

## **Programme**

### **6th International Conference on Intelligent Environments: IE2010**

#### **Sunday July 18th 2010 (Workshops)**

9.30 - 10.00: Registration

10.00-11.00: Workshop sessions, WS1, WS2, WS3

11.00-11.30: Refreshment break

11.00-13.00: Workshop sessions, WS1, WS2, WS3

13.00-14.00: Lunch

14.00-15.30: Workshop sessions, WS1, WS2, WS3

15:30-16.00: Refreshment break

16.00-18.00: Workshop sessions, WS1, WS2, WS3

#### **WS1: AITAmI'10 / WISHWell'10**

**Room: 9304**

5th International Workshop on Artificial Intelligence Techniques for Ambient Intelligence + 2nd International Workshop on Intelligent Environments Supporting Healthcare and Well-being

#### **WS2: HCIAmI'10**

**Room: 9303**

1st International Workshop on Human-Centric Interfaces for Ambient Intelligence

#### **WS3: SHASPA'10**

**Room: 9302**

SHASPA Intelligent Shared Spaces Linking Immersive Virtual Environments to Physical Spaces

**Note:** Workshop session details are published separately

#### **Monday July 19th 2010**

8.00-9.00: Registration

9.00-9.20: Conference Opening

**Room:** Plenary theatre

9.30-10.30: Keynote "Technology Innovation", Dato' Dr. Kamal Jit Singh, Innovation Advisor to the Malaysian Prime minister and founder of the Global Innovation Research Centre

**Room:** Plenary theatre

10.30-11.00: Refreshment break

11.00-13.00: Session A1: Ambient Intelligence & Agents

**Room:** 2103

11.00-13.00: Session U1: Ubiquitous/Pervasive Computing

**Room:** 2212/2212A

13.00-14.00: Lunch

14.00-14.15: Creative Science opening address, Brian David Johnson

**Room:** 2103

14.15-14.45: Special talk, "SciFi as a Design Tool" Nathan Shedroff

14.45-15.00: Invited Paper, "Sci-fi Prototyping", Brian David Johnson

15.00-16.00: Session SFP1: Science Fiction Prototyping

16.00-16.30: Refreshment break

16.30-17.00: Special talk, "Exploring Science Fiction Prototypes in Persuasive TeleHealth", Sumi Helal

17.00-17.45: Session SFP2: Science Fiction Prototyping

17.45-18.00: Invited Story, "Brain Machines", Brian David Johnson

18.00-18.30: Creative Science round table and closing chaired by Brian David Johnson

## **Tuesday July 20th 2010**

8.30-9.20: Registration

9.20-9.30: Welcome and Introduction to Keynote speaker

**Room:** Plenary theatre

9.30-10.30: Keynote, "Experiences of TRON Intelligent Houses", Prof. Ken Sakamura, Inventor of the iTRON embedded OS, smart-homes designer, and many more things, University of Tokyo

10.30-11.00: Refreshment break

11.00-13.00: Session V1: Virtual & Mixed-Reality

**Room:** 2103

11.00-13.00: Session U2: Ubiquitous/Pervasive Computing  
**Room:** 2212/2212A

13.00-14.00: Lunch

14.00-16.00: Session A2: Ambient Intelligence & Agents  
**Room:** 2103

14.00-16.00: Session E1: Educational Prospectives  
**Room:** 2212/2212A

16.00-16.30: Refreshment break

16.30-18.30: Session H1: Human Computer Interaction  
**Room:** 2103

16.30-18.30: Session E2: Educational Prospectives (including round table discussion)  
**Room:** 2301, Video Conference Suit

20.00-00.00: Conference dinner

### **Wednesday July 21st 2010**

8.30-9.30: Registration

9.30-10.00: Morning refreshments

10.00-12.00: Session A1: Ambient Intelligence & Agents  
**Room:** 2103

10.00-12.00: Session W2: Wireless Systems  
**Room:** 2212/2212A

12.00-13.00: Lunch

13.00-15.00: Session M1: Middleware and Architecture  
**Room:** 2103

13.00-15.00: Session N2: New Horizons  
**Room:** 2212/2212A

15.00-15.30: Refreshment break

15.30-17.30: Session C1: Context Awareness  
**Room:** 2103

15.30-17.30: Session P1: People & Technology

**Room:** 2212/2212A

17.30-17.50: Doctoral sessions

**Room:** 2103

17.50-18.00: Conference close session

18.00-18.30: Drinks, nibbles and networking

20.00-23.30: Social Event, Kuala Lumpur city night tour

**Meeting point:** Lobby of Sunway Resort Hotel

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### **Ambient Intelligence & Agents**

#### **Session A1 – Chair Juan Carlos Augusto**

1. Ball, Matthew “An Adjustable-Autonomy Agent for Intelligent Environments” (77)
2. Aztiria, Asier “Automatic Modeling of Frequent User Behaviours in Intelligent environments” (11)
3. Antoniou, Grigoris “On the Deployment of Contextual Reasoning in Ambient Intelligence Environments” (21)
4. Sgorbissa, Antonio “Affordance-based Planning for Assisting Humans in Daily Activities” (54)
5. Loke, Seng “Building Intelligent Environments By Adding Smart Artifacts to Spaces: a Peer-to-Peer Architecture” (91)

#### **Session A2 – Chair Victor Zamudio**

6. Jakkula, Vikramaditya “Outlier Detection in Smart Environment Structured Power Datasets” (38)
7. Baumgarten, Matthias “Embedding Self-Awareness into Objects of Daily Life” (11)
8. Jung, Ralf “A Framework for Auditory Displays in Intelligent Environments” (25)
9. Liao, Jing “Activity recognition for Smart Homes using Dempster-Shafer theory of Evidence based on a revised lattice structure” (36)
10. HTIKE, ZAW ZAW “Real-time Human Activity Recognition using External and Internal Spatial Features” (28)

#### **Session A3 - Chair Achilles Kameas**

11. Mahmoud, Sawsan “Occupancy Pattern Extraction and Prediction in an Inhabited Intelligent Environment using NARX Networks” (67)

12. Zablotskaya, Kseniya “Non-parametric Regression and Random Balance Method Modification for Determination of the Most Informative Features” (75)
13. Zamudio, Victor “c-INPRES: Coupling Analysis Towards Locking Optimization in Ambient Intelligence” (56)
14. Crandall, Aaron “Using a Hidden Markov Model for Resident Identification” (62)
15. Chen, Chao “A Data Mining Framework for Activity Recognition in Smart Environments” (59)

## **Human-Computer Interaction (Speech, Vision and Haptics)**

### **Session H1 - Chair Gordon Hunter**

16. Bertrand, Gregor “GEEDI - Guards for Emotional and Explanatory Dialogues” (47)
17. Zablotskiy, Sergey “Some Approaches for Russian Speech Recognition” (73) (
18. Herbig, Tobias “Fast Adaptation of Speech and Speaker Characteristics for Enhanced Speech Recognition in Adverse Intelligent Environments” (76)
19. Sonntag, Daniel “Prototyping Semantic Dialogue Systems for Radiologists” (27)
20. Yamabe, Tetsuo “Towards A Mobility Enhanced User Interface Design for Multi-task Environments” (33)
21. Schmitt, Alexander “Inter-Labeler Agreement for Anger Detection in Interactive Voice Response Systems” (61)

## **Context Awareness**

### **Session C1 - Chair Shumie Zhang**

22. Rangel, Pablo “Context reasoning through multiple logic framework” (57)
23. Nava-Muñoz, Sandra “Providing Awareness of Elder’s Situations of Care through a Context-Aware Notification Environment: A Preliminary Evaluation” (60)
24. Schneider, Michael “The ObjectRules Framework - Providing Ad-Hoc Context-Dependant Assistance in Dynamic Environments” (40)
25. PHYO WAI, AUNG AUNG “Situation Aware Patient Monitoring In and Around the Bed using Multimodal Sensing Intelligence” (42)
26. Brgulja, Nermin “Validating Context Information in Context Aware Systems” (45)

## **Ubiquitous/Pervasive Computing**

### **Session U1 - Chair Sumi Helal**

27. Rosi, Alberto “Automatic Analysis of Geotagged Photos for Intelligent Tourist Services” (17)
28. Surie, Dipak “Situative Space Tracking within Smart Environments” (32)

29. Zhang, Shumei “Activity Monitoring Using a Smart Phone’s Accelerometer with Hierarchical Classification” (19)
30. Kroener, Alexander “Demonstrating the Application of Digital Product Memories in a Carbon Footprint Scenario” (20)
31. Inthiran, Anushia “A Reflection of Current Search Engine Techniques on Medical Search Environments” (10)

#### **Session U2 – Chair Michael Schneider**

32. Peña Rios, Anasol “A Web Based Approach for Virtual Appliance Programming and Management” (78)
33. Tuttlies, Verena “A Coordination Framework for Pervasive Applications in Multi-User Environments” (39)
34. Maass, Wolfgang “Supporting Cooking Tasks by a Smart Formulation Table” (24)
35. Vanderhulst, Geert “PerCraft: Towards Live Deployment of Pervasive Applications” (46)
36. Goumopoulos, Christos “Deployment of adaptive workflows in intelligent environments” (70)

#### **Middleware and Architecture**

##### **Session M1 - Chair Michael Weber**

37. Dooley, James “Simpleware Device Surrogates” (58)
38. Ibbotson, John “Sensors as a Service Oriented Architecture: Middleware for Sensor Networks” (23)
39. Munir, Kashif “Secure Framework For Mobile Devices To Access Grid Infrastructure” (69)
40. Ponnusamy, Vasaki “Biologically-Inspired (Botany) Mobile Agent Based Self-Healing Wireless Sensor Network” (85)
41. Cook, Diane “Designing Lightweight Software Architectures for Smart Environments” (92)

#### **Wireless Systems**

##### **Session W1 – Chair Ken Guild**

42. Meliones, Apostolos “Network Adaptation in Intelligent Environments” (16)
43. Reyes, Angelica “A Quality of service -enabled accounting management” (63)
44. Yap, Kian Meng “Investigating Quality of Service issues for Distributed Haptic Virtual Environments in IP Networks” (68)
45. Helal, Sumi “Sensor-aware Adaptive Push-Pull Query Processing in Wireless Sensor Networks” (66)
46. Poland, Michael “Stopping Criterion impact on Pure Random Search Optimisation for Intelligent Device Distribution” (44)

## **People & Technology**

### **Session P1 – Chair Minjuan Wang**

47. Böhmer, Matthias “Users' Opinions on Public Displays that Aim to Increase Social Cohesion” (41)
48. Canlas, Daphne-Tatiana “Created, Produced and Starred in by...Me: Amateur video on the web and its implications for Philippine mainstream television” (80)
49. Kroener, Alexander “Digital Product Memories: Perspective of Users and System Architects” (22)
50. Vermeulen, Jo “PervasiveCrystal: Asking and Answering Why and Why Not Questions about Pervasive Computing Applications” (51)
51. Zejda, David “Deep Design for Ambient Intelligence: Toward Acceptable Appliances for Higher Quality of Life of the Elderly” (14)

## **New Horizons**

### **Session N1 – Chair Michael Gardner**

52. Kovalchuk, Yevgeniya “Self-Organizing System for Online Maintenance of a Living Organism” (9)
53. Pavel, Dana “Looking back in wonder: How self-monitoring technologies can help us better understand ourselves” (55)
54. Linner, Thomas “Compacted and industrially Customized Ambient Intelligent Service Units - Typologies, Examples and Performance” (49)
55. Fitsilis, Panos “From Digital to Ubiquitous Cities: Defining a Common Architecture for Urban Development” (50)
56. Hunter, Gordon “*TalkMaths Better ! Evaluating and Improving an Intelligent Interface for Creating and Editing Mathematical Text*” (7)

## **Virtual & Mixed-Reality**

### **Session V1 Chair Wolfgang Minker**

57. Davies, Marc “iWorlds: Building Mixed Reality Intelligent Environments using Customizable 3D Virtual Worlds” (72)
58. Daflos, Konstantinos “Cipo\_08, cybernetic intelligent parasitic object (53)
59. Gardner, Michael “+Spaces: Intelligent Virtual Spaces for eGovernment” (37)
60. Dooley, James “Decloaking Big Brother: Demonstrating Intelligent Environments” (93)
61. Loke, Kar-Seng “A framework of image segmentation via recognition” (71)

## **Educational Perspectives**

### **Session E1 – Chair Jason NG**

62. Ng, Jason “The Intelligent Campus (iCampus)” (8)

63. Guild, Ken "STUDENT: Scenarios, Technologies and Users within the Digital Essex Network Testbed" (95)
64. Ramadan, Rabie "The Intelligent Classroom: Towards an Educational Ambient Intelligence Testbed (15)
65. Meseguer, Roque "Group Prediction in Collaborative Learning" (43)
66. Petridis, Panagiotis "iSpace- Smart Monitoring of Higher and Further Institutions in UK" (30)
67. Zamudio, Victor "AVANTI: An Intelligent Vehicle Project as a Catalyst for Education and Business Collaboration and Regional Economic Regeneration" (52)

**Session E2 - Chair Jason NG**

68. Wang, Minjuan "Mobile Learning (mLearning) system for formal and informal learning"
69. Gardner, Michael "Use of MiRTLE for mixed-reality teaching and learning"
70. Wortley, David "Immersive technologies, serious games and the future of education"
71. Saffre, Fabrice "Personalized carbon accounting on a green educational campus"
72. Ng, Jason "iCampus – The Way Forward (Round Table)

**Bridging Event (Creative Science 2010)**

**Session B1 – Chair Brian Johnson**

73. Shedroff, Nathan "SciFi as a Design Tool" (invited talk)
74. Johnson, Brian SciFi Prototyping (210) - (Invited Paper)
75. Loke, Kar Seng; Egerton, Simon "Were-Tigers of Belum" (206)
76. Callaghan, Vic "Tales From a Pod" (201)
77. Clarke, Graham ; Lear, Malcolm "We all wear dark glasses now" (202 )
78. Hossein Farid Ghassem Nia "A survey in consciousness in robots and future of reception robots (204)
79. Helal, Sumi " (Invited Talk) "Exploring Science Fiction Prototypes in Persuasive TeleHealth"
80. Kovalchuk, Yevgeniya "Knowing Yourself" (205)
81. Reyes, Angelica; Contreras Ruth, "MDI" (207)
82. Johnson, Brian "Brain Machines" (209 ) (Invited SF prototype)
83. McCullagh, Paul "Voices from the Interface" (203)

**Doctorial Colloquium - – Chair Dolores Royo**

84. Shaukat, Muneeb “Exploring the Use of Mixed-Reality for the Design& Innovation of Future Ubiquitous Devices & Intelligent Environments”.
85. Htike, Zaw Zaw “Viewpoint Invariant Reconstruction of 3D Human Skeleton from Monocular Images”

**Poster Session**

86. Mikulecky, Peter “Formal Models for Ambient Intelligence”
87. Cuppens, Kris “Detection of epileptic seizures using video data”