Kai Kunze

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With over six years working in the Pervasive Computing field, Kai Kunze just gave his phD. defense earning a Summa Cum Laude. He holds a MSc. in Computer Science. His work experience includes internships at the Palo Alto Research Center (PARC), Sunlabs Europe and the Research Department of the German Stock Exchange. His major research contributions are in activity recognition including sensing and pattern recognition. His current research focus also includes crowd-based sensing and the modeling of large scale self-organizing systems.

Research Output

Kai Kunze published over 20 papers, some at high profile conferences.
His papers are well cited, with a total citation count of 496, H-index of 15, according to Google Scholar.

Selected Activities in the Research Community

Program Committee Chair of EuroSSC 2010, Passau, Germany.
Video Chair for ISWC 2012, Newcastle, UK.
Publicity Chair of ISWC 2011, San Francisco, USA.
Proceedings Chair of ISWC 2009, Linz, Austria.
Ph.D. Colloquium Chair of ISWC 2007, Boston, USA.
Co-Organizer of HPDI workshop at Pervasive 2011, San Francisco, USA.
Technical Program Committee Member of several conferences and workshops:
IEEE PIMRC, Pervasive Health, CoSDEO, IWFAR etc.
Reviewer for Pervasive, Ubicomp, ISWC, CHI, PervasiveHealth, ACSAC etc.

Academic Training

Kai Kunze supervised with Prof. Lukowciz over 15 MSc. and BSc. Theses. He taught one course (Intelligent Systems 2010), as a substitute for Prof. Lukowicz. He teaches regularly several tutorials (Intelligent Systems, Machine Learning, Pervasive Computing) at the University Passau as well as the Computer Networks/Pervasive Computing courses at the University for Medical Informatics in Hall in Tyrol.

Research Projects

Kai Kunze participated in 6 European Projects (FET STREPs and IPs).
He is a work package leader for the ALLOW Project http://www.allow-project.eu/.
Currently, he is involved in the EU Flagship Proposal FuturICT
http://www.futurict.eu/

International Collaborations

Cooperations with Bo Begole and Kurt Partridge at PARC, Palo Alto Research Center (internship, 3 joint publications and research visit over BaCaTec, Bavaria California Technology Center) and with Prof. Sandy Pentland at the Human Dynamics Group, MIT Media Lab (ongoing research visit for FuturICT).

Professional Experience

2011	Human Dynamics Group, MIT	*Cambridge, MA*
	Visiting researcher at the Human Dynamics Group, directed by Prof. Sandy Pentland, at the MIT Media Lab for 2 months. Task: Setup a collaboration for the EU Flagship Proposal FuturICT	
2006 -today	Embedded Systems Lab, University of Passau	*Passau*
	Full time position as researcher in Pervasive Computing and lecturer, Course: Intelligent Systems (2010) Tutorials: Machine Learning, Pervasive Computing, Intelligent Systems	
2006 -today	University for Medical Informatics	*Hall in Tyrol*
	External Lecturer Courses: Computer Networks, Pervasive Computing	
2005	Computer Science Lab, Palo Alto Research Center	*Palo Alto, CA*
	Internship in the ubiquitous computing area for 7 months Topic: The Obje Perception Framework Supervisors: Bo Begole, Kurt Partridge	
2004 - 2006	University for Medical Informatics	*Hall in Tyrol*
	Full time position as researcher in Pervasive Computing	
2003-2004	SunLabs Europe	*Grenoble*
	Master Thesis at the Research Lab of Sun Microsystems Topic: Exploration of RDMA Technology over IP	
2001	Research Department of Deutsche Börse Systems	*Frankfurt*
	Bachelor Thesis Topic: Web Services for Exchange Applications	
2000	Research Department of Deutsche Börse Systems	*Frankfurt*
	Internship Topic: Design and Implementation of a J2EE Trading System	
2000 -2001	IU/Sun Microsystems Network Lab	*Bruchsal*
	Study Projects: Implementation of network protocols	

Education

2006- 2011	Embedded Systems Lab, University of Passau Anticipated PhD. in Computer Science Title: Compensating for On-Body Placement Effects in Activity Recognition. Advisors: Paul Lukowicz, Hans Gellersen	*Passau*
2004- 2006	University for Medical Informatics Anticipated PhD. in Computer Science	*Hall in Tyrol*
2002- 2004	IU, International University in Germany Qualifications: Master of Science in Computer Science Grade: A-, ranking best of the graduating class.	*Bruchsal*
2002	NTU, Nanyang Technological University Term Abroad	*Singapore*
1999-2002	IU, International University in Germany Qualifications: Bachelor of Science, Major IT, Minor Business Grade: A-, Honors: Dean's List	*Bruchsal*

Selected Publications

Kai Kunze, Gernot Bahle, Paul Lukowicz and Kurt Partridge. Can magnetic field sensors replace gyroscopes in wearable sensing applications?. *In Proceedings of the 14th Annual International Symposium on Wearable Computing*. Seoul, South Korea, October 2010. (Acceptance rate: 20%)

David Bannach, Kai Kunze, Jens Weppner, and Paul Lukowicz. Integrated tool chain for recording and handling large, multimodal context recognition data sets.*In Proceedings of the 12th ACM International Conference Adjunct Papers on Ubiquitous Computing*. Copenhagen, Denmark, October 2010. **Best demonstration award**.

Kai Kunze, Florian Wagner, Ersun Kartal, Morales Kluge, and Paul Lukowicz. Does Context Matter? - A Quantitative Evaluation in a Real World Maintenance Scenario. *In Proceedings of the 7th international Conference on Pervasive Computing*. Nara, Japan, May 2009. (Acceptance rate: 18%).

Kai Kunze and Paul Lukowicz. Dealing with sensor displacement in motion- based on-body activity recognition systems. *In Proceedings of the 10th international Conference on Ubiquitous Computing*. Seoul, South Korea, September 2008. (Acceptance rate: 15%).

Kai Kunze and Paul Lukowicz. Symbolic object localization through active sampling of acceleration and sound signatures. *In Proceedings of the 9th international Conference on Ubiquitous Computing*. Innsbruck, Austria, September 2007.
Nominated for best paper. (Acceptance rate: 14%)

Kai Kunze, Paul Lukowicz, Holger Junker and Gerhard Tröster. Where am I: Recognizing On-body Positions of Wearable Sensors. *In Lecture Notes in Computer Science, Location- and Context-Awareness*. Oberpfaffenhofen, Germany, May, 2005.