

| <b>Sunday, July 15, 2007</b> |  |
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| <b>12:30 -5:00 PM</b>        | <b>Registration</b>  |
| <b>1:30 - 6.30 PM</b>        | <p style="text-align: center;"><b>Tutorial: Mobile Phylon, Supported by Nokia Inc.</b></p> <p style="text-align: center;">Yusuf Ozturk<br/>Electrical &amp; Computer Engineering Dept., San Diego State University, USA</p> <p style="text-align: center;"><b>Tutorial: Context-awareness and Reasoning</b></p> <p style="text-align: center;">Arkady Zaslavsky [ <a href="#">part 1</a> ] [ <a href="#">part 2</a> ]<br/>School of Computer Science &amp; Software Engineering,<br/>Faculty of Information Technology, Monash University , Australia</p>  |
| <b>Monday, July 16, 2007</b> |  |
| <b>8:00 AM - 5:00 PM</b>     | <b>Registration</b>  |
| <b>8:30 - 9:00 AM</b>        | <b>Opening remarks</b>   |
| <b>9:00 - 10:00 AM</b>       | <p style="text-align: center;"><b>Keynote #1</b><br/>Chair: Buyurman Baykal</p> <p style="text-align: center;"><b>Speaker: Frederica Darema, NSF</b></p>   |
| <b>10:00 - 10:30 AM</b>      | <b>Coffee Break</b>  |
| <b>10:30 AM - 12:00 PM</b>   | <p style="text-align: center;"><b>Session #1: Middleware</b><br/>Chair: Jean-Marc Pierson</p> <p style="text-align: center;">"Adapted distance-based decision-making support, a mandatory tool to make the grid pervasive" [50]<br/>Julien Gossa<sup>1</sup>, Lionel Brunie<sup>1</sup>, Jean-Marc Pierson<sup>2</sup><br/><sup>1</sup>LIRIS, INSA Lyon, <sup>2</sup>IRIT Paul Sabatier University France</p> <p style="text-align: center;">"SRMS: SIP-based RFID Management System" [52]<br/>Kideok Cho, Sangheon Pack, Taekyoung Kwon, Yanghee Choi<br/>Kideok Cho, Sangheon Pack, Taekyoung Kwon, and Yanghee Choi<br/>Computer Science &amp; Engineering, Seoul National University, Seoul, Korea</p> <p style="text-align: center;">"Visual Components for Pervasive Computing Management" [62]<br/>Ichiro Satoh<br/>National Institute of Informatics, Tokyo. Japan</p> |
| <b>12:00 - 1:30 PM</b>       | <b>Lunch</b>   |

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| <p><b>1:30 - 2:30 PM</b></p> | <p align="center"><b>Session #2: Position/Tracking and Interfaces</b><br/>Chair : Ozgur Ercetin</p> <p>“Direction of Arrival Estimation in Reverberant Rooms Using a Resource-Constrained Wireless Sensor Network” [3]<br/>Murat Arabaci, Robin Strickland<br/>Electrical and Computer Engineering, University of Arizona, USA</p> <p>“Cooperative Positioning Techniques for Mobile Localization in 4G Cellular Networks” [36]<br/>Francescantonio Della Rosa, Carlos Leonel Flores Mayorga, Satya Ardhy Wardana, Gianluca Simone, Marie Claire Naima Raynal, Joao Figueiras, Simone Frattasi<br/>Dept. of Electronic Systems, Aalborg University, Denmark</p>   |
| <p><b>2:30 - 3:00 PM</b></p> | <p align="center"><b>Coffee Break</b></p>   |
| <p><b>3:00 - 4:00 PM</b></p> | <p align="center"><b>Session #3 : Sensor and ad hoc networks</b><br/>Chair : Yusuf Ozturk</p> <p>“Coverage-based Clustering of Wireless Sensor and Actor Networks” [21]<br/>Brian McLaughlan, Kemal Akkaya<br/>Dept. of Computer Science, Southern Illinois University Carbondale, USA</p> <p>“Deploying Multiple Sinks in Multi-hop Wireless Sensor Networks” [48]<br/>Zoltan Vincze, Rolland Vida , Attila Vidacs<br/>Dept. of Telecommunications and Media Informatics<br/>Budapest University of Technology and Economics, Hungary</p>  |
| <p><b>4:00 - 5:45 PM</b></p> | <p align="center"><b>Short Papers Session #1:</b><br/>Chair : Ali Akoglu</p> <p>“Using SLA Context to Ensure Quality of Service for Composite Services” [58]<br/>Dmytro Dyachuk, Ralph Deters<br/><i>Department of Computer Science, University of Saskatchewan, Canada</i></p> <p>“Distributed Data Aggregation with Geographical Routing in Wireless Sensor Networks” [44]<br/>Dorottya Vass, Attila Vidacs<br/>Dept. of Telecommunications and Media Informatics<br/>Budapest University of Technology and Economics, Hungary</p> <p>“Adaptive Constraint-Based Multi-Objective Routing Framework for Ad Hoc Wireless Sensor Networks” [59]<br/>Dhia Mahjoub, Hesham El-Rewini<br/>Computer Science and Engineering Department, Southern Methodist University, USA</p> |

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| <p><b>4:00 - 5:45 PM</b></p>         | <p>“Multifaceted based language for pervasive services with deterministic and fully defined behavior” [34]<br/> Anca Rarau<sup>1</sup>, Kuderma Iulian Benta<sup>1</sup>, Marcel Cremene<sup>2</sup><br/> <sup>1</sup>Computer Science Department,<br/> <sup>2</sup>Faculty of Electronics, Telecommunications and Information Technology,<br/> Technical University of Cluj-Napoca, Romania</p> <p>“Use of Novel Feature Extraction Technique in Subspace Classifiers for Speech Recognition” [14]<br/> Serkan Günal<sup>1</sup> and Rifat Edizkan<sup>1</sup><br/> <sup>1</sup>Department of Computer Engineering, Anadolu University, Turkey<br/> <sup>2</sup>Department of Electrical and Electronics Engineering Eskişehir Osmangazi University, Turkey</p> <p>“Language Independent Dictionary Creation using International Phoneticizing Engine for Speech Recognition” [19]<br/> In-sung Woo, Chwa-cheul Shin, Heung-soon Kang, Suk-dong Kim<br/> <i>Dept. of Computer Science, Hoseo University, Republic of Korea</i></p> <p>“Context Fusion through Imprecise Reasoning” [33]<br/> Odysseas Sekkas, Christos B. Anagnostopoulos, Stathes Hadjiefthymiades<br/> Dept. of Informatics and Telecommunications, University of Athens, Greece</p> |
| <p><b>7:00 PM</b></p>                | <p><b>Welcome reception</b></p>   |
| <p><b>Tuesday, July 17, 2007</b></p> |   |
| <p><b>8:00 AM- 5:00 PM</b></p>       | <p><b>Registration</b></p>  |
| <p><b>8:30 - 9:30 AM</b></p>         | <p><b>Keynote #2</b><br/> Chair: Salim Hariri</p> <p><b>Speaker: Imrich Chlamtac, Create-Net</b></p>  |
| <p><b>9:30 - 10:00 AM</b></p>        | <p><b>Coffee Break</b></p>  |
| <p><b>10:00 - 11:30 AM</b></p>       | <p><b>Industry Session</b><br/> Organizer: Mazin Yousif</p> <p>“ Towards Operating Identity-based NFC Services”<br/> Mikko Laukkanen, Telia Sonera</p> <p>“Resilience and Dependability in Pervasive Systems”<br/> Robert Ghanea-Hercock, Chief Researcher, British Telecom</p> <p>“Pervasive Security Services – to Integrate or Not?”<br/> Alf Zugenmaier and Thomas Walter, DoCoMo Euro-Labs</p>   |

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| <p><b>11:30 - 1:00 PM</b></p> | <p style="text-align: center;"><b>Session #4 : Security</b><br/>Chair: Alptekin Temizel</p> <p style="text-align: center;">“On Securing MANET Routing Protocol Against Control Packet Dropping” [5]<br/>Djamel Djenouri<sup>1</sup>, Othmane Mahmoudi<sup>1</sup>, Mohamed Bouamama<sup>1</sup>,<br/>David Llewellyn-Jone<sup>2</sup>, Madjid Merabti<sup>2</sup></p> <p style="text-align: center;"><sup>1</sup>School of Computing and Mathematical Sciences, CERIST, Algier,<br/>Algeria</p> <p style="text-align: center;"><sup>2</sup>School of Computing and Mathematical Sciences, Liverpool John<br/>Moores University, UK</p> <p style="text-align: center;">“Mitigating Security Risks in Systems that Support Pervasive Services<br/>and Computing: Access-Driven Verification, Validation and Testing”<br/>[17]</p> <p style="text-align: center;">James D. Arthur<sup>1</sup>, Anil Bazaz<sup>2</sup>, Richard E. Nance<sup>3</sup>, Osman Balci<sup>1</sup><br/><sup>1</sup>Department of Computer Science, Virginia Polytechnic Institute and State<br/>University (Virginia Tech) , USA<br/><sup>2</sup>Microsoft Corporation, <sup>3</sup>Orca Computer, Inc.</p> <p style="text-align: center;">“Intrusion Detection with Neural Networks and Watermarking<br/>Techniques for MANET” [20]</p> <p style="text-align: center;">Aikaterini Mitrokotsa, Nikos Komninos, Christos Douligeris</p> <p style="text-align: center;">Aikaterini Mitrokotsa<sup>1</sup>, Nikos Komninos<sup>2</sup> and Christos Douligeris<sup>1</sup><br/><sup>1</sup>Department of Informatics, Univeristy of Piraeus, Greece<br/><sup>2</sup>Athens Information Technology, Greece</p> |
|                               | <p><b>1:00 - 2:30 PM</b></p>  |
| <p><b>2:30 - 3:30 PM</b></p>  | <p style="text-align: center;"><b>Session #5: Mobility</b><br/>Chair : Jean-Marc Pierson</p> <p style="text-align: center;">“Path Prediction through Data Mining” [41]<br/>Theodoros Anagnostopoulos<sup>1</sup>, Christos B. Anagnostopoulos<sup>1</sup>, Stathes<br/>Hadjiefthymiades<sup>1</sup>, Alexandros Kalousis<sup>2</sup>, Miltos Kyriakakos<sup>1</sup><br/><sup>1</sup>Dept. of Informatics &amp; Telecommunications, Univ. of Athens, Greece<br/><sup>2</sup>Department of Computer Science, University of Geneva,</p> <p style="text-align: center;">“Hybrid Handover Optimization for Multiple Mobile<br/>Routers-based Multihomed NEMO Networks” [9]<br/>Hai Lin, Houda Labiod<br/><i>GET – ENST ; LTCI-UMR 5141 CNRS; INFRES Department, France</i></p>   |
| <p><b>3:30 - 4:00 PM</b></p>  | <p style="text-align: center;"><b>Coffee Break</b></p>  |

## Short Papers Session #2

"Providing Anonymity in Wireless Sensor Networks" [57]  
Yi Ouyang<sup>1</sup>, Zhengyi Le<sup>1</sup>, Yurong Xu<sup>1</sup>, Nikos Triandopoulos<sup>1</sup>,  
Sheng Zhang<sup>1</sup>, James Ford<sup>1, 2</sup>, Fillia Makedon<sup>1, 2</sup>,

<sup>1</sup>Computer Science Department, Dartmouth College, USA  
<sup>2</sup>Dept. of Computer Science & Engr., University of Texas, Arlington, USA

"A Trust-Based Approach to Control Privacy Exposure in  
Ubiquitous Computing Environments" [6]

Pho Duc Giang<sup>1</sup>, Le Xuan Hung<sup>1</sup>, Riaz Ahmed Shaikh<sup>1</sup>,  
Sungyoung Lee<sup>1</sup>, Young-Koo Lee<sup>1</sup> and Heejo Lee<sup>2</sup>

<sup>1</sup>Computer Engineering Department, Kyung Hee University, Korea,  
<sup>2</sup>Computer Science & Engineering Department, Korea University, Korea.

"Network Memory Among Mobile Devices", [7]

Yusuf Ozturk, Veena Sambasivan  
Electrical & Computer Engr. Dept., San Diego State University, USA

4:00 -5:30 PM

"Simple Hardware-Oriented Algorithms for cellular Mobiles Positioning" [32]

Mohamadreza Najiminaini, Evgueni Doukhnitich,  
Muhammed Salamah, Izzet Kale  
Eastern Mediterranean University, TRNC Mersin 10 Turkey

"Sensor Data Collection Using Heterogeneous Mobile Devices" [27]

Prem Prakash Jayaraman<sup>1</sup>, Arkady Zaslavsky<sup>1</sup>, Jerker Delsing<sup>2</sup>

<sup>1</sup>Monash University, Melbourne, Australia  
<sup>2</sup>Lulea University of Technology, Lulea, Sweden

"Concealed Data Aggregation in Heterogeneous Sensor Networks  
using Privacy Homomorphism" [60]

Suat Ozdemir, Gazi University, Turkey

"A Mashup-Based Strategy for Migration to Service-Oriented Computing" [53]

Semih Cetin<sup>1,2</sup>, Ilker Altintas<sup>1,2</sup>, Halit Oguztuzun<sup>2</sup>,  
Ali Dogru<sup>2</sup>, Ozgur Tufekci<sup>1</sup>, Selma Suloglu<sup>2</sup>

*1 Cybersoft Information Technologies*  
*2 Department of Computer Engineering, Middle East Technical University*

## Poster Session

All Day

"Evaluating Cross-layer Context Exchange in Mobile Ad-hoc Networks with  
Colored Petri Nets" [12]

Ruwini Kodikara, Sea Ling, and Arkady Zaslavsky  
Clayton School of Information Technology, Monash University, Melbourne, AUS

"A Novel TOA Estimation Scheme using multiple correlations for  
Non-coherent IR-UWB Systems" [28]

Woon Yong Park<sup>1</sup>, Cheol Ung Park<sup>1</sup>, Sungsoo Choi<sup>2</sup> and Won Cheol Lee<sup>1</sup>  
<sup>1</sup>School of Electronic Engineering, Soongsil University, Korea

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| <p style="text-align: center;"><b>All Day</b></p>           | <p style="text-align: center;"><sup>2</sup><i>Power Telecommunication Network Research Group Korea Electrotechnology Research Institute (KERI)</i></p> <p style="text-align: center;"><b>"A Framework for Behavioral Context Reasoning" [40]</b><br/> Christos B. Anagnostopoulos, Yiorgos Ntirladimas, Stathes Hadjiefthymiades<br/> Dept. of Informatics &amp; Telecommunications, Univ. of Athens, Greece</p> <p style="text-align: center;"><b>"A New Morph Digital Signature: A New Signature Framework for e-Documents in Pervasive Environments" [42]</b><br/> Rachid Saadi<sup>1</sup>, Jean Marc Pierson<sup>2</sup> and Lionel Brunie<sup>1</sup><br/> <sup>1</sup>LIRIS lab, INSA de Lyon, France.<br/> <sup>1</sup>IRIT lab, University Paul Sabatier Toulouse, France.</p> <p style="text-align: center;"><b>"ConAMi: Collaboration-Based Content Adaptation Middleware for Pervasive Computing Environment" [49]</b><br/> Yaser Fawaz, Addisalem Negash, Lionel Brunie, Vasile-Marian Scuturici<br/> Laboratoire d'InfoRmatique en Images et Systèmes d'information (LIRIS),<br/> Institute National des Sciences Appliquées de Lyon, France</p> <p style="text-align: center;"><b>"Anomaly-based Protection Approach against Wireless Network Attacks" [62]</b><br/> Samer Fayssal and Salim Hariri<br/> Electrical &amp; Computer Engineering Department, The University of Arizona, USA</p> |
|   | <p style="text-align: center;"><b>Event<br/>Gala Dinner</b></p>  |
| <p><b>Wednesday, July 18, 2007</b></p>                      |  |
| <p style="text-align: center;"><b>8:00 AM - 5:00 PM</b></p> | <p style="text-align: center;"><b>Registration</b></p>   |
| <p style="text-align: center;"><b>8:30 – 10:00 AM</b></p>   | <p style="text-align: center;"><b>Session #6: Environments</b><br/> Chair : Ali Akoglu</p> <p style="text-align: center;"><b>"Programming Wireless Sensor and Actor Networks with TC-WSANs" [4]</b><br/> Bartolome Rubio, Javier Barbaran, Manuel Diaz, Iñaki Esteve, Daniel Garrido,<br/> Luis Llopis, Jose Troya Rubio<br/> Dpto. Lenguajes y Ciencias de la Computación. Málaga University, SPAIN</p> <p style="text-align: center;"><b>"Extending BPEL for Interoperable Pervasive Computing" [11]</b><br/> Gregory Hackmann, Christopher Gill, Gruia-Catalin Roman<br/> Department of Computer Science and Engineering<br/> Washington University in St. Louis, USA</p> <p style="text-align: center;"><b>"Automatic Reactive Adaptation of Pervasive Applications" [39]</b><br/> Marcus Handte<sup>1</sup>, Klaus Herrmann<sup>1</sup>, Gregor Schiele<sup>2</sup>,<br/> Christian Becker<sup>2</sup>, Kurt Rothermel<sup>1</sup><br/> <sup>1</sup>Universität Stuttgart, <sup>2</sup>Universität Mannheim, Germany</p>  |
|   | <p style="text-align: center;"><b>Coffee Break</b></p>   |

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| <p><b>10:30 - 12:00<br/>AM</b></p>                   | <p><b>Session #7 : Pervasive Services and Environments</b><br/>Chair : Ozgur Ercetin</p> <p>"Context-Aware Service Composition in a Home Control Gateway" [10]<br/>Andre Bottaro<sup>1,2</sup>, Johann Bourcier<sup>1</sup>, Clement Escoffier<sup>1</sup>, Philippe Lalanda<sup>1</sup><br/><sup>1</sup><i>GRENOBLE UNIVERSITY Laboratoire LSR-IMAG, France</i><br/><sup>2</sup><i>FRANCE TELECOM R&amp;D, Meylan. FRANCE</i></p> <p>"An Interaction Model and Infrastructure for Localized Activities in Pervasive Computing Environments" [31]<br/>Helder Pinto<sup>1</sup>, Rui José<sup>1</sup>, José Campos<sup>2</sup><br/><sup>1</sup><i>Information Systems Department, University of Minho</i><br/><sup>2</sup><i>Department of Informatics, University of Minho, Portugal</i></p> <p>"Adaptation of Composite Services in Pervasive Computing Environments" [55]<br/>Caroline Funk<sup>1</sup>, Amelia Schultheis<sup>1</sup>, Claudia Linnhoff-Popien<sup>1</sup><br/>Jelena Mitic<sup>2</sup>, Christoph Kuhmunch<sup>2</sup><br/><sup>1</sup><i>Ludwig-Maximilians-Universitat, Munchen</i><br/><sup>2</sup><i>Siemens AG Corporate Technology</i></p> |
| <p><b>12:00 - 12:30<br/>PM</b></p>                   | <p><b>Closing Remarks</b></p>  |
| <p><b>Thursday, July 19, 2007,<br/>Workshops</b></p> |  |
| <p><b>9:00 AM - 5:00<br/>PM</b></p>                  | <p>AUPC07: Agent-Oriented Software Engineering Challenges for Ubiquitous and Pervasive Computing Workshop</p> <p>SecPerU07 : Security, Privacy and Trust in Pervasive and Ubiquitous Computing</p> <p>SEPS07: Software engineering for pervasive services Workshop</p> <p>SIPE'07 : Services Integration in Pervasive Environments Workshop</p> <p>MAPS'07 : 2nd International Workshop on Multimodal and Pervasive Services</p>   |





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## **Supporting Institutions**

- Distance Education Center, Istanbul Technical University
- Informatics Institute, Middle East Technical University