

Program of AWCIT 2014

Asia Workshop on Convergence Information
Technology of KSCI 2014
(AWCIT 2014)

*December 12-13, 2014,
Jeju National University(Ara Campus) International Center,
Jeju island, Korea*

Organized by
The Korea Society of Computer Information

Co-sponsored by
The Korean Federation of Science and Technology Societies

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Greetings from the Workshop General Chair ○



Distinguished guests, members of Asia Workshop on Convergence Information Technology of KSCI 2014(AWCIT 2014), ladies and gentlemen.

I wish to extend my warmest welcome to you on the opening of our Asia Workshop on Convergence Information Technology of KSCI 2014(AWCIT 2014). I applaud the excellent work done by the organizing committee. I also wish to thank all those who worked so hard to prepare for all this important workshop.

Through this workshop, I expect all the participants to enhance their mutual understanding cross-culturally here and also to discuss hot issues and much possibilities in the field of Asia computer and information. Many specialists who are invited will give us more information, knowledge, skills, and insights for our future change of computer and information in Asia than before, even though there are different situations for us to face.

Dear all the participants,

Please enjoy your time here at Asia Workshop on Convergence Information Technology of KSCI 2014(AWCIT 2014), and don't forget to explore the beautiful campus of Juju National University and the scenery of Jeju island. We hope you return to your home with the good memory of this workshop and Jeju island.

Again I'd like to congratulate Asia Workshop on Convergence Information Technology of KSCI 2014(AWCIT 2014) on its effort, and I wish all of you a successful workshop.

Thank you very much.

Dr. Tae Wuk Lee
President of the Korea Society of Computer and Information
(Korea National University of Education)

Program at a Glance

	Date & Time	Session & Place	Chair
12/12 (Friday)	12:00~	Registration	
	13:00~13:10	Congratulatory speech	Tae Wuk Lee (President of the KSCI)
	13:10~14:00	Keynote · From 2D to 3D – An Overview of 3D Data acquisition, Principles and Applications	Chia-Yen Chen (National Univ. of Kaohsiung, Taiwan)
	14:00~14:10	Coffee Break	
	14:10~17:30	Session 1 (Room: Seminar III): ·IT-based Convergence Technology and Service	Young Woon Woo (Dong-Eui Univ.)
		Session 2 (Room: Seminar III): ·IT-based Convergence Technology and Service	Soo Kyun Kim, (PaiChai Univ.)
		Session 3 (Room: Seminar III): ·Ubiquitous Computing & Sensor Network	Jae-geol Yim (Dongguk Univ.)
		Session 4 (Room: Seminar III): ·Ubiquitous Computing & Sensor Network	Am Suk Oh, (TongMyong Univ.)
		Session 5 (Room: Seminar III): ·Business and Information Systems	Tae-Hoon Kim (Sungshin Women's Univ.)
		Session 6 (Room: Seminar III): ·Business and Information Systems	Han Jin Cho (Far East Univ.)
Session 7 (Room: Seminar III): ·Medical Information & Bioinformatics		Doo-Heon Song (Yong-In SongDam College)	
18:00~	Banquet		
12/13 (Saturday)	09:00~	Registration	-
	10:00~11:30	Session 8 (Room: Seminar III): ·IT-based Convergence Technology and Service	Kang-Hee Lee (Soongsil Univ.)
		Session 9 (Room: Seminar III): ·Ubiquitous Computing & Sensor Network	Suk Hoon Kim, (Suwon Women's Univ.)
		Session 10 (Room: Seminar III): ·Business and Information Systems	Soo Kyun Kim, (PaiChai Univ.)

■ Registration

- Time : December 12, 2014, 13:00 ~ 14:00
- Place : Jeju National University(Ara Campus) 1F Lobby International Center(<http://jnuic.jejunu.ac.kr>)

■ Keynote Speech

- Time : December 12, 2014(Friday) 13:10 ~ 14:00
- Place : Jeju National University(Ara Campus) International Center Seminar III
- Invited Tutorial : From 2D to 3D–An Overview of 3D Data acquisition, Principles and Applications”
- Chia-Yen Chen (Associate professor Dept. of Computer Science and Information Engineering, National University of Kaohsiung, Taiwan)
· Email : ayen@nuk.edu.tw
· Web: <http://www.csie.nuk.edu.tw/~ayen>

■ Luncheon

- Time : December 12, 2014(Friday) 12:00 ~ 13:00
- Place : Jeju National University(Ara Campus) Faculty Hall Restaurant





Chia-Yen Chen

Associate professor
Dept. of Computer Science and Information Engineering,
National University of Kaohsiung, Taiwan.

| Biography :

Chia-Yen Chen received her B.Sc. and M.Sc.(Hon), as well as Ph.D. degrees from the Department of Computer Science, at the University of Auckland, New Zealand. She has been a lecturer in the Department of Computer Science at the University of Auckland from 2002 to 2006, an assistant professor in the Department of Electrical Engineering at National Chung Cheng University from 2006 to 2007. She has been an assistant professor from 2007 to 2013 and an associate professor from 2013 in the Department of Computer Science and Information Engineering at National University of Kaohsiung, in Taiwan.

Chia-Yen's research interests include 3D reconstructions, computer vision, as well as augmented reality and related applications. Since 2007, she has received and directed more 10 projects related to computer vision and 3D reconstructions, from the Ministry of Science and Technology in Taiwan, as well as several best or excellent paper awards for papers presented in conferences.

| Title :

From 2D to 3D – An Overview of 3D Data acquisition, Principles and Applications

Abstract:

In this new century, we have witnessed the increasing popularity of 3D technologies in many different aspects of our lives. In this presentation, I will provide a brief introduction of some of the commonly seen 3D data acquisition methods, including computer vision based approaches such as photometric stereo, structured lighting and binocular stereo, which perform 3D reconstruction using 2D images, as well as methods that use specialized devices to capture 3D information, such as the LiDAR. Some recent research findings from our laboratory will also be presented, including work related to 3D reconstruction and egomotion estimation. In addition, I will provide some possible applications of reconstructed 3D models and future prospects of the research area.



Session

December 12th, 2014

Session 1 • IT-based Convergence Technology and Service

Time: 14:10 ~ 15:30
Room: Seminar III Young Woon Woo
(Dong-Eui Univ.)

14:10 ~ 14:30 **IT-01 Interactive Faces**
Kang-Hee Lee (Soongsil University)

14:30 ~ 14:50 **IT-02 Iris recognition using the subdivided vector sum of the gradient direction histogram**
Chang-Soo Choi (Cheongju Correction Institution),
Jeong-Man Seo (Korea national university of Welfare)

14:50 ~ 15:10 **IT-03 Design of a Fingerprinting Indoor Positioning Application**
Jae-Geol Yim (Dongguk University)

15:10 ~ 15:30 **IT-04 Efficient Iris Recognition for Large Scale Database**
Chang-Soo Choi (Cheongju Correction Institution), Jeong-Man Seo (Korea national university of Welfare), Hee-Man Lee (Seowon University)

December 12th, 2014

Session 2 • IT-based Convergence Technology and Service

Time: 16:20 ~ 17:30
Room: Seminar III Soo Kyun Kim
(PaiChai Univ.)

16:20 ~ 17:30 **IT-05 A Research on Autonomous Mobility Management of Heterogeneous Networks**
Yu-Mi Oh, Sung-Won Lee (Kyung Hee University),
Myung-Ju Kang (Chungkang College of Cultural Industries)

16:20 ~ 17:30 **IT-06 Image Shooting Using Gesture Recognition**
Kwang-Baek Kim (Silla University), Young-Woon Woo (Dong-Eui University)

16:20 ~ 17:30 **IT-07 Automatic Detection and Segmentation of License Plates**
Muhammad Saad Malik, Reinhard Klette (The University of Auckland, New Zealand)

16:20 ~ 17:30 **IT-08 Lane and Corridor Detection Using a Multi-row Particle Filter**
Han Wang, Bok-Suk Shin (Nanyang Technological University, Singapore)

16:20 ~ 17:30 **IT-09 Source Localization and Cramer Rao bound in presence of Ambient Noise**
Zahra Madadi (Nanyang Technological University, Singapore),
Benjamin Premkumar (University of Malaya, Kuala Lumpur, Malaysia)

16:20 ~ 17:30 **IT-10 The Role of Local Adaptive Binarization in Analyzing Cracks on the Surface of Concrete Slab Structures**
Kwang-Baek Kim (Silla University), Hyun-Jun Park (Pusan National University),
Doo-Heon Song (Yong-In SongDam College)

16:20 ~ 17:30 **IT-11 Pac Man Game Using Hand Movement**
Seong-Yoon Shin (Kunsan National University),
Hyun-Chang Lee (Wonkwang University), Ki-Hong Park (Kunsan National University)

December 12th, 2014

Session 3 • Ubiquitous Computing & Sensor Network

Time: 15:40 ~ 16:20
Room: Seminar III Jae-geol Yim
(Dongguk Univ.)

15:40 ~ 16:00 **US-01 Design of Architecture and Application Plan for High Performance Push Sever**
Wook Kim, Mi-Ae Kang, Sang-Hoon Lee (Yagins inc),
Won-Joo Lee (Inha Technical Collage)

16:00 ~ 16:20 **US-02 The Smart Work Application Service for Context-awareness of Mobile Object based on IoT**
Umarov Jamshid, Ju-Su Kim, Chol-U Lee, Ryum-Duck Oh
(Korea National University of Transportation)

December 12th, 2014

Session 4 • Ubiquitous Computing & Sensor Network

Time: 16:20 ~ 17:30
Room: Seminar III Am Suk Oh
(TongMyong Univ.)

16:20 ~ 17:30 **US-03 Sleep Measure and Understanding Sleep Apnea**
Seong-Yoon Shin (Kunsan National University),
Hyun-Chang Lee (Wonkwang University), Sang-Won Lee (Wonkwang University)

16:20 ~ 17:30 **US-04 Push-based Content Sharing System for Smart Devices in Home Network**
Byoung-Seob Park (Inha Technical Collage), Yang G. Kim (New York City College of
Technology), Won-Joo Lee (Inha Technical Collage)

16:20 ~ 17:30 **US-05 Design of LED Display Device Based on Wireless Sensor Network**
Chen-Lin Xu, Hyun-Chang Lee (Wonkwang University),
Seong-Yoon Shin (Kunsan National University)

16:20 ~ 17:30 **US-06 IoT-based Intelligent System for Evacuation Guidance in Buildings**
Chang-Su Ryu (Yewon Arts University)

16:20 ~ 17:30 **US-07 A Mobile OS Integrity Check Using Bootloader & Storage Device of Physical Independent**
Dong-Yeob Oh, Jae-Kyung Park (KAIST)

16:20 ~ 17:30 **US-08 DGCA Scheme for Differentiated Services in Wireless Cellular Networks**
Yang Cao, Qin Lu, JianWei Yin (Eastern Liaoning University)



Session

December 12th, 2014

Session 5 • Business and Information Systems

Time: 14:10 ~ 15:10
Room: Seminar III

Tae-Hoon Kim
(Sungshin Women's Univ.)

14:10 ~ 14:30 **BI-01 Puzzle Based Algorithm Learning for Improving Computational Thinking**
Jeong-Won Choi, Young-Jun Lee (Korea National University of Education University)

14:30 ~ 14:50 **BI-02 Improvement in Korea Electronic Litigation**
Jong-Ryeol Park, Jae-Nam Kim (Kwangju Women's University),
Ga-Yun Lee (Chonnam National University)

14:50 ~ 15:10 **BI-03 Rethinking of Informatics Teacher Education Framework: in Accordance with the changes of Curriculum**
Sang-Jin An, Young-Jun Lee (Korea National University of Education University)

December 12th, 2014

Session 6 • Business and Information Systems

Time: 16:20 ~ 17:30
Room: Seminar III

Han Jin Cho
(Far East Univ.)

16:20 ~ 17:30 **BI-04 The Development of a Software Education Program Using App Inventor**
Myung-Jung Kim, Tae-Wuk Lee (Korea National University of Education University)

16:20 ~ 17:30 **BI-05 Effect of Augmented Reality on Flow and Satisfaction with Smart Learning**
Yun-Sung Cho (HanYang University), Seok-Hun Kim, Byung-Taek Kim,
Sung-Soo Park (Suwon Women's University)

16:20 ~ 17:30 **BI-06 Using Mobile Technology for Enhancing Visitor Experience in Museum Contexts**
Bo-a Rhee, Yong-Soon Choi (Sogang University)

16:20 ~ 17:30 **BI-07 A Study on the Social Campaign Reinforcing Computer Education in Korea**
Seong-Kyun Jeon, Young-Jun Lee (Korea National University of Education University)

16:20 ~ 17:30 **BI-08 Time Series Clustering for Patent Big Data**
Jun-Hyeog Choi (Kimpo University), Sung-Hae Jun (Cheongju University)

16:20 ~ 17:30 **BI-09 Comparative Research of Competitiveness and Influence Factors of Computer and Information Service Trade of South Korea, China and Japan**
Liang Rui(Beijing Union University), Zi-Yang Liu(Kyonggi University)

December 12th, 2014

Session 7 • Medical Information & Bioinformatics

Time: 15:20 ~ 15:40
Room: Seminar III

Doo-Heon Song
(Yong-In SongDam College)

15:20 ~ 15:40 **MB-01 Pulse Printer**
Kang-Hee Lee (Soongsil University), Jae Gu (Formation Design Group)

December 13th, 2014

Session 8 • IT-based Convergence Technology and Service

Time: 10:00 ~ 11:30
Room: Seminar III

Kang-Hee Lee
(Soongsil Univ.)

10:00 ~ 11:30 **IT-12 Detection of Smoking in Elevator Using Image Forensic**
Seong-Yoon Shin (Kunsan National University),
Hyun-Chang Lee (Wonkwang University), Yang-Won Rhee (Kunsan National University)

10:00 ~ 11:30 **IT-13 Analysis of the Relationship between Patterns and Flow in Adventure Game**
Myung-Ju Kang, Chan-Il Park, Jong-Won Lee, Hyoun-Ju Oh, Sang-Jung Kim
(Chungkang College of Cultural Industries)

10:00 ~ 11:30 **IT-14 Prototype Design of a Social Network Game Using Win32 API**
Joung-Hun Yang, Chang-Yoon Lee, Syung-Og An, Soo-Kyun Kim (Paichai University),
Jin-Young Jung, Jin-Seob Shin, Woo-Young Ahn (Daejeon Health Sciences College)

10:00 ~ 11:30 **IT-15 Incremental Structured ICP Algorithm**
Haokun Geng, Johnny Chien, Radu Nicolescu,
Reinhard Klette (The University of Auckland, New Zealand)

December 13th, 2014

Session 9 • Ubiquitous Computing & Sensor Network

Time: 10:00 ~ 11:30
Room: Seminar III

Suk Hoon Kim
(Suwon Women's Univ.)

10:00 ~ 11:30 **US-09 A Study on Fire Detection Based on IR Laser Focus Alignment Algorithms**
Gwan-Hyung Kim, Se-Woon Choe, Am-Suk Oh (Tongmyong University)

10:00 ~ 11:30 **US-10 A Study on Security Weaknesses of Android System**
Seung-Il Jung, Hyun-Woo Kim, Jae-Kyung Park (KAIST)

10:00 ~ 11:30 **US-11 Comparison and Analysis of distributed algorithms for Wireless Sensor Network**
Fanglu Ning, Yang Cao, Qin Lu (Eastern Liaoning University)

December 13th, 2014

Session 10 • Business and Information Systems

Time: 10:00 ~ 11:30
Room: Seminar III

Soo Kyun Kim
(PaiChai Univ.)

10:00 ~ 11:30 **BI-10 Implementation of Efficient Data Management System as an Essential Tool for Monitoring and Evaluation of Basic Education**
Emis Muthoni Njeru (Ministry of Education, Kenya)

10:00 ~ 11:30 **BI-11 Policy on ICT Education in Ghana**
Eunice Dumashie, Angela Nkansah (Ministry of Education, Ghana)

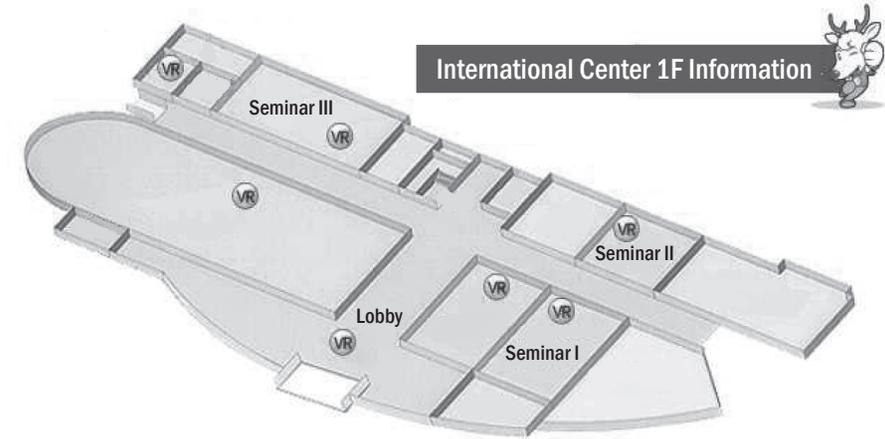
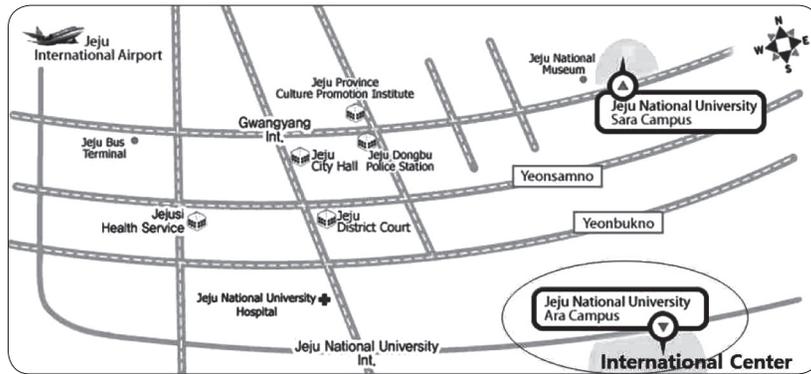
10:00 ~ 11:30 **BI-12 Characteristics of Mobile Advertising and User Acceptance : A Cross-Cultural Study on South Korea and China**
Seung-Gweon Kim (Software Engineering Center of National IT Promotion Agency),
Jong-Soo Yoon (Kangnam University)



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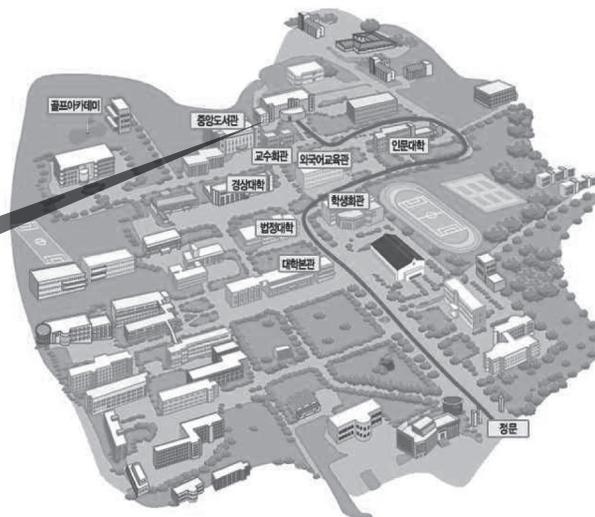
- Jeju National University Ara Campus, 102 Jejudaehak-ro, Jeju-si, Jeju Special Self-Governing Province, Republic of Korea, 690-756
Tel: +82-64-754-2491~2



| International Center



International Center
TEL: +82-64-754-2491



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This work was supported by the Korean Federation of Science and Technology Societies Grant funded by the Korean Government.

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