier and Sampling Frequency Offset Compensation in 8X8 MIMO-OFDM Systems and its Performance Evaluation Using Measured Data |
| THA1-3 | A Feasibility Study of a Flexible OFDM Transmitter Towards an Adaptive Control of Communication Quality |
| THA1-4 | UWB-IR Path Loss Model for Short Range Multimedia System |
| THA1-5 | A Novel Comparison of UWB Indoor Localization |

THA2: Engineering Business
Session Chair: Asst. Prof. Dr. Saroj Pullteap, Silpakorn University

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| THA2-1 | The possibility study on waste management at Silpakorn University (Sanam Chandra Palace Campus) |
| THA2-2 | Process Improvement in Blow Film Plastic Production by Using Engineering Business Principle |
| THA2-3 | Worthiness of Changing LED Lighting System at Silpakorn University |
| THA2-4 | The Homomorphic Property of Paillier Cryptosystem |
| THA2-5 | Analysis Effects from Overvoltage on Grounding Grids System of Two High Voltage Substation at Nearby Using ATP/EMTP Program |

THA3: Biomedical Engineering and Applications I
Session Chair: Mr. Sukkharak Sae-chia, ARU

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| THA3-1 | Simple ASL Alphabet Using Leap Motion Controller |
| THA3-2 | Effect of Blood Flow During Microwave Ablation in Narrowed Coronary Artery Disease |
| THA3-3 | Joint Movement Analysis System of Human Using Non-contact 3 D Sensor |
| THA3-4 | Brainwave measurement when enjoying the music by EPOC+ |
| THA3-5 | Computational Fluid Dynamic Simulation of Blood Tube Centrifuge System |

THA4: Communication Circuits Design II
Session Chair: Asst. Prof. Dr. Siraphop Tooprakai, KMITL

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| THA4-1 | High Speed Hybrid CMOS Full Adder Circuit |
| THA4-2 | A Voltage-Mode Quadrature Sinusoidal Oscillator Using VDDDA |
| THA4-3 | MOSFET-c Realization of Sinusoidal Quadrature Oscillator |
| THA4-4 | Current-mode sixth-order ladder band-pass filters based on current-controlled current conveyor |
| THA4-5 | A Voltage-Mode VDDDA-Based Universal Filter |

THA5: Wireless Communication Systems II
Session Chair: Assoc. Prof. Dr. Chuwong PhongCharoenpanich, KMITL

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| THA5-1 | Studying the prediction path loss in rural by standard macrocell model |
| THA5-2 | Analysis of DVB-T2 received signal for outdoor reception in Bangkok Thailand |
| THA5-3 | Circularly Polarized UHF-RFID Multi-loop Tag Antenna using Truncated Corner Techniques |
| THA5-4 | Miniatured Antenna using Thin Strip Lines for WLAN/2G/3G Applications |
| THA5-5 | Analysis of UWB Antennas with FCC band and Common Band for WiMedia System |
| THA5-6 | Experimental Study of DVB-T2 Propagation Loss in an Indoor Environment |

THA6: Body Area Network-Ultra Wideband Technology
Session Chair: Assoc. Prof. Dr. Pipat Prommee, KMITL

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| THA6-1 | Evaluation of Channel Transfer Function and Transmission Gain in BAN-UWB |
| THA6-2 | Experimental Study of BAN-UWB System Using Double Waveform Transmission |
| THA6-3 | An Investigation of a Non-binary LDPC Codes Designed for MAC Layer WBAN Communication |
| THA6-4 | A Study of Rectangular Slot Antenna for Body Area Network-Ultra Wideband |
| THA6-5 | Comparisons of Distance Error between Trilateration and Min-Max Techniques for UWB Indoor Localization |
| THA6-6 | Comparisons of LOS and NLOS in UWB Transmission Waveform for WBAN |

FRM1: IC Packaging Technology

Session Chair: Assoc. Prof. Dr. Montree Siripruchyaun, KMUTNB

- FRM1-1 Effect of Wire Sweep between Wire Bonding and Molding Process to QFN Package
- FRM1-2 Bond Lind Thickness Modification for Minimizing Of Lot Reject Rate in IC Packaging
- FRM1-3 Cleanning Parameters Affecting on Bond Pad Contamination in Wafer Saw Process of IC Package
- FRM1-4 Effect of Post Mold Cure Ramp Down Temperature to IC Package using PPF Leadframe
- FRM1-5 Increasing Units per Hour (UPH) in Substrate Saw Process for IC Packaging

FRM2: Biomedical Engineering and Applications II

Session Chair: Asst. Prof. Dr. Pattarapong Phasukkit, KMITL

- FRM2-1 Finite Element Modeling of Lower Human Body Passive Exoskeleton
- FRM2-2 Support Back For Lower Back Pain By Passive Mechanism
- FRM2-4 3D Finite Element Analysis of Specific Absorption Rate Distribution in Virtual Physiological Human Modeling

FRM3: Natural Language Understanding for Big Data

Session Chair: Assoc. Prof. Dr. Tomoaki Sato, Hirosaki University

- FRM3-1 Use of Neural Network Model for Frequency Control in Microgrid System
- FRM3-2 An automatic Thai career path generation using similarity of roles and their competencies
- FRM3-3 Object-Oriented Program Comprehension and Revision by Conceptual Graph
- FRM3-4 The Constraint Extension and Recommend for Generate Ontology from Relational Database
- FRM3-5 Thai Classifier Disambiguation in Bilingual Alignment Process for Thai-English SMT

FRA1: Engineering Evolution and Management
Session Chair: Dr. Chouwalit Hamontree, KMITL

- FRA1-1 Reverse Logistics Cost Reduction A Case Study of Auto Parts Company
- FRA1-2 An artificial bee colony (ABC) algorithm for solving the capacitated vehicle routing problem
- FRA1-3 Spare Parts Management with Simulation Technique A Case study: Transportation Service Company
- FRA1-4 Performance Analysis of Dispatching Rules for Job Shop Manufacturing System with Simulation Approach
- FRA1-5 Solving Permutation Flowshop Scheduling Problem with Hybrid Algorithm in a Sheet Metal Manufacturing

FRA2: Analog Signal Processing and Circuits
Session Chair: Asst. Prof. Dr. Montree Kumngern, KMITL

- FRA2-1 A Simple Electronically Controllable Square-wave Generator Using only Single MO-VDTA
- FRA2-2 A Linearly Electronically Controllable Current-mode Square-Rooter Based on VDTAs
- FRA2-3 A Temperature-Insensitive Current-mode Biquad Filter Based on Differentiator Structures Employing CCTAs
- FRA2-4 An Electronically Controllable Instrumentation Amplifier Based on CC-CDBA
- FRA2-5 A Simple Current-mode Quadrature Sinusoidal Oscillator Based on VDTAs

FRA3: Communication Signal Processing & IC Packaging Technology
Session Chair: Asst. Prof. Dr. Sorawat Chivapreecha, KMITL

- FRA3-1 Life Time of Non Conductive Epoxy Effect to Reliability in IC Packaging Process
- FRA3-2 An Improved Digital Image Encryption Using Chaos in Digital Filter
- FRA3-3 Improving Education on Modern Digital System Design and Digital Signal Processing at NUOL Case Study: Chaotic Encoder-Decoder Based on Digital Filter and Its FPGA Implementation
- FRA3-4 An Implementation of Face Recognition System Applications
- FRA3-5 IEEE 802.15.4a Indoor Positioning Using Trilateration Technique
- FRA3-6 Time Domain Antenna Analysis for Ultrawideband System

