

Training School Vehicular Connectivity



Location:

FTW Telecommunications Research Center Vienna
TechGate Vienna, Lecture Hall # 3.2, 3rd floor
Donau-City Str. 1
1220 Vienna, Austria



Duration and Schedule: May 21-23, 2012 (Monday, Tuesday, Wednesday).

Registration via website:

<http://www.ftw.at/events/>

Speakers:

Laura Bernadó (FTW, Austria)
Oliver Klemp (BMW Research and Technology, Germany)
Christoph Mecklenbräuer (Vienna University of Technology, Austria)
Claude Oestges (Université catholique de Louvain, Belgium)
Dieter Smely (Kapsch TrafficCom, Austria)
Veronika Shivaldova (Vienna University of Technology, Austria)
Erik Ström (Chalmers University of Technology, Sweden)
Thomas Zemen (FTW, Austria)

General Outline:

- Introduction to wireless propagation
- Information theory background: Multi-user communications, rate-reliability trade-off, and delay-constrained capacity.
- Vehicular channel characterisation from measurements
- Models for vehicular channels
- Vehicular on-board antennas and RF architecture
- Physical layer design: OFDM and Forward Error Correction
- Multiple access: CSMA/CA and STDMA, MAC layer design
- IEEE 802.11p performance simulation
- IEEE 802.11p performance measurements
- Intelligent Transport System: architecture aspects
- Intelligent Transport System: Standardisation issues

Detailed Draft Schedule:

First Day: Monday May 21, 2012

9:00 – 9:15: welcome and practicalities

9:15 – 10:30: T. Zemen: Introduction to wireless propagation (I)

10:30 – 10:45: coffee break

10:45 – 12:30: T. Zemen: Introduction to wireless propagation (II)

12:30 – 14:00: lunch break

14:00 – 15:30: C. Mecklenbräuker: Information theory background

15:30 – 15:45: coffee break

15:45 – 17:00: L. Bernadó: Vehicular channel characterisation from measurements

Second Day: Tuesday May 22, 2012

9:00 – 10:30: C. Mecklenbräuker: PHY layer design: OFDM and FEC

10:30 – 10:45: coffee break

10:45 – 12:30: E. Ström: MAC layer design: CSMA/CA & STDMA

12:30 – 14:00: lunch break (not provided)

14:00 – 15:30: O. Klemp: Vehicular on-board antennas and RF

15:30 – 15:45: coffee break

15:45 – 17:00: T. Zemen: WAVE performance simulations

19:00 – 22:00 social event

Third Day: Wednesday May 23, 2012

9:00 – 10:30: V. Shivaldova: WAVE performance measurements

10:30 – 10:45: coffee break

10:45 – 12:30: C. Oestges: Models for vehicular channels

12:30 – 14:00: lunch break (not provided)

14:00 – 15:30: D. Smely: ITS Architecture and Standardisation

15:30 – 15:45: closing

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