

Conference Program

2013 International Joint Conference on
Awareness Science and Technology &
Ubi-Media Computing
(iCAST 2013 & UMEDIA 2013)



-- Can we realize awareness via ubi-media?

November 2 - 4, Aizuwakamatsu, Japan

Organized By
University of Aizu, Aizu-wakamatsu, Japan



iCAST 2013 & UMEDIA 2013

Program at a Glance

		M2	M3	M4	M8	M9
Nov. 2 (Sat)	9:00	Registration				
	10:30	Lth: Opening Ceremony				
	11:00	Lth: Keynote Speech 1 by Dr. Shoichi Noguchi				
	12:00	Lunch				
	13:00	IM - 1	IM - 8	SS - 1	UM - 1	UM - 8
	14:40	Break				
	14:50	IM - 2	IM - 9	SS - 2	UM - 2	UM - 9
	16:30	Break				
	16:40	Lth: Keynote Speech 2 by Dr. Jing-Nong Cao				
	18:30	Lat-a-tat: Welcome Reception				
Nov. 3 (Sun)	9:30	Lth: Keynote Speech 3 by Dr. Xin Yao				
	10:30	Break				
	10:50	IM - 3	IM - 10	SS - 3	UM - 3	UM-10
	12:30	Lunch				
	13:30	IM - 4	IM - 11	SS - 4	UM - 4	UM-11
	15:10	Break				
	15:20	IM - 5	IM - 12	SS - 5	UM - 5	UM-12
	17:00	Break				
	17:10	Lth: Keynote Speech 4 by Frank Hsu				
	18:10	Transport – Banquet Bus				
	19:00	Banquet at Aizu Washington Hotel				
Nov. 4 (Mon)	9:30	Lth: Keynote Speech 5 by Dr. Gary Yen				
	10:30	Break				
	10:40	Lth: Keynote Speech 6 by Dr. Keun Ho Ryu				
	11:40	Lunch				
	13:00	IM - 6	WS - 1	SS-6	UM - 6	UM- 13
	14:40	Break				
	14:50	IM - 7	WS-2	WS-3	UM - 7	WS-4
	16:30	Lth: Closing				

- Demo Session: M5, 13:00 – 16:00
- UMEDIA Special Session: UBIC 3D Theater, 16:00 – 17:00
- IM: iCAST Main Track - SS: Special Sessions
- UM: UMEDIA Main Track - WS: Workshops

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Foreword

-- Can we realize awareness via ubi-media?

Welcome to iCAST & UMedia 2013! It is our great pleasure to share awareness, ubiquitous & multimedia computing in Aizu, Fukushima with all of you. The iCAST & UMedia 2013 conference provides a forum for researchers, engineers, and scientists for discussing the awareness and ubiquitous multimedia computing and exchanging ideas, opinions, and the latest results in these emerging new fields. "Awareness" is the ability to be conscious of, feel, or perceive. This implies vigilance in observation and alertness in drawing inferences from what one experiences. The ultimate goal of awareness computing is to create computing systems that are themselves aware. The International Conference on Awareness Computing and Technology (iCAST) conference that focuses on awareness computing has been evolved from the International Workshop on Aware Computing (IWAC2009) in Aizu, Japan, the International Symposium on Aware Computing (ISAC2010) in Tainan, Taiwan, the iCAST 2011 was held in Dalian, China. The iCAST 2012 conference was held in Seoul, Korea. The 1st International Conference Ubi-Media Computing (UMEDIA2008) was held in Lanzhou, China, the 2nd conference on Ubi-Media Computing (UMEDIA2008) was held in Tamkang, Taiwan, the 3rd UMEDIA (UMEDIA2010) was held in JinHua, China, the 4th UMEDIA (UMEDIA2011) was held in Sao Paulo, Brazil, the 5th UMEDIA (UMEDIA2012) was held in Xining, China. In this year, we invite you as a joint conference of iCAST and Ubi-Media with a subject "Can we realize Awareness via Ubi-Media?" in Aizu.

This year's main conference track and special sessions attracted 168 papers from various group of authors in 20 countries. Each paper was reviewed by 3 program committee members, and 126 articles were selected for presentation in the conference. 48 papers of the total 82 papers (59%) were selected for the main oral session in the iCAST conference. Also, we have 6 special sessions or 4 workshops, whose chairs have attracted motivating articles suitable for the session's issues in detail.

The conference is sponsored by IEEE CI Society, IEEE SMC Society, IEEE Sendai Section, and Information Processing Society of Japan, and supported by IEEE SMCS Japan Chapter, IEEE SMCS Technical Committee on Awareness Computing, IEEE CIS Task Force on Aware Computing, IEEE CIS Task Force on Brain Informatics, Future Technology Research Association, and Fukushima Prefecture.

And, we would like to thank our host, University of Aizu, who has fully supported us in providing the meeting rooms and necessary resources and energy with financial funds; our authors for submitting their newest results; the steering committee chairs for their proper guide and leading for

the conference, the organizing committee members for preparing necessary things for the event; the 185 program committee members for reviewing the articles carefully; the organizers for organizing the special/invited sessions; and all people involved in this event.

Especially, this year is in the 20th anniversary of University of Aizu, please join to celebration of the great event. We hope you can enjoy this festival of sharing our knowledge and heart of love!

Incheon Paik

Program Committee Chair of iCAST 2013 & UMEDIA 2013

Keitaro Naruse

Organizing Committee Chair of iCAST 2013 & UMEDIA 2013

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Keynote Speech

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Keynote Speech 1: 11:00 – 12:00, Nov. 2, 2013.

Semantics and Semantic Communication

Dr. Shoichi Noguchi

President of Sendai Foundation for Applied Information Sciences



Abstract:

In this talk, first the basic concept of semantics and semantic communication is discussed. The quality of the semantics of an object is decided by the level of the information, it is concerned with, is contained. A hierarchical four-layer model is introduced to explain the level of information content. The first of the four layers represent the formal information, which is represented by a series of symbols. The second layer is the common information which is widely recognized as the common knowledge among the community. The third layer consists of knowledge information and the emotional information. On the basis of this third layer information, most of our daily social activities are accomplished. Information at the fourth layer is recognized as the highest level of information for human activities. This abstract information contains the philosophical truth, the spirituality in religious beliefs and the emotion involved with a work of art. This model is closely related to the philosophy of the Buddhism.

The organization of the information contents of an individual is achieved through the communication among individuals in a community. This means that the semantics is increased by semantic communication within community. At the same time, it is very important to mention that the contents obtained by the communication between two objects, A and B, is decided by the level of the common semantics which both A and B share between each other. From this communication it is evident that there does not exist a perfect semantic communication on the third and the fourth layers of semantics defined above. Under such a communication environment, it becomes very important to find a supporting method which would improve the imperfect semantic communication among the objects. For the third layer semantic communication, several important supporting methods are proposed. Among them, communication supported by the metaphor and the ontology technologies are explained. There is no fundamental idea to improve semantic communication on the

fourth layer. But, we must recognize that there are so many important results which deeply enrich our human life by the heuristic semantic communication on this fourth layer. Many results involving communication in this layer are explained.

Short Biography:

After receiving Doctor of Engineering Degree from Tohoku University, Japan, in 1961, Dr. Shoichi Noguchi dedicated his research to the field of computer science, computer systems and computer networks. Dr. Noguchi served as Professor of Tohoku University (1971~1993), Director of Computing Center of Tohoku University (1984~1990), Director of Research Center for applied Information Science (1990~1993), Professor of Nihon University (1993~1997), President of Information Processing Society of Japan (1995~1997), President of the University of Aizu (1997~2001), and President of Sendai Foundation for Applied Information (1990 till date). Dr. Noguchi's three significant contributions in research are (1) Establishment of a theoretical background for algebraic and cellular automata theory which focuses on characterization and unification of automata by algebraic theory and proof of completeness of one dimensional cellular automata; (2) Development of a large-scale parametron computer named Sendai Automatic Computer 1 (SENAC-1) which was the largest computer in Japan during late 1950s. It was jointly developed by Tohoku University and NEC Corporation. Its advanced concepts on architecture design was and still been widely applied to today's computers; and (3) Theoretical analysis of the concept of time-sharing and space-sharing systems which was the first of its kind in the world of computer systems.

In addition to research, Dr. Noguchi played an important role in developing computer networks in Japan. From 1985, serving as the head of the Tohoku University Large Computer Center, Prof. Noguchi promoted the research and development of computer networks mainly with the members of large computer centers at the top seven national universities in Japan. In addition, he planned and completed Tohoku University Academic/All-round/Advanced Information Network System (TAINS). This was the first large-scale academic network in Japan. Dr. Noguchi promoted many research projects financed by the Ministry of Education, Japan. These projects include Japan Academic Inter-University Network (JAIN), and they contributed greatly to the progress in research on networks, and to promote internet, in Japan.

Keynote Speech

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Keynote Speech 2: 16:40 – 17:40, Nov. 2, 2013.

Hot Research Topics in Mobile Cloud Computing

Dr. Jian-Nong Cao

Chair Professor and Head of Department of Computing,
Hong Kong Polytechnic University, HK



Abstract:

Mobile cloud computing (MCC) has emerged as a new paradigm of cloud computing. It offers great opportunities for mobile service industry, allowing mobile devices to access the applications and utilize the elastic resources offered by the cloud. When cloud meets mobile, there are many interesting and challenging issues to address. In this talk, I will first introduce different models and applications of mobile cloud computing. Then, in terms of the models and applications, I will describe hot research topics, including both topics that originate from cloud computing but become different and more challenging to solve due to users' mobility, and new topics that arise from complexity of the new computing paradigm. In the last part of this talk, I will introduce some work that we are focusing on in mobile cloud computing.

Short Biography:

Dr. Cao is currently a chair professor and head of the Department of Computing at Hong Kong Polytechnic University, Hung Hom, Hong Kong. His research interests include parallel and distributed computing, computer networks, mobile and pervasive computing, fault tolerance, and middleware. He has co-authored 3 books, co-edited 9 books, and published over 300 papers in major international journals and conference proceedings. He is a senior member of China Computer Federation, a senior member of IEEE, and a member of ACM. He was the Coordinator in Asia and now the Chair of the Technical Committee on Distributed Computing of IEEE Computer Society. Dr. Cao has served as an associate editor and a member of the editorial boards of many international journals, including IEEE Transactions on Parallel and Distributed Systems, IEEE Networks,

Pervasive and Mobile Computing Journal, Wireless Communications and Mobile Computing, Peer-to-Peer Networking and Applications, and Journal of Computer Science and Technology. He has also served as a chair and member of organizing / program committees for many international conferences, including PERCOM, INFOCOM, ICDCS, IPDPS, ICPP, RTSS, DSN, ICNP, SRDS, MASS, PRDC, ICC, GLOBECOM, and WCNC.

Dr. Cao received the BSc degree in computer science from Nanjing University, Nanjing, China, and the MSc and the Ph.D degrees in computer science from Washington State University, Pullman, WA, USA.

Keynote Speech

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Keynote Speech 3: 9:30 – 10:30, Nov. 3, 2013.

Ensemble Approaches in Learning

Dr. Xin Yao (IEEE Fellow),
Professor of the University of Birmingham, UK



Abstract:

Designing a monolithic system for a large and complex learning task is hard. Divide-and-conquer is a common strategy in tackling such large and complex problems. Ensembles can be regarded an automatic approach towards automatic divide-and-conquer. Many ensemble methods, including boosting, bagging, negative correlation, etc., have been used in machine learning and data mining for many years. This talk will describe three areas of ensemble methods in multi-objective learning, online learning with concept drift, and multi-class imbalance learning. Given the important role of diversity in ensemble methods, some discussions and analysis will be given to gain a better understanding of how and when diversity may help ensemble learning.

Some materials use in the talk were based on the following papers:

A Chandra and X. Yao, "Ensemble learning using multi-objective evolutionary algorithms," *Journal of Mathematical Modelling and Algorithms*, 5(4):417-445, December 2006.

L. L. Minku and X. Yao, "DDD: A New Ensemble Approach For Dealing With Concept Drift," *IEEE Transactions on Knowledge and Data Engineering*, 24(4):619-633, April 2012.

S. Wang and X. Yao, "Multi-Class Imbalance Problems: Analysis and Potential Solutions," *IEEE Transactions on Systems, Man and Cybernetics, Part B*, 42(4):1119-1130, August 2012

Short biography:

Xin Yao is a Chair (Professor) of Computer Science and the Director of CERCIA (Centre of Excellence for Research in Computational Intelligence and Applications) at the University of Birmingham, UK. He is an IEEE Fellow and a Distinguished Lecturer of IEEE Computational Intelligence Society

(CIS). His work won the 2001 IEEE Donald G. Fink Prize Paper Award, 2010 IEEE Transactions on Evolutionary Computation Outstanding Paper Award, 2010 BT Gordon Radley Award for Best Author of Innovation (Finalist), 2011 IEEE Transactions on Neural Networks Outstanding Paper Award, and many other best paper awards at conferences. He won the prestigious Royal Society Wolfson Research Merit Award in 2012 and was selected to receive the 2013 IEEE CIS Evolutionary Computation Pioneer Award. He was the Editor-in-Chief (2003-08) of IEEE Transactions on Evolutionary Computation and is an Associate Editor or Editorial Member of more than ten other journals. He has been invited to give 65 keynote/plenary speeches at international conferences. His major research interests include evolutionary computation and ensemble learning.

Keynote Speech

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Keynote Speech 4: 17:10 – 18:10, Nov. 3, 2013.

Awareness Computing, Combinatorial Fusion, and Cognitive Diversity

Dr. Frank Hsu

Clavius Distinguished Professor of Science,
Professor of Computer and Information Science,
Fordham University, U.S.



Abstract:

Awareness computing has been studied extensively in a variety of awareness contexts such as situation, location, preference, behavior, risk, security and cognition. Computational awareness is a process to understand the mechanisms of awareness in order to realize an awareness computing system. Awareness computing entails acquisition of relevant data content (e.g.: a receptor); extraction, selection, and combination of context features (e.g.: a reactor); and making proper decisions for and characterize possible relations to users (e.g.: a relator).

Combinatorial fusion analysis (CFA), a recently developed algorithmic information fusion paradigm, entails the combination of multiple scoring systems using a rank-score characteristic (RSC) function and the concept of a cognitive diversity (CD). In this talk, we will review recent results in CFA and show how to use the RSC function and cognitive diversity to combine features or fuse decisions. This approach has great potential to provide a unified theory in realizing various intelligent awareness computing systems and to provide a foundation in building the global-scale awareness server (GSAS) system.

Examples are drawn from science, technology, business and society including search engines, virtual screening, target tracking, image recognition, cognitive informatics, affective computing, corporate revenue prediction, and joint decision making.

Short biography:

Frank Hsu is the Clavius Distinguished Professor of Science, a professor of Computer and Information Science, and director of the Laboratory of Informatics and Data Mining (LIDM) at Fordham University in New York City. He was chair of the Dept. of Computer and Information Science, associate dean of the Graduate School of Arts and Sciences at Fordham University, and chair of the Section of Computer and Information Science at the New York Academy of Science. He received an M.S. degree from the University of Texas and a Ph.D. from the University of Michigan. He has been visiting scholar/professor at M.I.T., Taiwan University, Tsing-Hua University (Hsin-Chu, Taiwan), Keio University (IBM Chair Professor), JAIST (Komatsu Chair Professor), and the University of Paris-Sud (and CNRS).

Dr. Hsu's research interest includes combinatorics, interconnection networks, informatics and computing. He and his colleagues have proposed and developed an algorithmic information fusion paradigm called combinatorial fusion algorithm (CFA). CFA has been used in a variety of domain applications including business intelligence and financial informatics, neuroinformatics and cognitive science, information retrieval, bioinformatics, health informatics, on-line learning, target tracking, and image recognition.

Dr. Hsu is a senior member of IEEE and a Foundation Fellow of the Institute of Combinatorics and Applications. He is a Fellow of the New York Academy of Science (NYAS), the International Institute of Cognitive Informatics and Cognitive Computing (ICIC), and the International Society of Intelligent Biological Medicine (ISIBM). He is the recipient of an IBM Faculty Award in 2012. He has served as Founding Editor and Editor-in-Chief for the Journal of Interconnection Networks and was on the editorial board of IEEE Transactions on Computers, Pattern Recognition Letters, Networks, and International Journal of Foundation of Computer Science. He is on the Editorial Board of the monograph Health Information Science published by Springer and Journal of Advanced Mathematics and Applications by American Scientific Publishers.

Keynote Speech

-- *Can we realize awareness via ubi-media?*

Keynote Speech 5: 9:30 – 10:30, Nov. 4, 2013.

State-of-the-Art Evolutionary Algorithms for Many Objective Optimization and Its Applications

Dr. Gary G. Yen (Fellow of IEEE, Fellow of IET)

Professor of Oklahoma State University, United States of America



Abstract:

Evolutionary computation is the study of biologically motivated computational paradigms which exert novel ideas and inspiration from natural evolution and adaptation. The applications of population-based heuristics in solving multiobjective optimization problems have been receiving a growing attention. To search for a family of Pareto optimal solutions based on nature-inspiring problem solving paradigms, Evolutionary Multiobjective Optimization Algorithms have been successfully exploited to solve optimization problems in which the fitness measures and even constraints are uncertain and changed over time.

When encounter optimization problems with many objectives, nearly all designs performs poorly because of loss of selection pressure in fitness evaluation solely based upon Pareto optimality principle. This talk will survey recently published literature along this line of research- evolutionary algorithm for many-objective optimization and its real-world applications. The list includes, but not limited to, multiobjective evolutionary algorithm based on decomposition (MOEA/D), ϵ -dominance based multiobjective evolutionary algorithm (ϵ -MOEA), preference order based genetic algorithm (POGA), territory defining evolutionary algorithm (TDEA), hypervolume estimation algorithm (HypE), grid-based evolutionary algorithm (GrEA), and fuzzy-based Pareto optimality evolutionary algorithm. At the end of my presentation, I will touch upon some successfully applications been devoted into the subject of the conference.

Short biography:

Gary G. Yen received the Ph.D. degree in electrical and computer engineering from the University of Notre Dame in 1992. He is currently a Professor in the School of Electrical and Computer Engineering, Oklahoma State University. His research interest includes intelligent control, computational intelligence, evolutionary multiobjective optimization, conditional health monitoring, signal processing and their industrial/defense applications.

Gary was an associate editor of the IEEE Transactions on Neural Networks and IEEE Control Systems Magazine during 1994-1999, and of the IEEE Transactions on Control Systems Technology, IEEE Transactions on Systems, Man and Cybernetics and IFAC Journal on Automatica and Mechatronics during 2000-2010. He is currently serving as an associate editor for the IEEE Transactions on Evolutionary Computation. Gary served as Vice President for the Technical Activities, IEEE Computational Intelligence Society in 2004-2005 and is the founding editor-in-chief of the IEEE Computational Intelligence Magazine, 2006-2009. He was the President of the IEEE Computational Intelligence Society in 2010-2011 and is elected as a Distinguished Lecturer for the term 2012-2014. He received Regents Distinguished Research Award from OSU in 2009, 2011 Andrew P Sage Best Transactions Paper award from IEEE Systems, Man and Cybernetics Society, and 2013 Meritorious Service award from IEEE Computational Intelligence Society. He is a Fellow of IEEE- class of 2009.

Keynote Speech

-- Can we realize awareness via ubi-media?

Keynote Speech 6: 10:40 – 11:40, Nov. 4, 2013

Text Mining: Is it old fashion or evolution? Experience with development

Dr. Keun Ho Ryu

Professor of Chungbuk National University, Korea

Vice president of Personalized Medicine Tumor Engineering Research Center



Abstract:

In this talk, we will discuss an experience of the text mining and development of application. First we will review text mining, data mining, and bio-text mining. Then, the user requirement from Korean NIH will be described: bio-entity identification, annotation event detection, evidential qualifier association, and databases record completion. Depending on the user request, we have developed the bio-text mining system. We describe the experience with comprehensive examples as step by step.

Short biography:

Keun Ho Ryu received the BS degree from Soongsil University in 1976 and the Ms and the Ph.D degree from Yonsei University, Korea, in 1980 and 1988 respectively. He is a professor at Chungbuk National University in Korea and a leader of group of database and bioinformatics laboratory as well as a vice president of Personalized Medicine Tumor Engineering Research Center. He served Korean Army as ROTC. He worked not only at University of Arizona as Post-doc and research scientist but also at ETRI (Electronics & Telecommunications Research Institute), Korea. He has served on numerous international journals, ⁷ reviewer and program committees including the IEEE International Conference on Advanced Information Networking and Applications (AINA) and the Very Large Data Base (VLDB), and so on. His research interests are included in temporal databases, spatiotemporal databases, stream data processing, knowledgebase information, security, data

mining, and bioinformatics and biomedical informatics. He is a member of the IEEE and member of the ACM since 1983.

Please refer the website <http://dblab.chungbuk.ac.kr> for more detail projects, publications, laboratory members, and so on.

- 1) See “DBLP: Keun Ho Ryu” from search on the GOOGLE site;
- 2) See “Keun Ho Ryu” from Search on ACM PORTAL;
- 3) See “Keun Ho Ryu” from Search on PubMed home

iCAST 2013 Technical Program

-- Can we realize awareness via ubi-media?

iCast Main Track 1 (IM – 1): Nov.2, 13:00-14:40, M2.

Machine Learning & Knowledge Management

Chairs: Prof. Yong Liu (University of Aizu)

1. *Improved Stability Criteria of ADP Control for Efficient Context-Aware Decision Support Systems*
Yury Sokolov, Robert Kozma
2. *Proactive Model to Predict and Notify the Risk of CRD Problem in Broiler Farms*
Suthathip Maneewongvatana, Songrit Maneewongvatana
3. *A Framework of Autonomous Knowledge Transfer for Robot Navigation Task*
Weiwei Yu, Shen Wang, Kurosh Madani, Huashan Feng
4. *Make Decision Boundary Smoother by Transition Learning*
Yong Liu, Qiangfu Zhao, Neil Y. Yen

iCAST Main Track 2 (IM-2): Nov.2, 14:50-16:30, M2.

Awareness of Pattern and Image (I)

Chairs: Prof. Yuichi Yaguchi (University of Aizu)

1. *Image Segmentation by Probability Density Awareness with Genetic Algorithm*
Chih-Yu Hsu, Hui-Ching Wang, Wan-Ting Hung
2. *Bayesian Network for Algorithm Selection: Real-World Hierarchy for Nodes Reduction*
Martin Lukac, Michitaka Kameyama
3. *Analysis of EEG Signal to Investigate the Influence of Intoxication in Perception Delay*
Daigo Kikuchi, Goutam Chakraborty, Jun Sawamoto, Hikaru Yokoha
4. *Construction of Intelligent Intrusion Detection System Based on KINECT*
Wei Zhang, Goutam Chakraborty

iCAST Main Track 3 (IM-3): Nov.3, 10:50-12:30, M2.

Awareness of Pattern and Image (II)

Chairs: Prof. G. Chakraborty (Iwate P. University)

1. *Real-time Mobility Aware Shoe - Analyzing Dynamics of Pressure Variation at Important Foot Points*
Tetsuhiro Dednou, Goutam Chakraborty

2. *Recognition of Character Drawn on Screen With Laser Pointer*
Jungpil Shin, Shingo Watanabe
3. *An Efficient Implementation of Normalized Cross-Correlation Image Matching based on Pyramid*
Yasser Fouda, Khaled Ragab
4. *Multimodal Soft Biometric Verification by Hand Shape and Handwriting Motion in the Air*
Akiji Takeuchi, Yusuke Manabe, Kenji Sugawara

iCAST Main Track 4 (IM-4): Nov.3, 13:30-15:10, M2.

Semantics & Knowledge

Chairs: Prof. V. Klyuev (University of Aizu)

1. *A Knowledge-based Autonomous Service Management System in Emergency Situations*
Johan Sveholm, Khamisi Kalegele, Yusuke Tanimura, Kazuto Sasai, Gen Kitagata, Tetsuo Kinoshita
2. *Customizable Active Situation Awareness Framework Based on Meta-Process in Ontology*
Ryohei Komiya, Incheon Paik, Keunho Ryu
3. *Next Stop Recommender*
Ben Ripley, Dirksen Liu, Maiga Chang, Dr. Kinshuk
4. *Awareness Computing to Classify Thyroid Hormone Disturbances Using Electrocardiogram*
Anthony Kaveh, Wayne Chung

iCAST Main Track 5 (IM-5): Nov.3, 15:20-17:00, M2.

Location & Position Awareness & Fundamentals

Chairs: Prof. Cheng-Hsiung Hsieh (Chaoyang University)

1. *Pathway Prediction Using Similar Users and the N-gram Model*
Kanta Kawase, Ruck Thawonmas
2. *A Modified Particle Swarm Optimization Algorithm For Distributed Search and Collective Cleanup*
Jun Li, Zhutian Chen, Yu Liu, Yi Cai, Huaqing Min, Qing Li
3. *Robot-Based Deployment Mechanism for Wireless Sensor Networks in Unknown Region*
Ying-Hong Wang, Chih-Hsiao Tsai, You-Hua Wu
4. *Neurophysiological Evidence of the Cognitive Cycle and the Emergence of Awareness*
Joshua Davis, Robert Kozma, Walter Freeman

iCAST Main Track 6 (IM-6): Nov.4, 13:00-14:40, M2.

Trust and Ubiquitous Computing

Chairs: Incheon Paik (University of Aizu)

1. *Steganography Based on Image Morphing*
Qiangfu Zhao, Tosiya L. Kunii

2. *The Psychological Aspects and Implementation of Adaptive Games for Mobile Application*
Widodo Budiharto, Ro'fah Nur Rachmawati, Michael Yoseph Ricky, Pingkan Chyntia B. Rumondor
3. *Design of Large Scale Structural Health Monitoring System for Long-Span Bridges Based on Wireless Sensor Network*
Eko Setijadi, Suwadi, Slamet BP, Muntaquo A.A., In'am, Evy Nur A. Priyo Suprobo, Fainum, Arie Febry F.

iCAST Main Track 7 (IM-7): Nov.4, 14:50-16:30, M2.

Sound and Signals in Awareness

Chairs: Prof. Shuxue Ding (University of Aizu)

1. *A New 5-Loudspeaker 3D Sound System with a Reverberation Reconstruction Method*
Keita Tanno, Akira Saji, Jie Huang
2. *Improve vertical sweet-spot of 3-D sound system by loudspeaker arrays*
Akira Saji, Keita Tanno, Jie Huang
3. *A Comparative Study of Gesture Recognition between RGB and HSV Colors Using Time-Space Continuous Dynamic Programming*
Keigo Amma, Yuichi Yaguchi, Yuki Niitsuma, Takashi Matsuzaki, Ryuichi Oka
4. *An Efficient Pressure-Aware Character Input Algorithm for Mobile Phones*
Masafumi Matsuhara, Miki Itoh, Goutam Chakraborty, Hiroshi Mabuchi,

iCAST Main Track 8 (IM-8): Nov.2, 13:00-14:40, M3.

Signal Processing for Awareness

Chairs: Prof. K. Markov (University of Aizu)

1. *Heterogeneous Information Saliency Features' Fusion Approach for Machine's Environment Sounds Based Awareness*
Jingyu Wang, Ke Zhang, Kurosh Madani, Christophe Sabourin
2. *Factored Language Modeling for Russian LVCSR*
Daria Vazhenina, Konstantin Markov,
3. *A Residue to Binary Converter for a Balanced Moduli set $\{2^{2n+1}-1, 2^{2n}, 2^{2n}-1\}$*
Edem Bankas, Alagbe Gbolagade

iCAST Main Track 9 (IM-9): Nov.2, 14:50-16:30, M3.

Data Mining in Awareness (I)

Chairs: Banage T.G.S. Kumara (University of Aizu)

1. *Calculating Word Similarity for Context Aware Web Service Clustering*
Hiroki Ohashi, Incheon Paik, Banage T. G. S. Kumara
2. *Web Service Filtering and Visualization with Context Aware Similarity to Bootstrap Clustering*
Banage T. G. S. Kumara, Incheon Paik, Hiroki Ohashi, Yuichi Yaguchi

3. *System Monitoring Models as Active Information Resources*
Khamisi Kalegele, Hideyuki Takahashi, Kazuto Sasai, Gen Kitagata, Tetsuo Kinoshita
4. *Spelling Out Opinions: Difficult Cases of Sentiment Analysis*
Ivan Khozyainov, Evgeny Pyshkin, Vitaly Klyuev

iCAST Main Track 10 (IM-10): Nov.3, 10:20-12:00, M3.

Data Mining in Awareness (II)

Chairs: Prof. Keunho Ryu (Chungbuk University)

1. *Awareness of manipulation in on-line review*
Ching-Yun Hsueh, Long-Sheng Chen, Qiangfu ZHAO
2. *Associated Keyword Analysis for Temporal Data with Spatial Visualization*
Shunsuke Wada, Yuichi Yaguchi, Ryo Ogata, Yutaka Watanobe, Keitaro Naruse, Ryuichi Oka
3. *A Novel Clustering Method for Animal Trajectory Analysis using Wireless Sensor Network*
Hiep Vu
4. *A Hybrid Recommender System based Non-common Items in Social Media*
Chi-Chih Yu, Toru Yamaguchi, Yasufumi Takama

iCAST Main Track 11 (IM-11): Nov.3, 13:00-14:40, M3.

Business and Healthcare Application

Chairs: Wuhui Chen (University of Aizu)

1. *Big Data Approach in an ICT Agriculture Project*
Dennis Ludena, Alireza Ahrary.
2. *Supporting System to Grasp misunderstandings by Quiz in Large Class — Support for observation by walking*
Haruhiko Takase, Hiroharu Kawanaka, Shinji Tsuruoka
3. *Constructing Web-Scale Functional Map on Global Social Service Network for Workflow-as-a-Service*
Tetsuya Tashiro, Wuhui Chen, Incheon Paik
4. *Artificial Neural Network Integrated Heart Rate Variability with Detection System*
Chen-Shen Huang, Kong-Sheng Huang, Gwo-Jia Jong, Yu-Ting Lin

iCAST Main Track 12 (IM-12): Nov.3, 14:50-16:30, M3.

Healthcare and Cloud Application

Chairs: Prof. Shusaku Tsumoto (Shimane University)

1. *Computer Aided Silicon Padding Design For Burn Injury*
Mohamed Salleh, Memis Acar, Neils Burns
2. *Data Mining based Clinical Care Plan Construction*
Shusaku Tsumoto, Haruko Iwata, Shoji Hirano
3. *Hybrid Cloud Load Prediction Model for LMS Applications Based on Class Activity Patterns*
Songrit Maneewongvatana, Suthathip Maneewongvatana

4. *Autonomous feedback with Brain Entrainment*
Shu-Hui Tsai, Yue-Der Lin

Special Session Track (SS-1): Nov.2, 13:00-14:40, M4.

Awareness in Humans and Robots (I)

Chairs: Mitsuyuki Nakao (Tohoku University)

1. *Is Autonomy Working under Unconscious State of Sleep?*
Mitsuyuki Nakao, Akihiro Karashima, Norihiro Katayama
2. *Contribution of Visual Feedback to the Hippocampal Theta Activity in Mice*
Norihiro Katayama, Keita Hidaka, Akihiro Karashima, Mitsuyuki Nakao
3. *Brain-Computer Interface Based on Explicit and Implicit Mental Process*
Shin'ichiro Kanoh

Special Session Track (SS-2): Nov.2, 14:50-16:30, M4.

Awareness in Humans and Robots (II)

Chairs: Yasuji Sawada (Tohoku Institute of Technology)

1. *Complementarity between the Feedforward and Feedback Mechanisms is Necessary for Anticipatory Activity in Hand Tracking*
Fumihiko Ishida, Yasuji Sawada
2. *A Study of Anticipatory Non-Autonomous Systems*
Yoshikatsu Hayashi, Matthew C. Spencer, Slawomir J. Nasuto
3. *Regions of Interest in Observing Robot Hand Movement by a Cooperative Robot*
Toyomi Fujita, Claudio M. Privitera
4. *A Model Subjective System with Functions of Decision Making and Action Evaluation*
Yasuji Sawada

Special Session Track (SS-3): Nov.3, 10:50-12:30, M4.

Intuitive Human-System Interaction (I)

Chairs: Masao Yokota (Fukuoka Institute of Technology)

1. *Generating a Variety of Expressions from Visual Information and User-Designated Viewpoints*
Yasuhiro Noguchi, Makoto Kondo, Satoru Kogure, Tatsuhiko Konishi, Yukihiro Itoh, Akira Takagi, Hideki Asoh, Ichiro Kobayashi
2. *A Study of Data Reduction for Intuitive AR Interface*
Hideo Miyachi
3. *Measurement of Density and Granularity of Archeological Artifacts using Industrial Computed Tomography*
Akio Doi, Toru Kato, Hiroki Takahashi
4. *A Medical Imaging Diagnosis Supporting Method with Sound Effects*
Tsuneo Kagawa, Hiroaki Nishino, Shuichu Tanoue, Hiro Kiyosue, Hiromu Mori

Special Session Track (SS-4): Nov.3, 13:30-15:10, M4.

Intuitive Human-System Interaction (II)

Chairs: Kenji Araki (Hokkaido University)

1. *Modeling and Reshaping Handwritten Characters based on Dynamic Font Model*
Hirotsugu Matsukida, Hiroyuki Fujioka
2. *Customer Classification Method for Multiple Pedestrians Using Pressure Sensors*
Junjiro Hasegawa, Takuya Tajima, Takehiko Abe, Haruhiko Kimura
3. *Speed Dependencies of Human Gesture Recognition*
Junpei Endo, Masashi Inoue
4. *A Topological Approach to Natural Languages - Metaphorical Mappings between Space and Time*
Ikumi Imani, Itaru Takarajima

Special Session Track (SS-5): Nov.3, 15:20-17:00, M4.

Intuitive Human-System Interaction (III)

Chairs: Kenji Araki (Hokkaido University)

1. *Intuition as Mental Image Processing*
Masao Yokota
2. *A Facial Recognition Method Based on 3-D Images Analysis for Intuitive Human-System Interaction*
Lu Xu, Weiwei Liu, Kazuhiro Tsujino, Cunwei Lu
3. *A Head Posture Estimation Method based on 3-D Images Measurement for Intuitive Human-system Interaction*
Chen Xul, Ying Kang, Kazuhiro Tsujino, Cunwei Lu
4. *Data Visualization in *AIDA Programming Language*
Kanto Nakayama, Yutaka Watanobe

Special Session Track (SS-6): Nov.4, 13:00-14:40, M4.

Ubiquitous Computing for Intelligent Networks & Computing Social Awareness: Trends and Applications

Chairs: Cheng-Hsiung Hsieh (Chaoyang University of Technology)

1. *Dynamically Re-definable Ontology Based User Intension Awareness*
Yu-Hsiang Lin, Run-Ching Chen, Qiangfu Zhao
2. *Adaptive Polynomial Interpolation for Noise Replacement*
Cheng-Hsiung Hsieh, Sheng-Yung Hung, Po-Chin Huang, Chia-Wei Lan
3. *Design of Refrigerated Cargo Tracking System*
Jen-Yung Lin, Tuan-Anh Do, Bo-Kai Yang, Yung-Fa Huang
4. *Data-aware Environment for Grass-roots Development in Village Communities*
Bulbul Sen, Ranjan Sen

Workshop Track (WS-1): Nov.4, 13:00-14:40, M3.

Mobile Systems, E-Commerce, and Agent Technology (I)

Chairs: Chun-Hong Huang (Lunhwa University of Science and Technology)

1. *A Study of Integrating Social Networking Service into The Virtual Pet Web Game System*
Lin Hui, Wan-Chi Lin, Xiwen Li
2. *Contractibility for Digraphs and the Fixed Clique Property*
Rueiher Tsaur
3. *The Angle Coverage Algorithm of Mobile Object in Wireless Camera Sensor Networks*
Hua-Wen Tsai, Jhen-Jhou Jhong, Meng-Ruei Lin
4. *RTL/FPGA Implementation of Color Correction for Digital Cameras*
Yi-Hong Lu, Chun-Hong Huang
5. *Backpropagation Neural Network Model for Detecting Artificial Emotions with Color*
Min-Feng Lee, Guey-Shya Chen

Workshop Track (WS-2): Nov.4, 14:50-16:30, M3.

Mobile Systems, E-Commerce, and Agent Technology (II)

Chairs: Ming-Ni Wu (National Taichung University of Science and Technology)

1. *Abnormal Action Tracking Using Robot Vision System*
Li-Hong Juang, Ming-Ni Wu
2. *Hiding-type Speech Communication Using Ultrasonic Carrier Technology*
Li-Hong Juang, Ming-Ni Wu
3. *A Genetic Local Search Algorithm for the Resource-Constrained Project Scheduling Problem with Generalized Precedence Constraints*
Shih-Chieh Chen
4. *Mobile Agent based Train Control System for Mitigating Meet Conflict at Turnout*
Anshul Verma, Kiran Kumar Pattanaik

Workshop Track (WS-3): Nov.4, 14:50-16:30, M4.

Mobile Systems, E-Commerce, and Agent Technology (III)

Chairs: Jason C. Hung (Oversea Chinese University)

1. *The Paradigm Framework of Cloud Migration Based on BPR and gBPR*
Hsing-I Wang, Chou-Yin Hsu
2. *A Research of Critical Factors in the the Enterprise Adoption of Cloud Service*
Chou-Yin Hsu, Hsing-I Wang
3. *Exploring the Antecedents of Electronic Word-of-Mouth Communication : Using Involvement Perspective*
Hsiu-Hua Cheng, Jia-Jun Li
4. *Distributed MapReduce Framework using Distributed Hash Table*
Chuan-Feng Chiu, Steen J. Hsu, Sen-Ren Jan

5. *A Study for Task based Recommendation System for Travel Navigation*
Jason C. Hung, Victoria Hsu, Martin M. Weng

Workshop Track (WS-4): Nov.4, 14:50-16:30, M9.

Independent Computing

Chairs: Neil Y. Yen (University of Aizu)

1. *A Low Complexity Detection for the Binary MIMO System Using Lagrange Multipliers*
Wenlong Liu, Nana Sun, Minglu Jin, Shuxue Ding
2. *Sparse Representation and Dictionary Learning Based on Alternating Parallel Coordinate Descent*
Zunyi Tang, Toshiyo Tamura, Shuxue Ding, Zhenni Li
3. *Inducing High Performance Neural Networks Based on An Improved Decision Boundary Making Algorithm*
Yuya Kaneda, Qiangfu Zhao, Yong Liu, Neil Y. Yen
4. *Improvement of Security in Cloud Systems Based on Steganography*
Kazuki Murakami, Ryota Hanyu, Qiangfu Zhao, Yuya Kaneda
5. *One Source Signal Extraction Based on Metrics Transform*
Linlin Chen, Jifei Song, Xiaohong Ma, Shuxue Ding

UMEDIA 2013 Technical Program

-- Can we realize awareness via ubi-media?

UMEDIA Main Track 1 (UM – 1): Nov.2, 13:00-14:40, M8.

Biology & Healthcare

Chairs: Prof. Xin Zhu (University of Aizu)

1. *Precise Tracking and Initial Segmentation of Abdominal Aortic Aneurysm*
Shwu-Huey Yen, Hung-Zhi Wang, Hsiao-Wei Chang
2. *CT Image Reconstruction on PI-lines in Parallel-Beam*
Guiqin Yang, Huanyu Ning, Hui Wu, Zhanjun Jiang
3. *Advancement in Clinician Efficiency Through Awareness Computing*
Joe Jaudon, John Gobron
4. *The Relationship between Structural and Functional Connectivity of Default Mode Network in Generalized Tonic-clonic Seizure: An Analysis of Diffusion Tensor Imaging Combined Neural Mass Model*
Chen Xuhui , Zhang Zhe

UMEDIA Main Track 2 (UM – 2): Nov.2, 14:50-16:30, M8.

Media Design & Development

Chairs: Prof. Qingguo Zhou (Lan Zhou University)

1. *Organic Streams: Data Aggregation and Integration Based on Individual Needs*
Xiaokang Zhou, Qun Jin, Bo Wu, Wei Wang, Julong Pan, Wenbin Zheng
2. *Research on Converting CAD Model to MCNP Model Based on STEP File*
Jiaming Yang, Yanshan Tian, Shuan He, Junqiong Wang, Qingguo Zhou, Xunchao Zhang, Ji Qi, Xuesong Yan, Jason C. Hung
3. *A Heterogeneous CPU-GPU Implementation for Discrete Elements Simulation with Multiple GPUs*
Yuan Tian, Ji Qi, Junjie Lai, Qingguo Zhou, Lei Yang
4. **AIDA Declarations Supporting Program Compactness*
Yutaka Watanobe, Nikolay N. Mirenkov

UMEDIA Main Track 3 (UM – 3): Nov.3, 10:50-12:30, M8.

Sensing & Mining

Chairs: Prof. Qun Jin (Waseda University)

1. *An Innovative Application by Incorporating RFID Technology with Current Available Glucometer*
Hui-Yuan Liu, Tsung-Yi Tsai, Tai-Kuei Ren
2. *An Improved Algorithm on Micro-blog Community Detection*
Zhicheng Ma, Xin Shu, Guanghui Yan
3. *Recipe Popularity Prediction based on the Analysis of Social Reviews*
Xudong Mao, Yanghui Rao, Qing Li,
4. *Dynamically Identifying Roles in Social Media by Mapping Real World*
Bo Wu, Qun Jin, Xiaokang Zhou, Wei Wang, Fuhua Lin, Henry Leung

UMEDIA Main Track 4 (UM – 4): Nov.3, 13:30-15:10, M8.

Smart Home & Ubi-Media

Chairs: Prof. Zixue Cheng (University of Aizu)

1. *Adaptive Home Surveillance System using HTTP Streaming*
Duc V. Nguyen, Hung T. Le, Anh T. Pham, Truong Cong Thang, Jin Young Lee, Kugjin Yun
2. *Visually-aided Smart Kitchen Environment for Senior Citizens Suffering from Dementia*
Yahui Li, Muhammad Zeeshan Asghar, Petri Pulli,
3. *Robust Pedestrian Detection and Tracking with Shadow Removal in Indoor Environments*
Yunbiao Chen, Hui Yang, Chenxiang Li, Shuxiang Pu, Jianyang Zhou, Lingxiang Zheng
4. *Programmable Wireless Sensor Node Featuring Low-power FPGA and Microcontroller*
Shoichi Yamaguchi, Toshiaki Miyazaki, Junji Kitamichi, Song Guo, Tsuneo Tsukahara, Takafumi Hayashi

UMEDIA Main Track 5 (UM – 5): Nov.3, 15:20-17:00, M8.

Ubi-Media & Artificial Intelligent

Chairs: Prof. Alexander Vazhenin (University of Aizu)

1. *Task Management Strategies for Automatic Task Generation and Verification*
Kazuma Abe, Ruth Cortez, Alexander Vazhenin
2. *A Bayesian Approach to Skin Detection in YCbCr Color Space*
Zhongdong Wu, Saichao Wang, Zichao Han
3. *Adaptive Template Adjustment for Personalized Gesture Recognition Based on a Finger-worn Device*
Yinghui Zhou, Daisuke Saito, Lei Jing

UMEDIA Main Track 6 (UM – 6): Nov.4, 13:00-14:40, M8.

Ubi-Media & Image Processing

Chairs: Dr. Joseph Tsai (University of Aizu)

1. *Reversible Data Hiding on Dual Steganographic Images Exploiting Matrix and Histogram Modification*
Chin-Feng Lee, Yung-Fa Huang, Jui-Yu Chen
2. *Affective Color Transfer Based on Skin Color Preservation*
Hui-Wen Wan, Timothy K. Shih, Shwu-Huey Yen, Chun-Hong Huang
3. *Video Seam Carving with Perspective Line Structure Preservation*
Wan-Duo Ma, Timothy K. Shih, Hon-Hang Chang, Wee-Kheng Leow
4. *Detection of Seam Carving in JPEG Images*
Wen-Lung Chang, Timothy K. Shih, Hui-Huang Hsu

UMEDIA Main Track 7 (UM – 7): Nov.4, 14:50-16:30, M8.

Ubi-Media & Navigation

Chairs: Prof. Aiguo He (University of Aizu)

1. *A Dorsal Pathway Guided Visual Attention Model*
Lingxiang Zheng, Zianchao Zheng, Zhanjian Lin, Weiwei Tang, Changle Zhou
2. *A Basic Study of Human Face Direction Estimation Using Depth Sensor*
Ryota Nagayama, Takenobu Kazuma, Takuya Endo, Aiguo He
3. *“Canderoid”: A Mobile System to Remotely Monitor Travelling Status of the Elderly with Dementia*
Bin Xiao, Muhammad Zeeshan Asghar, Tapani Jämsä, Petri Pulli

UMEDIA Main Track 8 (UM – 8): Nov.2, 13:00-14:40, M9.

Ubi-Media Infrastructure & Middleware (I)

Chairs: Prof. Hui-Huang Hsu (Tamkang University)

1. *A New Transport Protocol for Cloud Servers*
Ching-Hsiang Chu, Jyh-Ming Chen, Eric Hsiao-Kuang Wu
2. *GPU Application on Deep Packet Inspection*
Richard Chun-Hung Lin, Yu-Hsiu Huang, Ying-Chih Lin, Cheng-Yi Lin
3. *Modeling Real-Time System Performance with Respect to Scheduling Analysis*
Fenglin Han, Peter Herrmann
4. *Smart Mobile Web Browsing*
Abdurhman Albasir, Sagar Naik, Tarek Abdunabi

UMEDIA Main Track 9 (UM – 9): Nov.2, 14:50-16:30, M9.

Ubi-Media Infrastructure & Middleware (II)

Chairs: Yinghui Zhou (University of Aizu)

1. *A Framework for Detecting Positions of Objects in Water*
Koki Kimura, K.S. Lasith Gunawardena, Masahito Hirakawa,
2. *Analyzing the Influence of Mobile Social Communities on Data Dissemination in Delay-Tolerant Networks*
Chih-Lin Hu, Pin-Chun Chiu
3. *Design and implementation of server cluster dynamic load balancing based on OpenFlow*
Zhihao Shang, Wenbo Chen, Qiang Ma, Bin Wu

UMEDIA Main Track 10 (UM – 10): Nov.3, 10:50-12:30, M9.

Ubi-Media Interface

Chairs: Prof. Timothy Shih (National Central University)

1. *The Communication Model between Humanoid Robot and Mobile Phone*
Huaming Chen, Yong Sheng, Rui Zhou, Qingguo Zhou, Shouqing Sun, Jason C. Hung
2. *Investigating Multi-touch Tabletop Technology: Facilitating Collaboration, Interaction and Awareness*
Rustam Shadiev, Wu-Yuin Hwang, Yu-Shu Yang, Yueh-Min Huang
3. *Spider King: Virtual Musical Instruments based on Microsoft Kinect*
Mu-Hsen Hsu, Kumara W. G. C. W., Timothy K. Shih, Zixue Cheng
4. *Controlling Spatial Sound with Table-top Interface*
Yuya Sasamoto, Michael Cohen, Julian Villegas

UMEDIA Main Track 11 (UM – 11): Nov.3, 13:30-15:10, M9.

Ubi-Media & Networking

Chairs: Dr. Peng Li (University of Aizu)

1. *The Modified Parallelized File Transfer Protocol for Multi-users*
Wei-Chen Lin, Jiun-Jian Liaw, Chiung-Ta Wu
2. *On Game-Theoretic Incentive Scheme for Mobile P2P Live Streaming Systems*
Ming-Hung Chen, Cheng-Fu Chou
3. *Mobility Support in IPv6 Networks with Dynamic DNS Servers*
Takayuki Tomonari, Shigetomo Kimura
4. *User-perceived Availability of M-for-N Shared Spare-server Systems with General Repair-time Distributions*
Hirokazu Ozaki

UMEDIA Main Track 12 (UM – 12): Nov.3, 15:20-17:00, M9.

Ubi-Media & Sensor Network

Chairs: Prof. Song Guo (University of Aizu)

1. *A Research of Multiple Mobile Agents Routing Algorithm Based on Redundancy for Wireless Sensor Network*
Xiao-Chao Dang, Zhanjun Hao
2. *Localization Mechanism with Mobile Reference Node in Grid-based Wireless Sensor Networks*
Chih-Hsiao Tsai, Yu-Jie Lin, Han-Ming Chang, Ying-Hong Wang
3. *ANTS: Pushing the Rapid Event Notification in Wireless Sensor and Actor Networks*
Mianxiong Dong, Kaoru Ota, Suguo Du, Haojin Zhu, Song Guo
4. *Key Management Scheme for Small Dynamic Node Groups in Wireless Sensor Networks*
Wei Sun, Yong Zhang, Fengkun Li, Lixin Ma

UMEDIA Main Track 13 (UM – 13): Nov.4, 13:00-14:40, M9.

Ubi-Media Education

Chairs: Junbo Wang (University of Aizu)

1. *Information Success Model for Learning System in Cloud Computing Environment*
Anna Kang, Jong Hyuk Park, Leonard Barolli, Hwa Young Jeong, Jae Dong Lee
2. *The Design and Display of Simple Interactions in Programming Courses*
Yi-Chun Liao, Han-Min Chien
3. *Research Trends in Mobile Assisted Language Learning from 2008 to 2012 A Content Analysis of Publications in Selected Journals*
Ching-Ju Chao, Yu-Ling Lin, Ya-Fei Yang, Chih-Kai Chang

UMEDIA Special Track: Nov.4, 16:00-17:00, UBIC-3D (Video Conference)

Humans and Computers

Chairs: Michael Cohen (University of Aizu)

1. *Integrating the Collaborative Virtual Environment Protocol with Mathematica*
Anzu Nakada, Michael Cohen, Rasika Ranaweera
2. *Towards a Flexible Architecture for Interaction with Augmented Surfaces*
Paolo Bottoni, Kamen Kanev
3. *Markerless Actor Tracking for Virtual (TV) Studio Applications*
Jeff Daemen, Peter Haufs-Brusberg, Jens Herder

Demo Session Track (Demo): Nov.3, 13:00-16:00, M5.

1. Vistual Musical Band Playing

Timothy K. Shih, National Central University, Taiwan

2. Virtual Musical Instrument Playing,

Akihiro Yaguchi, Lei Jing, Zixue Cheng, University of Aizu, Japan

3. Information Security

Qiangfu Zhao, University of Aizu, Japan

4. Smart server for Agribusiness

Kenzo Ozaki, Smart Communication Co. Ltd., Japan

5. PocketGeiger - Smartphone Connected Radiation Detector

Yang Ishigaki, University of Electro-Communications

6. Finding Relative Object on Information Sphere

Yuichi Yaguchi, University of Aizu, Japan

7. Cap Indicator: an interface for wearable notification device

Naohiro Raiko, Iwate Prefectural University

8. Prototype of virtual chemical experiment system

Yosuke Takahashi, Iwate Prefectural University

9. "Noren" communicator: A communication sending the behavior to check the status of a friend

Naohito Ogasawara, Iwate Prefectural University

10. Twirling Control of Mixed Reality Scenes

Michael Cohen, Kensuke Nishimura, Tomohiro Oyama, Tetsunobu Ohashi, Anzu Nakada,
University of Aizu, Japan

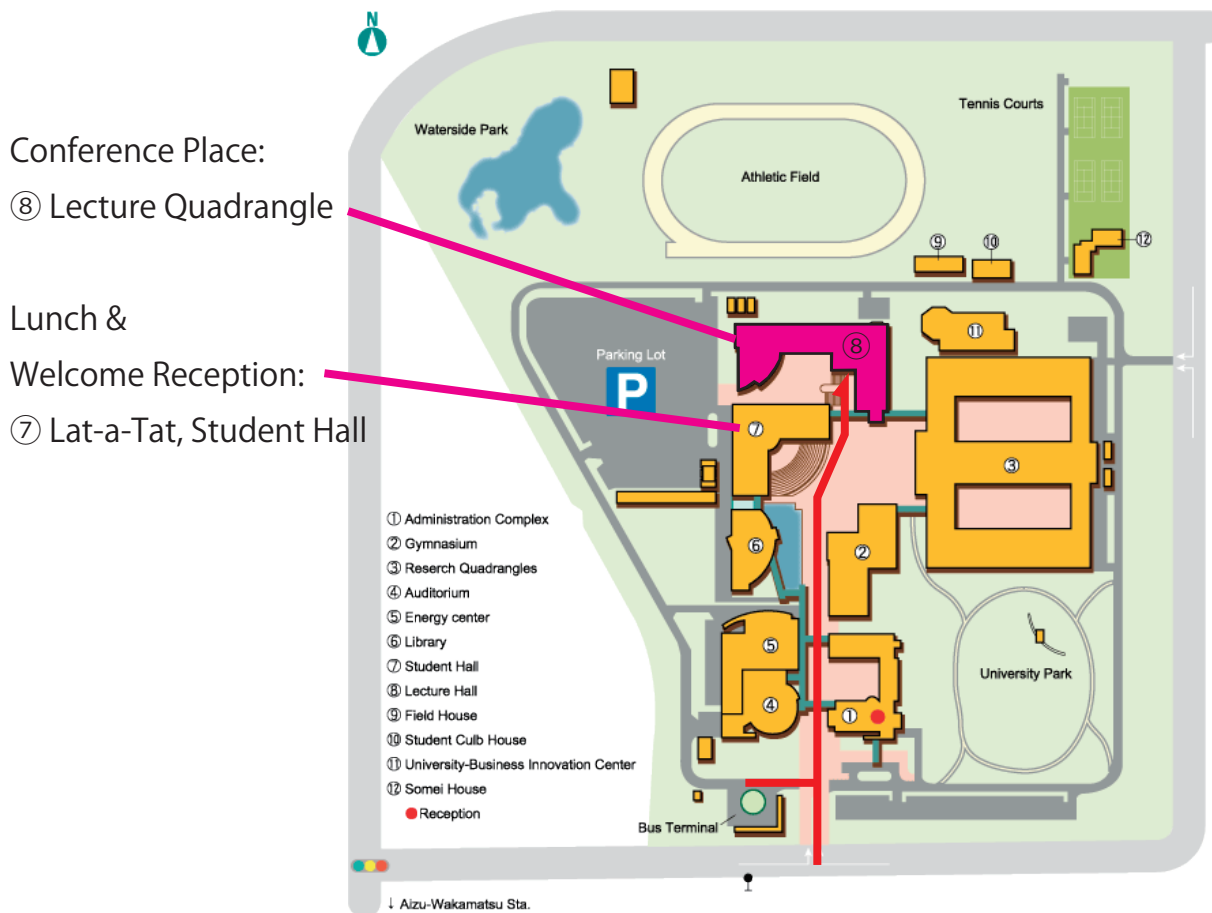
11. Fukushima Wheel

Yongping Chen, Jun Yamadera, Eyes JAPAN, Co. Ltd.

Note

Note

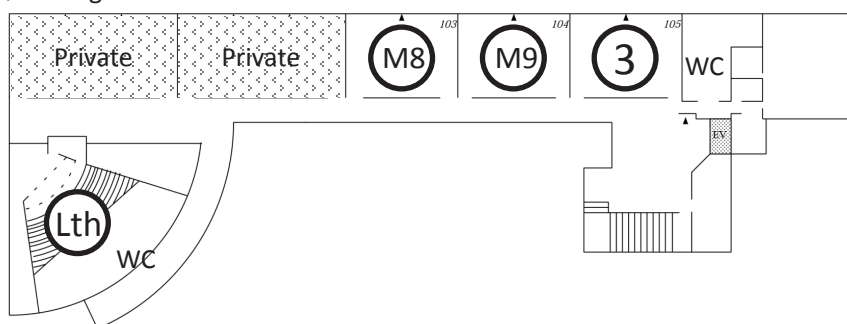
Campus Map



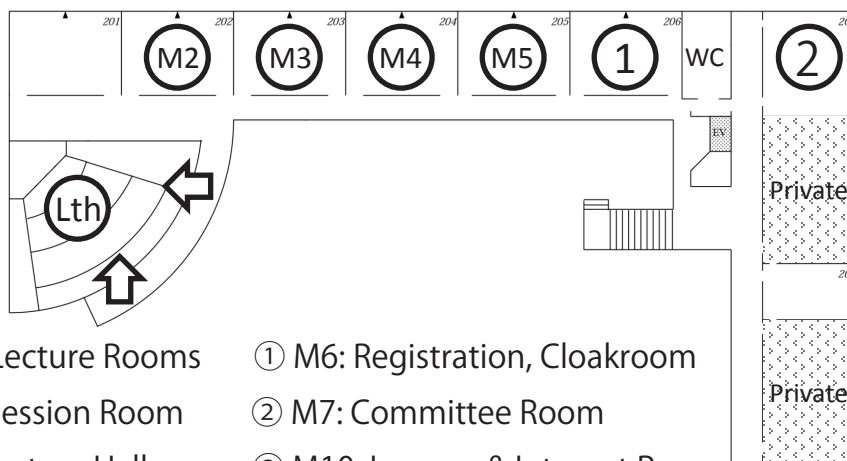
Room Arrangement

Lecture Quadrangle

1st Floor



2nd Floor



M2,3,4,8,9: Lecture Rooms

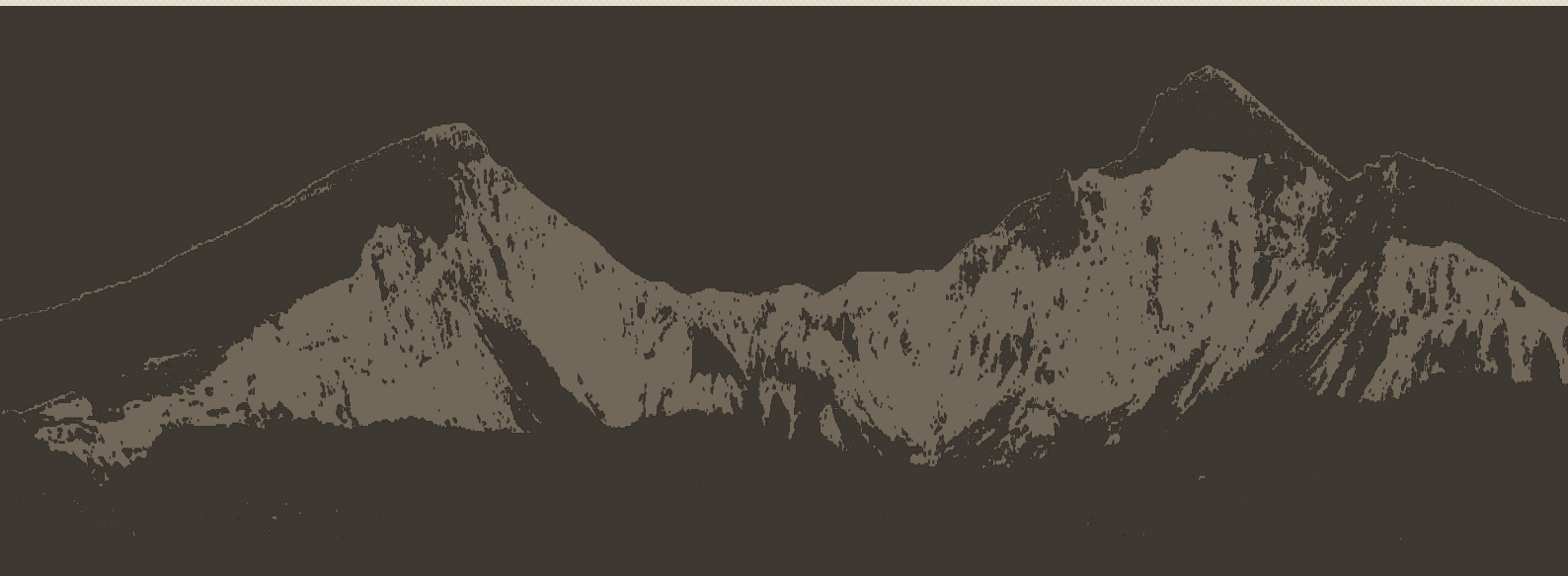
M5: Demo Session Room

Lth: Large Lecture Hall

① M6: Registration, Cloakroom

② M7: Committee Room

③ M10: Lounge & Internet Room



Front cover: Omote Bandai, Back cover: Ura Bandai



Tsuruga Castle, University of Aizu, Ouchi-Juku
Lake Sobara, SL Train in Aizu, Oyakuen



University of Aizu
Tsuruga, Ikkinmachi, Aizuwakamatsu,
Fukushima, 965-8580 Japan.

Front cover: Lake Inawashiro, Back cover: Pond Goshiki

