2nd IEEE International Symposium on Wireless Vehicular Communications

Final Program

21 - 22 September 2008
Telus Convention Center
Calgary, Canada
Welcome

It is our great pleasure to welcome attendees to the second edition of the IEEE International Symposium on Wireless Vehicular Communications (IEEE WiVeC2008).

After a very successful first WiVeC edition in Baltimore with over 130 registrants, the IEEE Vehicular Technology Society (VTS) has decided to continue its WiVeC symposium with a second edition co-located with the IEEE Vehicular Technology Conference Fall 2008 in Calgary (Canada). Following the trend established in the first edition, the second WiVeC edition aims to capture the current research and technological developments in the area of wireless vehicular communications. To this aim, the symposium will feature two keynote speakers from distinguished industrial and academic representatives, two industrial and academic panels, 3 oral sessions and a posters and demos session where colleagues will showcase their research activities.

We have accepted a total of 24 papers from 55 submitted papers with 15 papers being presented orally and 9 papers as poster presentations; there will also be 7 demonstrations co-located with the poster presentations. The papers cover the full range of wireless vehicular communications: physical layer area; protocol design area; and applications, systems and experiments area. We would like to express our gratitude to all authors who submitted their work to IEEE WiVec 2008. All submitted papers have been thoroughly and independently reviewed in accordance with standard blind reviewing practices. Each of the submitted papers was assigned to at least 3 reviewers. We would also like to take this opportunity to thank all TPC members and external reviewers for providing timely and high quality reviews.

Finally, we would like to take this opportunity to thank the work and dedication of all WiVeC2008 organizing and technical committee, and the support from the IEEE Vehicular Technology Society.

We hope you will have a fruitful technical conference while taking the opportunity to enjoy the beauty of Calgary and its surroundings.

IEEE WiVeC2008 Organizing and Technical Committees

Organising Committee

General Co-chairs: Javier Gozalvez
Mario Gerla
University Miguel Hernandez
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Technical Program Co-chairs: Andreas Festag
Daniel Stancil
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Hariharan Krishnan, General Motors
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Thomas Kürner, Technische Universität Braunschweig
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Massimiliano Lenardi, Hitachi Europe
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Demonstration Committee

Jérôme Härr, Karlsruhe University
Marco Fiore, Polito

Reviewers

Maziar Nekovee, University of Michigan
Hamid Menouar, Hitachi Europe

WiVeC Technical Sessions

Sunday 21 September 14.00 – 15.30
W1: Applications, Systems & Experiments
1. 12V Communication Driving Assistance System: On-board Traffic Light Assistant
   Inaki Iglesias, Tecnalia-Robotiker, Spain; Lucia Isasi, Tecnalia-Robotiker, Spain; Mohamed Cherif, University of the Basque Country; and Begona Molinete, Tecnalia-Robotiker, Spain
   Yinn Ko, Andreas Festag, Fethi Filali, Marco Fiore, Mario Gerla, Matthias Gerlach, Mohamed Cherif, Marco Fiore, and Thierry Ernst

2. Mobile WiMAX: Performance Analysis and Comparison with Experimental Results
   Mai Tran, Bristol University, United Kingdom; George Zaggoulous, Bristol University, United Kingdom; Andrew Nix, Bristol University, United Kingdom; and Angela Doufexi, Bristol University, United Kingdom
   Yinn Ko, Andreas Festag, Fethi Filali, Marco Fiore, Mario Gerla, Matthias Gerlach, Mohamed Cherif, Marco Fiore, and Thierry Ernst

3. TRACKSS Approach to Improving Road Safety through Sensors Collaboration on Vehicle and in Infrastructure
   Leonardus (Budi) Arief, Newcastle University, UK; and Axel von Arnim, LCPC, France
   Jérôme Härr, Hannes Hartenstein, Jose I. Herrero Zarzosa, Tom H Pew, Tom Jim, Liviu Htope, Frank Kargl, Yacine Khaled, Heechang Kim, and Harisharan Krishnan

4. V2V Communications in Automotive Multi-sensor Multi-target Tracking
   Matthias Roeckl, German Aerospace Center (DLR), Germany; Thomas Strang, German Aerospace Center (DLR), Germany; and Matthias Kranz, German Aerospace Center (DLR), Germany
   Jérôme Härr, Hannes Hartenstein, Jose I. Herrero Zarzosa, Tom H Pew, Tom Jim, Liviu Htope, Frank Kargl, Yacine Khaled, Heechang Kim, and Harisharan Krishnan

5. Towards Advanced Information Fusion for Driver Assistant Systems of Modern Vehicles
   Florian Dittmann, TWT GmbH, Science & Innovation, Germany; Konstantina Geramani, TWT GmbH, Science & Innovation, Germany; George Rigas, University of Ioannina, Greece; Christos Katsis, University of Ioannina, Greece; and Dimitrios Fotiadis, University of Ioannina, Greece
   Jérôme Härr, Hannes Hartenstein, Jose I. Herrero Zarzosa, Tom H Pew, Tom Jim, Liviu Htope, Frank Kargl, Yacine Khaled, Heechang Kim, and Harisharan Krishnan

Sunday 21 September 15.30 – 17.15
WiVeC Posters
1. Efficient Certificate Distribution for Vehicle Heartbeat Messages
   Jeremy Blum, Pennsylvania State University, USA; Alexey Tararakin, Pennsylvania State University, USA; and Azim Eskandarian, The George Washington University, USA

2. On the Cost-Effective Wireless Broadband Service Delivery from High Altitude Platforms with an Economic Business Model Design
   Zhe Yang, Blekinge Institute of Technology, Sweden; and Abbas Mohammed, Blekinge Institute of Technology, Sweden

3. Pseudonym-on-demand: A New Pseudonym Refill Strategy for Vehicular Communications
   Zhendong Ma, Ulm University, Germany; Frank Kargl, Ulm University, Germany; and Michael Weber, Ulm University, Germany

4. Remote Medical Monitoring Through Vehicular Ad Hoc Network
   Hyduke Noshabi, University of California Los Angeles, USA; Eugenio Giordano, University of California Los Angeles, USA; Hagop Hagopian, University of California, Los Angeles, USA; Giovanni Pau, University of California, Los Angeles, USA; Mario Gerla, University of California Los Angeles, USA; and Majid Sarrafzadeh, University of California, Los Angeles, USA

5. The WiMAX ASN Network in the V2I scenario
   Marina Agudo, University of the Basque Country, Spain; Jon Matias, University of the Basque Country, Spain; Eduardo Jacob, University of the Basque Country, Spain; and Marion Berbineau, INRETS, France
6. Study on Distributed Delay Time Control Algorithm for Cooperative Multi-hop Vehicular Networks with Cyclic Delay Diversity
Shizhen Sasaki, Kyoto University, Japan; Hidekazu Murata, Kyoto University, Japan; Koji Yamamoto, Kyoto University, Japan; and Susumu Yoshida, Kyoto University, Japan

7. Multilevel Coded Cooperation for Wireless Vehicular Networks
Muntaz Yılmaz, Dokuz Eylül University, Turkey; and Reyat Yılmaz, Dokuz Eylül University, Turkey

8. 50 Ways to Track Your Lover
Lars Fischer, Technische Universität Darmstadt, Germany; and Claudia Eckert, Technische Universität Darmstadt, Germany

9. A Selective Cluster Index Scheduling Method in OFDMA
Marios Nicolaou, University of Bristol, United Kingdom; Angela Doufexi, University of Bristol, United Kingdom; and Simon Armour, University of Bristol, United Kingdom

Sunday 21 September 15.30 – 17.15
WiVeC Demonstrations

1. The Design of a Wireless Access for Vehicular Environment (WAVE)/Prototype for Intelligent Transportation System (ITS) and Vehicular Infrastructure Integration (VII)
Weidong Xiang, University of Michigan, Dearborn, USA; Yue Huang, University of Michigan, Dearborn, USA; and Sudhan Majhi, University of Michigan, Dearborn, USA

2. C-Vet an open research platform for VANETs: Evaluation of Peer to Peer Applications in Vehicular Networks
Eugenio Giordano, University of California Los Angeles, USA; Andrea Tomatis, Politecnico di Torino, Italy; Abhishek Ghosh, University of California Los Angeles, USA; Giovanni Pau, University of California Los Angeles, USA; and Mario Gerla, University of California Los Angeles, USA

3. Demonstrator: V2V Communications in Automotive Multi-sensor Multi-target Tracking
Matthias Roeckl, German Aerospace Center (DLR), Germany; and Matthias Kranz, German Aerospace Center (DLR), Germany

4. NCTUns 5.0: A Network Simulator for IEEE 802.11(p) and 1609 Wireless Vehicular Network Researches
Shie-Yuan Wang, National Chiao Tung University, Taiwan; and Chih-Chen Lin, National Chiao Tung University, Taiwan

5. Secure and Privacy-Enhancing Vehicular Communication: Demonstration of implementation and operation
Petra Ardeleanu, EPFL, Switzerland; and Panagiotis (Panos) Papadimitratos, EPFL, Switzerland

6. U2VAS: A Research Communication Stack for Vehicular Networks
Elmar Schoch, Ulm University, Germany; Frank Kargl, Ulm University, Germany; Fabian Wolf, Ulm University, Germany; and Michael Weber, Ulm University, Germany

7. Visualizing and Understanding Spatio-Temporal Correlations of Data Dissemination in Vehicular Environments
Tessa Tielert, Universität Karlsruhe (TH), Germany; Felix Schmidt-Eisenlohr, Universität Karlsruhe (TH), Germany; and Hannes Hartenstein, Universität Karlsruhe (TH), Germany

Monday 22 September 10.30 – 12.00
PHY & MAC

1. Channel Update Algorithm for VBLAST Architecture in Vehicular Ad-hoc Networks
Ghassan M.T. Abdalla, University of Plymouth, UK; Mosa Ali Abu-Rgheff, University of Plymouth, UK; and Sidi-Mohammed Senouci, France Telecom, France

2. Doppler Spread Suppression Technique for an L-band Digital Radio Broadcast System
Abdelmonamen Mouki Benani, Communications Research Centre Canada, Canada; André Carr, Communications Research Centre Canada, Canada; and Martin Quenneville, Communications Research Centre Canada, Canada

Youichiro Nakahata, Kitakyushu University, Japan; Katsushi Ono, Kitakyushu University, Japan; Isamu Matsunami, Kitakyushu University, Japan; and Akihiro Kajiwara, Kitakyushu University, Japan

4. Optimizing Adaptive Transmission Policies for Wireless Vehicular Communications
Miguel Sepulcre, University Miguel Hernandez, Spain; and Javier Gozalvez, University Miguel Hernandez, Spain

Katrin Bilstrup, Halmstad University, Sweden; Elisabeth Uhlemann, Halmstad University, Sweden; Erik G. Ström, Chalmers University of Technology, Sweden; and Urban Bilstrup, Halmstad University, Sweden

Monday 22 September 13.30 – 15.00
Protocols

1. LOUVRE: Landmark Overlays for Urban Vehicular Routing Environments
Kevin Lee, UCLA, USA; Michael Le, UCLA, USA; Jerome Harri, University of Karlsruhe, Germany; and Mario Gerla, UCLA, USA

2. Media Access Technique for Cluster-Based Vehicular Ad Hoc Networks
Mostafa Taha, Assiut University (ARE), Egypt; and Yassin Hasan, Assiut University (ARE) - Taibah University (KSA), Egypt

3. Optimized Position Based Gossiping in VANETs
Beto Bako, Ulm University, Germany; Elmar Schoch, Ulm University, Germany; Frank Kargl, Ulm University, Germany; and Michael Weber, Ulm University, Germany

4. Operation and Performance of Vehicular Ad-hoc Routing Protocols in Realistic Environments
Ramon Bauza, University Miguel Hernandez, Spain; Javier Gozalvez, University Miguel Hernandez, Spain; and Miguel Sepulcre, University Miguel Hernandez, Spain

5. A Novel Headway-Based Vehicle-to-Vehicle Multi-Mode Broadcasting Protocol
Mostafa Taha, Assiut University (ARE), Egypt; and Yassin Hasan, Assiut University (ARE) - Taibah University (KSA), Egypt