

Program of the WPNC'07

Morning Sessions

Poster Session

Afternoon Sessions

Time	Morning Sessions		
8:00-9:00	Registration (coffee & light breakfast)		
9:00-9:05	Welcome Speech Prof. Dr.-Ing. T. Kaiser Leibniz University of Hannover		
9:05-9:35	Keynote Address Position Localization and Imaging of Objects and Environments Prof. Dr.-Ing. R. Thomä TU Ilmenau, Germany		
9:35-9:40	Break		
	Joint communication and positioning I Chair: Prof. Dr.-Ing. K. Kyamakya University of Klagenfurt, Austria	Navigation and tracking Chair: Prof. Dr.-Ing. R. Kraemer IHP Microelectronics, Germany	Ultra-Wideband Chair: Heinz Lüdiger IMST, Germany
9:40-10:00	WLAN-Based Pedestrian Tracking Using Particle Filters and Low-Cost MEMS Sensors Hui Wang, Henning Lenz, Siemens AG, CT IC 4; Andrei Szabo, Siemens AG; Joachim Bamberger, Siemens AG, CT IC 4; Uwe D. Hanebeck, Universität Karlsruhe (TH)	Omnidirectional Pedestrian Navigation for First Responders Stéphane Beauregard, Universität Bremen	UWB Positioning Experiment in a typical Snowy Environment Friedman Tchoffo Talom, CEA-LETI; Benoit Denis, CEA-LETI; Julien Keignart, Daniele Norbert, Didier Bouix, CEA-LETI
10:00-10:20	A Novel Indoor Location Sensing Mechanism for IEEE 802.11 b/g WLAN Shahid Ali, Dr Philip Nobles, Cranfield University	Indoor Navigation based on doppler measurements Simon Schelkshorn, Jürgen Detlefsen, TU München, Lehrstuhl HFS	An Ultra-Wideband Positioning Demonstrator Using Audio Signals Giovanni Bellusci, Junlin Yan, Gerard J. M. Janssen, Christian C. J. M. Tiberius, Delft University of Technology
10:20-10:55	Coffee Break		
10:55-11:15	Cooperative Positioning with MagicMap Stefan Brüning, Johannes Zapotoczky, Peter Ibach, Humboldt-Universität zu Berlin; Vladimir Stantchev, Technische Universität Berlin	Pedestrian Navigation - Creating a tailored geodatabase for routing Birgit Elias, Leibniz University of Hannover	A Flexible Distributed Maximum Log-Likelihood Scheme for UWB Indoor Positioning Benoit Denis, CEA-LETI MINATEC; Liyun He, ENSIMAG-ID; Laurent Ouvry, CEA-LETI MINATEC
11:15-11:35	WLAN indoor positioning based on TOA with two reference points Marc Ciurana, Technical	A Sequential Monte Carlo Method for Target Tracking in an Asynchronous	Communication and TOA Estimation with Differential Impulse Radio UWB systems Gustave Franck Tchere, ZESS,

	University of Catalonia (UPC); Francisco Barcelo, Universidad Politecnica de Catalunya; Sebastiano Cugno, Technical University of Catalonia (UPC)	Wireless Sensor Network Mahesh Vemula, State University of New York at Stony Brook; Joaquin Miguez, Antonio Artés-Rodríguez, Universidad Carlos III de Madrid	University Siegen; Pakorn Ubolkosold, Stefan Knedlik, Otmar Loffeld, University of Siegen
11:35-11:55	Time of Arrival Prediction for WLAN Systems Using Prony Algorithm Ibraheem A. Ibraheem, Jörg Schöbel, Technische Universität Braunschweig	Robust Extended Kalman Filtering in Hybrid Positioning Applications Tommi Perälä, Robert Piché, Tampere University of Technology	Analysis of a UWB Indoor Positioning System Based on Received Signal Strength Thomas Gigl, Graz University of Technology; Gerard J. M. Janssen, Delft University of Technology; Vedran Dizdarevic, Graz University of Technology; Klaus Witrissal, Graz Technical University; Zoubir Irahhaute, Delft University of Technology
11:55-12:15	Poster Teaser Chair: Prof. Dr.-Ing. K. Jobmann Leibniz University of Hannover		
12:15-14:00	Light Lunch		
Time	Poster Session		
13:00-14:00	Chair: Prof. Dr.-Ing. K. Jobmann Leibniz University of Hannover		
	A Particle Filtering Algorithm for Audiovisual Speaker Localisation Christoph Voges, Patrick Bauer, Tim Fingscheidt, TU Braunschweig	Influence of Predicted and Measured Fingerprint on the Accuracy of RSSI-based Indoor Location Systems Widyawan, Martin Klepal, Dirk Pesch, Cork Institute of Technology	
	A wireless architecture for telemedicine Martin Krohn, Heiko Kopp, Djamshid Tavangarian, University of Rostock	Location Tracking of Mobile Stations in TD-SCDMA System Hong Tang, Yongwan Park, Yeungnam University	
	SLL: Statistical Conditions and Algebraic Properties Bruno Betoni Parodi, Henning Lenz, Siemens AG, CT IC 4; Andrei Szabo, Siemens AG; Joachim Bamberger, Siemens AG, CT IC 4; Joachim Horn, Helmut-Schmidt-University, University of the Federal Armed Forces Hamburg	NLOS detection algorithms for Ultra-Wideband localization Jens Schroeder, Stefan Galler, Leibniz University of Hannover; Kyandoghene Kyamakya, University of KLAGENFURT, Chair of Transportation Informatics; Klaus Jobmann, Leibniz University of Hannover	
	Comparison of Hough Transform and Particle Filter Methods of Emitter Geolocation using fusion of TDOA Data Alex Mikhalev, Richard Ormondroyd, Cranfield University	Performance Improvement of Asynchronous UWB Position Location Algorithm Using Multiple Pulse Transmission Jasurbek Khodjaev, Anvar Narzullaev, Yongwan Park, Yeungnam University	
	Field trial on the efficiency and user experience of GPS based state of the art navigational systems for pedestrians Ronny Kramer, Marko Madsching, Klaus ten Hagen, Marcel Riebeck, Annegret Stark, University of Applied Sciences Zittau/Görlitz	Repeater Effect Suppression Method for TDOA algorithm in CDMA system Sunmi Kim, Heedong Choi, Yongwan Park, Yeungnam University	
	IMM Estimator for Maneuvering Target Tracking in GSM Networks Miao Zhang, Stefan Knedlik, Otmar Loffeld, University of	Unscented and Extended Kalman Estimators for non Linear Indoor Tracking Using Distance Measurements	

Siegen		Haytham Qasem Mahamda, University of Freiburg	
Indoor Navigation with Minimal Infrastructure Roberto Bisiani, Davide Merico, University of Milano-Bicocca		UWB regulatory compliant synchronization signal for indoor broadcast Cyril Laderriere, Pole Star and INRETS/LEOST; Marc Heddebaut, INRETS; Nicolas Rocher, Pole Star; Atika RIVENQ, University of valenciennes; Fouzia Elbahhar, INRETS-LEOST; Jean Michel Rouvaen, IEMN-DOAE	
Time	Afternoon Sessions		
	Joint communication and positioning II Chair: Stéphane Beauregard University of Bremen	Positioning Chair: Prof. Dr.-Ing. K. Kyamakya University of Klagenfurt, Austria	Pulsers Chair: Prof. Dr.-Ing. M.-G. Di Benedetto University of Rome La Sapienza, Italy
14:00-14:20	System Considerations for a Combined UMTS/GNSS Receiver Guenter Heinrichs, Ifen GmbH	A Framework for Visual Position Estimation for Motor Vehicles Andrew Rae, Otman Basir, University of Waterloo	A Clusterized WLS Localization Algorithm for Large Scale WSNs Giuseppe Destino, Davide Macagnano, Giuseppe Thadeu Freitas de Abreu, University of Oulu Cognitive resource access scheme for IR-UWB autonomous networks Maria D. Perez-Guirao, Leibniz University of Hannover
14:20-14:40	Hybrid Pattern Matching/TDOA Positioning Method for CDMA Networks Dilshod Akbarov, Heedong Choi, Yongwan Park, Yeungnam University	Challenges for GNSS-based high precision positioning some geodetic aspects Steffen Schoen, Leibniz University of Hannover	Performance Analysis for a Body Area Network composed of IEEE 802.15.4a devices Daniele Domenicali, Maria-Gabriella Di Benedetto, University of Rome La Sapienza
14:40-15:00	Synchronization Algorithms for Positioning with OFDM Communications Signals Christian Mensing, Simon Plass, Armin Dammann, German Aerospace Center (DLR)	Three frequency linear combinations for Galileo Patrick Henkel, Christoph Günther, Technische Universität München	MAC layer design for UWB Low Data Rate systems: PULSERS proposal Isabelle Bucaille, Arnaud Tonnerre, Thales Communications; Laurent Ouvry, CEA-LETI MINATEC; Benoit Denis, CEA - LETI; Virgilio Rodriguez, Universität Karlsruhe
15:00-15:40	Coffee Break & Snacks		
15:40-16:00	A Novel Mobile Positioning Algorithm Based on Environment Estimation Ozgun Bayrak, Cagri Temizyurek, Metin Barut, Vodafone IT A. S.; Onur Turkyilmaz, Gurkan Gur, Bogazici University	DLS: A Resource-Aware Localization Algorithm with High Precision in Large Wireless Sensor Networks Frank Reichenbach, Alexander Born, Jakob Salzmann, Dirk Timmermann, Ralf Bill, University of Rostock	Overview of the IEEE 802.15.4/4a standards for low data rate Wireless Personal Data Networks Luca De Nardis, M.-G. Di Benedetto, University of Rome La Sapienza

16:00-16:20	<p>Velocity Estimation of Mobile Terminals by Exploiting GSM Downlink Signalling</p> <p>Sven Peschke, Reinhold Haeb-Umbach, University of Paderborn</p>	<p>Estimation of 2-D Direction of Arrival with an Extended Correlation Matrix</p> <p>Ferid Harabi, Hatem Changuel, Ali Gharsallah, Faculty of Sciences</p>	<p>An ultra-wideband approach towards autonomous radio control and positioning systems in manufacturing & logistics processes</p> <p>Heinz Lüdiger, IMST</p> <p>MAC Performances for Localization and Tracking in Wireless Sensor Networks</p> <p>Davide Macagnano, Giuseppe Destino, Flavio Esposito, Giuseppe Thadeu Freitas de Abreu, University of Oulu</p>
16:20-16:30	Closing		
16:30-	Cold Beer Session		