

**Jeudi 03 Nov. 2011**

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Accueil café : 09h30:10h00

Ouverture des journées : 10h00:10h30

Tutorial du Pr. Bertrand DUCOURTHIAL – Laboratoire Heudiasyc : 10h30:12h30

**Design and validation of applications in vehicular networks**

In this tutorial, we introduce the vehicular networks research field. We begin by presenting the main motivations and applications of vehicular networks. We then discuss about research issues, current development and methodology for validating new results. Next, we focus on some applications, covering road safety, infrastructure management and services to passengers. We will have a look on their requirements in terms of protocols, architectures and distributed algorithms.

Présentations : 12h30:13h00

**Sécurité des communications dans les réseaux de capteurs sans fil (RCSF)**

*Ismail Mansour, Gérard Chalhoub, Michel Misson, LIMOS CNRS - Aubières*

Repas : 13h00/14h30

Présentations : 14h30 – 16h30

**Optimized handover detection for IEEE 802.11a deployment in tunnels for metro applications**

*Mohamed Kassab, Marion Berbineau, Martine Wahl, LEOST, IFSTTAR - Villeneuve d'Ascq*

**Diffusion efficace d'un message d'urgence dans un réseau ad hoc de véhicules**

*Wahabou Abdou, Christelle Bloch, Damien Charlet, François Spies, LIFC - Montbéliard*

**Adaptive MIMO algorithms for train-to-wayside transmissions in tunnels**

*Yann Cocheril, Baptiste Vrigneau, Charlotte Langlais, Marion Berbineau, Crépin Nsiala-Nzéza, Jean-Noël Vétillard, IFSTTAR, LEOST - Villeneuve d'Ascq, XLIM-SIC - Futuroscope, Institut Telecom-Telecom Bretagne - Brest, ALSTOM-TIS*

**UM-CRT model optimisation**

*Slimane Bouhadi, Jonathan Ledy, Anne-Marie Poussard, XLIM-SIC - Futuroscope, MIPS-GRTC - Colmar*

Démonstrations et séminaires entreprises (2h00) 17h00:19h00

**Génération de signaux altérés (Fading...) IEEE 802.11p et Analyse temps réel.**

**Application à l'analyse d'une transmission C2C. Théorie et mise en œuvre pratique**  
*Bernard Subtil et Cyril Fombonne, Sté Rohde & Schwarz*

***Emulation of a CAR2CAR Wireless Channel.***

*Fading in a CAR2CAR environment and Virtual drive Test)*

**Testing Considerations for the Positioning [and Network] Elements of V2X.**

*Current developments in satellite navigation relevant to connected vehicles.*

*Improving positioning performance - availability, accuracy and integrity considerations.*

*Moving beyond proof of concept testing towards performance and conformance testing for V2X.*

*Video demonstration of an approach synthetic testing for V2X R&D.*

*Frédéric Touma et John Pottle, Sté Spirent Communications*

Repas en commun : 20h00:23h00 – Winstub Le Cygne - Colmar

## Vendredi 04 Nov. 2011

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Accueil café : 08h30:09h00

Tutorial du Pr. Hannes Hartenstein – KIT (2h00) : 09h00:11h00

### **Channel modeling for vehicular networks: intersections and combined PHY/MAC/NET simulations**

*Hannes Hartenstein (KIT), Jens Mittag (KIT) and Thomas Mangel (BMW)*

In this tutorial, we first survey recent work in the field of channel modeling for vehicular communication networks and discuss why and when accurate modeling matters. Then, we will in detail address the two issues mentioned in the title. First, we present our work on modeling and simulation of the radio channel at intersections in urban scenarios and compare previously used models with the one based on our measurements. Second, we report on our recent work in bringing a physical layer simulator into the NS-3 network simulator for highly accurate cross-layer PHY/MAC/NET simulations. We discuss our findings how results differ when highly accurate channel models are used instead of models that assume that the channel is 'constant' at the packet level. Of course, there is a price to pay for this type of cross-layer simulations: we also discuss options how to make use of GPGPUs to speed up computations for these simulation studies.

Pause café : 11h00:11h30

Présentations : 11h30:13h00

### **Mécanisme d'échange de files d'attente pour améliorer la QoS d'une architecture multi-couches**

*Nancy El Rachkidy, Gérard Chalhoub, Alexandre Guitton, Michel Misson, LIMOS CNRS - Aubières*

### **Q-OLSR adaptation for mobility in VANETs**

*Hanene Gabteni, Patrick Soundi, LAMIH-DIM, CNRS, University of Valenciennes et Hainaut Cambresis*

### **A large-scale urban vehicular mobility trace for network research**

*Sandesh Upoor and Marco Fiore INSA, INRIA - Lyon*

Repas : 13h00:14h30

Présentations : 14h30 – 16h00

### **Architecture et méthode d'accès pour réseaux de capteurs linéaires**

*Malick Ndoye, Frédérique Jacquet, Michel Misson, Laboratoire d'Informatique UCAD - Dakar-Fann, Sénégal, LIMOS CNRS - Aubières*

### **Impact énergétique de l'algorithme MAC pour un réseau de capteurs sans fil industriel**

*Adrien van den Bossche, Thierry Val, Nicolas Fourty, IRIT-IRT CNRS - Toulouse, LCIS/INPG - Valence*

### **Protocole de contrôle commande homogène sur support hétérogène : Application efficacité énergétique**

*Nicolas Fourty, Denis Genon-Catalot, LCIS/INPG - Valence*

Debriefing et clôture des journées : 16h00:17h00