2010 2nd International Symposium on Aware Computing

(ISAC 2010)

Tainan, Taiwan 1 – 4 November 2010



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Monday, Nov. 1, 2010

RS 1 Time: Place: Chair(s):	REGULAR SESSION 1: Monday, Nov. 1, 2010 1 st Lecture Room Prof. Cheng-Hsiung Hsieh	Pattern recognition for awareness 11:00 - 12:30
11:00		
RS 1-1		hang Chen ¹ , Chih-Ming Lin ¹ , and Qiangfu Zhao ² hnology
11:20		
RS 1-2	Error-Correcting Semi-Sup Weiwei Du ¹ and Kiichi Urah ¹ Kyoto Institute of Technolog ² Kyushu University	
11:40		
RS 1-3	A Study on Rough Null Spa Daichi Kunita, Jie Ji, Yuuta I Aizu University	ace Based Support Vector Machine
12:00		
RS 1-4	images Hsien-Chu Wu and Jia-Hong	-
	National Taichung Institute of	of Technology

Monday, Nov. 1, 2010

RS 2 REGULAR SESSION 2: Context/situation/background aware computing

- *Time:* Monday, Nov. 1, 2010 11:00 12:30
- *Place:* 2nd Lecture Room
- Chair(s): Prof. Bharanitharan Karunanithi
- 11:00

11:20

 RS 2-2
 Medicine Management and Medicine Taking Assistance System for Supporting

 Elderly Care at Home
 31

 Yui Yamamoto, Runhe Huang, and Jianhua Ma
 31

 Hosei University
 31

11:40

12:00

RS 2-4	Topic-Based Awareness Computing Model for Video-Sharing Service
	Mariko Kamie ¹ , Takako Hashimoto ² , and Hiroyuki Kitagawa ¹
	¹ Tsukuba University
	² Chiba University of Commerce

Monday, Nov. 1, 2010

RS 3 Time: Place: Chair(s):	REGULAR SESSION 3:Danger/risk/chance/opportunity aware computingMonday, Nov. 1, 201011:00 - 12:303 rd Lecture RoomProf. Hui-Huang Hsu
11:00 RS 3-1	Two-Party and Three-Party Remote User Authentication Schemes Using Biometric Data Only For Emergency
11:20 RS 3-2	RFID-Based Danger Prevention for Home Safety
11:40 RS 3-3	Support for Awareness of Data Selection in Data Envelopment Analysis
12:00 RS 3-4	An Improvement of Fuzzy Association Rules Mining Algorithm Based on Redundancy of Rules

Monday, Nov. 1, 2010

- RS 4 REGULAR SESSION 4: Soft/agent computing for awareness
- *Time:* Monday, Nov. 1, 2010 14:00 15:30
- *Place:* 1st Lecture Room
- *Chair(s):* Prof. Jungpil Shin

14:00

RS 4-1 A Decision-Tree-Based Denoising Approach for Efficient Removal of Impulse Noise 74 Chien-Chuan Huang¹, Chih-Yuan Lien², and Pei-Yin Chen¹ ¹National Cheng Kung University ²National Kaohsiung University of Applied Sciences

14:20

14:40

RS 4-3 A Concept of Context-Aware Computing Based on Symbol Grounding Perspective 86 Yusuke Manabe, Shigeru Fujita, Susumu Konno, Hideki Hara, and Kenji Sugawara *Chiba Institute of Technology*

15:00

Monday,	Nov.	1,	20	10
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RS 5 Time: Place: Chair(s):	REGULAR SESSION 5: Monday, Nov. 1, 2010 2 nd Lecture Room Prof. Jie Huang	Location/position/goal aware computing 14:00 - 15:30	
14:00			
RS 5-1	÷	eurrent multiple sound sources eita Tanno ¹ , Jun Ma ¹ , Jie Huang ¹ , and Qunfei Zhao ²	97
14:20			
RS 5-2		nsor Node Robots	
	Shigekazu Hukui, Jie Luo, T Aizu University	akuma Daicho, Keigo Suenaga, and Keitaro Naruse	
14:40			

Monday, Nov. 1, 2010

- SS 3 SPECIAL SESSION 3: User behavior/intention aware computing
- *Time:* Monday, Nov. 1, 2010 14:00 15:30
- *Place:* 3rd Lecture Room
- Chair(s): Prof. Hiroshi Tsuji and Mr. Jie Ji
- 14:00
- 14:20

14:40

Tuesday,	Nov.	2.	2010	
Tucsuuy,		~ 1	2010	

RS 6 Time:	REGULAR SESSION 6: Tuesday, Nov. 2, 2010	Artificial intelligence for awareness 10:30 - 12:00
Place:	1 st Lecture Room	10.50 12.00
Chair(s):	Prof. Masao Yokota	
10:30		
RS 6-1	Emotion-Aware Probabili	stic Robotics
	Martin Lukac and Michitaka	a Kameyama
	Tohoku University	
10:50		
RS 6-2	Towards Awareness Com	puting Based on Subjective World Knowledge Grounded in
	Masao Yokota	
	Fukuoka Institute of Techno	logy
11:10		
RS 6-3	A Framework for User Aw	are Route Selection in Pedestrian Navigation System 150
	Basabi Chakraborty ¹ and Ta	kako Hashimoto ²
	¹ Iwate Prefectural Universit	^T y
	² Chiba University of Comm	erce
11:30		

Tuesday,	Nov.	2.	2010
Tuesday,		~ ,	2010

RS 7 Time: Place: Chair(s):	REGULAR SESSION 7: Tuesday, Nov. 2, 2010 2 nd Lecture Room Prof. Hiroshi Tsuji	Power/energy aware computing 10:30 - 12:00
10:30		
RS 7-1	•	Energy Consumption by Information Entropy and Bayesian
		oki ¹ , Hiroshi Tsuji ¹ , and Shuki Inoue ²
	¹ Osaka Prefecture University	v
	² The Kansai Electric Power	Co., Inc.
10:50		
RS 7-2	Programmable Reference f	or Power-Aware DVS 166
	Chun-Hung Yang, Jiunn-Hun National Cheng Kung Univer	ng Shiau, and Chien-Hung Tsai rsity
11:10		
RS 7-3	An Energy Aware MAC Pr	otocol for Wireless Personal Area Networks
	Deze Zeng and Song Guo	
	Aizu University	
11:30		
RS 7-4	Digital Compensator Desig	n for Power-Aware DC-DC Converters
	Chun-Nan Liu, Chun-Hung	
	National Cheng Kung Univer	rsity

Tuesday, Nov. 2, 2010

SS 3	SPECIAL SESSION 3:	User behavior/intention aware computing		
Time:	Tuesday, Nov. 2, 2010	10:30 - 12:00		
Place:	3 rd Lecture Room			
Chair(s):	Prof. Incheon Paik and Mr.	Jie Ji		
10:30				
SS 3-4	The Design and Realization of the Integration of Internet and LAN-based RFID and the			
	Intrusion Detection Sy	stem based on Snort in the RFID System with Ethernet		
	Interface			
	GUO Hao-yan, GUO Chan	g-yong, and Wang Fa-qiang		
	Harbin Institute of Technol	ogy		

10:50

11:10

SS 3-6	Aggregating Web Service Matchmaking Variants Using Web Search Engine and Ma	chine
	Learning	191
	Incheon Paik ¹ , Eigo Fujikawa ¹ , and Sangkyung Kim ²	
	¹ Aizu University	
	² Gangneung-Wonju National University	

11:30

SS 3-7	DDoS Attack Detection Based On Neural Network	196
	Jin Li, Yong Liu, and Lin Gu	
	Aizu University	

Wednesday, Nov. 3, 2010

SS 1 SPECIAL SESSION 1: Awareness computing for ubiquitous health care and bio-medical systems

- *Time:* Wednesday, Nov. 3, 2010 10:30 12:00
- *Place:* 1st Lecture Room
- *Chair(s):* Prof. Chul Gyu Song
- 10:30

10:50

11:10

11:30

Wednesday, Nov. 3, 2010

SS 5	SPECIAL SESSION 5:	Awareness promoting system for education and training	
Time:	Wednesday, Nov. 3, 2010	10:30 - 12:00	
Place:	2 nd Lecture Room		
Chair(s):	Prof. Kiyota Hashimoto		
10:30			
SS 5-1	Prototype of Collaborative Communication Portfolio for Better Awareness through Self-Reviews		
	Yuki Nakagawa, Hiroshi Tsuji, Kazuhisa Seta, and Kiyota Hashimoto		
	Osaka Prefecture University		
10:50			
SS 5-2	The Use of Blended Learn	ing in the Teaching of Piano Playing and Singing in Education	
	Faculties		
	Katsuko T. Nakahira ¹ , Miki A	Akahane ² , and Yukiko Fukami ³	
	¹ Nagaoka University of Tech	nology	
	² Yukiko Fukami Music Laboratory		
	³ Kyoto Women's University		
11:10			
SS 5-3	Spiral Capability Enhance	ment Support System	
	Yu Nakamura and Hiroshi Ta	suji	
	Osaka Prefecture University		
11:30			
SS 5-4	A Study of Virtualized Ser	ver Usage to Support Collaborative Learning	
	Hiroyuki Kojima, Hiroaki Sa	akai, and Naoya Yamasaki	
	Hiroshima Institute of Techn	ology	

SS 2 Time: Place: Chair(s):	SPECIAL SESSION 2: Wednesday, Nov. 3, 2010 3 rd Lecture Room Prof. Rung-Ching Chen	Intelligent service and applications 10:30 - 12:00
10:30		
SS 2-1	A New Protocol for User Awareness in Card Based Shopping	
10:50		
SS 2-2	Video Summary Based on Human Bio-signals -Evaluation of its Applicability to First-Time Viewers 251 Kok-Meng Ong and Wataru Kameyama Waseda University	
11:10		
SS 2-3	A Novel Method for Indoor Rung-Ching Chen and Yu-Cl Chaoyang University of Tech	
11:30		

SS 2-4 Examination of Effect of Free Bus Service in Election Using Computer Simulation 263 Kenta Konishi and Tadahiko Murata *Kansai University*

SS 1 SPECIAL SESSION 1: Awareness computing for ubiquitous health care and bio-medical systems

- *Time:* Wednesday, Nov. 3, 2010 14:00 15:30
- *Place:* 1st Lecture Room
- *Chair(s):* Prof. Xin Zhu

14:00

14:20

14:40

SS 1-7	Examination of Possible Progress of Japanese Pension System Using An A	gent-based	
	Model		
	Zhibin Chen and Tadahiko Murata		
	Kansai University		

15:00

Wednesday, Nov. 3, 2010

SS 5	SPECIAL SESSION 5:	Awareness promoting system for education and training	
Time:	Wednesday, Nov. 3, 2010	14:00 - 15:30	
Place:	2 nd Lecture Room		
Chair(s):	Prof. Hiroyuki Kojima and Prof. Kiyota Hashimoto		
14:00			
SS 5-5	Awareness Promoting Visualization of Style Inconsistencies in Texts		
14:20			
SS 5-6	Design of a multilinguistic Problem Based Learning learning environment in the metaverse		
	Katsuko T. Nakahira ¹ , Rodrigo N. R. ^{1,3} , Ryosuke Taguchi ¹ , Hidekatsu Kanematsu ² , and Yoshimi Fukumural ¹		
	¹ Nagaoka University of Tec	hnology	
	² Suzuka National college og	f Technology	
	³ Simon Bolivar University		
14:40			
SS 5-7	Prototypical Developmen	nt of Awareness Promoting Learning Support System of Basic	
	Presentation		
	Kiyota Hashimoto ¹ and Ka	zuhiro Takeuchi ²	

¹Osaka Prefecture University

²Osaka Electro-Communication University

Wednesday, Nov. 3, 2010

SS 4 Time:	SPECIAL SESSION 4: Wednesday, Nov. 3, 2010	QoS-aware networking technology 14:00 - 15:30	
Place:	3 rd Lecture Room		
Chair(s):	Prof. Ken'ichi Kawanishi		
14:00			
SS 4-1	Hierarchical Combination of Detour-type Local Routing and Autonomous Decentralized Flow Control 312 Hirokazu Kariya and Masaki Aida Tokyo Metropolitan University		
14:20			
SS 4-2	Extended Diffused Key-information Based Routing Protocol in Ad Hoc Networks 318 Tomoaki Mizuide, Tatsuya Tsuchiya, Ahmad Bazzi, and Yoshikuni Onozato <i>Gunma University</i>		
14:40			
SS 4-3		P Selective Retransmission Under the Endpoints Time 326	
	Li Wang and Ken'ichi Kawa		
	Gunma University		
15:00			
SS 4-4	A Method to Prolong the	Lifetime of Sensor Networks by Adding New Sensor Nodes to	
	Energy-consumed Areas		
	Shinji Inoue ¹ , Kyouhei Kuro	okawa ² , Yoshiaki Kakuda ¹ , and Tadashi Dohi ³	
	¹ Hiroshima City University		
	² NTT-Neomeit		
	³ Hiroshima University		