



**CALL FOR SHORT PAPERS**  
**1st International Conference on Pervasive Computing  
Technologies for Healthcare 2006**

<http://www.pervasivehealth.org/>

Innsbruck, Austria

November 29 - December 1st, 2006

CREATE-NET



**Organizing Committee:**

**Conference Co-Chairs:**

**Jakob E. Bardram**  
Pervasive Healthcare Center, University of Aarhus,  
Aarhus, Denmark

**Juan Carlos Chachques**  
Dept. of Cardiovascular Surgery, Hospital Georges  
Pompidou, Paris, France

**Upkar Varshney**  
Computer Information Systems, Georgia State  
University, Atlanta, USA

**Steering Committee:**

**Imrich Chlamtac, (Chair)**  
CREATE-NET, Trento, Italy

**Oscar Mayora-Ibarra**  
CREATE-NET, Trento, Italy

**Csaba Szabo**  
Budapest University of Technology and Economics,  
Budapest, Hungary

**Upkar Varshney**  
Computer Information Systems, Georgia State  
University, Atlanta, USA

**Conference Vice-Chair:**

**Carlos Bilich**  
CREATE-NET and University of Trento, Italy

**Program Committee Chairs:**

**Emile Aarts**  
Vice President of Research, Philips Electronics,  
Eindhoven, Netherlands

**Ryuji Kohno**  
Yokohama National University, Japan

**Paul Lukowicz**  
UMIT-University for Health Sciences, Medical  
Informatics and Technology, Innsbruck, Austria

**Jorge Carlos Trainini**  
Department of Cardiovascular Surgery, Presidente  
Perón Hospital, Buenos Aires, Argentina

**Workshops Chair:**

**Konstantina Geramani**  
TWT GmbH Information & Engineering Technologies,  
Germany

**Henry Wang**  
Mobile Computing, MINT Centre, Kingston  
University, UK

**ASIA Publicity Chair:**

**Tomoki Hamagami**  
Yokohama National University, Japan

**USA Publicity Chair**

**Ron Vetter**  
University of North Carolina, USA

**EU Publicity Chair**

**Rene Mayrhofer**  
Lancaster University, UK

**USA Sponsor Chair**

**Sandeep K. S. Gupta**  
Arizona State University, USA

**Publication Chair**

**Ana Hilda Morales Aranda**  
CREATE-NET, Trento, Italy

**Local Chair**

**Friedrich Hanser**  
UMIT, Austria

**Program Committee:**

**Baker, Dixie:** SAIC Health Solutions, USA

**Baldus, Heribert:** Philips Research Labs, Aachen,  
Germany

**Batos, Vedran:** University of Dubrovnik, Croatia

**Bilas, Vedran:** University of Zagreb, Croatia.

**Bonato, Paolo:** Department of Physical Medicine and  
Rehabilitation, Harvard Medical School, USA.

**Castro, Rodrigo D.:** HP, C-Net Argentina

**Connelly, Kay:** Pervasive Technology Labs, Indiana  
University, USA

**Craven, Michael:** University of Nottingham, UK

**Boris Dragovic:** CREATE-NET, Trento, Italy

**Favela, Jesus:** Medical Informatics Group, CICESE,  
Mexico

**Fontelo, Paul:** NIH, USA

**Fraser, Hamish:** MIT, USA

**Ganz, Aura:** University of Massachusetts, USA

**Geisler Eliezer:** Illinois Institute of Technology, USA

**Gonzalez, Victor M.:** University of California at Ir-  
vine, USA

**Guang-Zhong Yang:** Imperial College, UK

**Gupta, Sandeep:** Arizona State University, USA

**Helal, Sumi:** University of Florida, USA

**Istepanian, Robert:** Kingston University, UK

**Jayaraman, Sundaresan:** Georgia Institute of  
Technology, USA

**Joshi, Anupam:** University of Maryland, USA

**Jovanov, Emil:** University of Alabama, USA

**Kabara, Joseph:** University of Pittsburgh, USA

**Kautz, Henry:** University of Washington, USA

**Important Deadlines**

Short Papers Submission Deadline: June 30th, 2006 - **Deadline Extension: July 3<sup>rd</sup>, 2006**

Acceptance: September 1st, 2006 - **New Date: September 11<sup>th</sup>, 2006**

Camera Ready: September 14th, 2006- **New Date: October 9<sup>th</sup>, 2006**

**Pervasive healthcare** is emerging research discipline, focusing on the development and application of pervasive and ubiquitous computing technology for healthcare purposes. Pervasive healthcare seeks to accommodate the growing need for healthcare arising from a number of factors, including the increase in life-style and chronic diseases, the increased complexity of large healthcare organizations, providing healthcare services in rural and underserved areas worldwide, and enabling patients and relatives engage more closely in self-care and treatment.

**Pervasive healthcare** may be defined from two perspectives. First, it is the development and application of pervasive computing (or ubiquitous computing, ambient intelligence) technologies for healthcare, health and wellness management. Second, it seeks to make healthcare available to anyone, anytime, and anywhere by removing locational, time and other restraints while increasing both the coverage and quality of healthcare.

**Topics of Interest:**

We seek novel, innovative, and exciting work in areas including but not limited to:

**Technologies "situated on the patient"**

- Design and use of bio-sensors
- Mobile devices for patient monitoring
- Wireless and wear-able devices for pervasive healthcare
- Patient monitoring in diverse environments (in-door, outdoor, hospitals, nursing homes, assisted living)
- Continuous vs event-driven monitoring of patients
- Using mobile devices for healthcare information storage, update, and transmission
- Sensing of vital signs and transmission
- Home monitoring for cardiac arrhythmias
- Preventative care: Technologies to improve overall health of people one wouldn't normally call "patients"

**Technologies "situated in the environment"**

- The use of "environmental" technologies such as cameras, interfaces, and sensor networks
- Data fusion in pervasive healthcare environment
- Managing knowledge in pervasive healthcare
- Content-based encoding of medical information
- Forming ad hoc wireless networks for enhanced monitoring of patients
- Networking support for pervasive healthcare (location tracking, routing, scalable architectures, dependability, and quality of access)
- Managing healthcare emergency vehicles and routing
- Network support for mobile telemedicine
- Ubiquitous health care and monitoring at home

- Ubiquitous medical network and appliances in homes or hospitals.
- Ubiquitous computing support for medical works in hospitals

**Medical aspects of pervasive healthcare**

- Pervasive healthcare applications
- Specific requirements of vital signs in pervasive healthcare environment
- Diversity of patients and their specific requirements
- Representation of medical information in pervasive healthcare environment (multimedia, resolution, processing and storage requirements)
- Role of medical protocols in pervasive healthcare
- Improved delivery of healthcare services
- The usability of wireless-based solutions in healthcare
- Physiological models for interpreting medical sensor data
- Decision support algorithms for sensor analysis

**Management of pervasive healthcare**

- Security and privacy in pervasive healthcare
- Training of healthcare professional for pervasive healthcare
- Managing the integration of wireless solutions in pervasive healthcare
- Increasing coverage of healthcare services
- Legal and regulatory issues in pervasive healthcare
- Insurance payments and cost aspects
- Role of HIPAA (Health Insurance Portability and Accountability Act of 1996) in pervasive healthcare

**Information for Authors**

**Submission of Papers:**

**PERVASIVEHEALTH** accepts submissions that describe original, research work not submitted or published elsewhere. Submissions must follow IEEE's conference style two-column format including figures and references. Conference papers will be submitted for publication to IEEE and CD proceedings will be distributed during the conference days.

Papers submitted to **PERVASIVEHEALTH** will consist of 4 pages maximum. For more details on submission type and format please refer to the conference web site. Authors are requested to submit their manuscripts electronically using the Create-net's COCUS System only <http://www.cocus.info> by following the link and instructions at the conference home page: <http://www.pervasivehealth.org>. Authors of best contributions will be invited to submit extended papers to a special edition of ACM/Springer MONET Journal.

**Korhonen, Ilka:** Pervasive Health Technologies Group,  
VTT Electronics, Finland

**Labrador, Miguel A.:** University of South Florida, USA

**Lee, Yugi:** University of Missouri-Kansas City, USA

**Lubitz, Dag von:** Med-Smart, USA

**Lundell, Jay:** Proactive Health Group, Intel, USA

**Mahmoud, Qusay:** University of Guelph, Canada

**Medhi, Deep:** University of Missouri-Kansas City, USA

**Miranda Dias, Jorge Manuel:** University of Coimbra,  
Portugal

**Polymenakos, Lazaros:** Athens Information Technology,  
Greece

**Reddy, Ramana:** West Virginia University, USA

**Riva, Giuseppe:** Catholic University of Milan, Italy

**Schwiebert, Loren:** Wireless Sensors Lab, Wayne State  
University, USA

**Shankar, Ravi:** University of South Florida, USA

**Sloane, Elliot:** Villanova University, USA

**Srivastava, Mani:** University of California-Los Angeles,  
USA

**Tröster, Gerhard:** ETH Zurich, Switzerland

**Tyler-Kabara, Elizabeth:** University of Pittsburgh, USA

**Uzunoglu, Nikolaos:** National Technical University of  
Athens, Greece

**Vetter, Ron:** University of North Carolina, Wilmington,  
USA

**Wactlar, Howard:** School of Computer Science, CMU,  
USA

**Weaver, Alfred:** University of Virginia, USA

**Wickramasinghe, Nilmini:** Illinois Institute of Technology,  
USA

**Wilson, Vance:** University of Wisconsin, USA

**Wong, Steve:** Harvard Medical School, USA

**Znati, Taieb:** University of Pittsburg, USA

**Authors of best contributions will be invited to  
submit extended papers to a special edition of  
ACM/Springer MONET Journal**

