

Curriculum Vitae

Karel HEURTEFEUX

Address

CNRS, Verimag - Laboratory / Synchrone Team
2, Avenue de Vignate,
38610 Gières, France
Tel. : +33 (0)4 56 52 03 86

Born 10.21.1982

French

karel.heurtefeux@imag.fr
<http://www-verimag.imag.fr/~heurtefe>
IEEE Graduate Student Member #80745232

Education

- 2006–2009** **Thesis (PhD student)**, INRIA ARES / CITI - INSA Lyon, France.
Topic : *Self-organization in Wireless Sensor Networks*.
PhD supervisor : Pr. Fabrice Valois
soutenance due : November 2009.
- since Sept 2008** **Teaching assistant (ATER)** (1 year) at the INSA Lyon, France.
Lectures : networking, operating systems and programming.
- sept-dec 2008** **Visiting researcher** (3 months) at the School of Electronics and Information, North-western Polytechnic University, Xian, China.
Collaboration with Prof. Li Bo
- 2005–2006** **Master 2 Networks, Telecoms and Service**, Claude Bernard Lyon 1 University, France. *Mention : good*.
Internship : Self-organization in Wireless Sensor Networks. (CITI, INSA-Lyon).
- 2004–2005** **Master Computer Science**, Claude Bernard Lyon 1 University, France.
Cisco Certified Network Associate 1 et 2.
Internship : Installation of a web site for material management (DDASS du Rhône)
- 2003–2004** **3rd year of bachelor's degree : Computer Science**, Claude Bernard Lyon 1 University, France.
- 2002–2003** **2nd year of bachelor's degree : Computer Science and Math**, Claude Bernard Lyon 1 University, France.
- 2000–2002** **1st year of bachelor's degree : Computer Science and Math**, Claude Bernard Lyon 1 University, France.
- 2000** **scientific baccalaureate**, Lycée Juliette Récamier, Lyon, France.

Courses

Courses on the Network and System programming and Java programming were made at the Telecommunications, Services and Uses Department of INSA Lyon with third year students.

Courses on the Networks Design and Optimization and Networks Architectures and Protocols were made at the Telecommunications, Services and Uses Department of INSA Lyon with fourth year students.

Courses on Operating Systems and Web programming were made at the Telecommunications, Services and Uses Department of INSA Lyon with third year students.

Courses on Databases were made at the first cycle Department of UCBL I with second year students.

Year 2008-2009

1. **Network and System programming**, INSA Lyon, TP (32h).
2. **Networks Architectures and Protocols : BGP and Multicast**, INSA Lyon, TD (24h).
3. **Java programming**, INSA Lyon, TD (6h), TP (36h).

Year 2007-2008

1. **Networks Design and Optimization : Markov Chains and Petri Nets**, INSA Lyon, TD (16h).
2. **Networks Architectures and Protocols : RIP, OSPF, BGP, VLAN**, INSA Lyon, TP (24h).
3. **Web programming**, INSA Lyon, TD (2h) et TP (20h).

Year 2006-2007

1. **Networks Design and Optimization : Markov Chains and Petri Nets**, INSA Lyon, TD (16h), TP (4h).
2. **Operating Systems**, INSA Lyon, TP (24h).
3. **Databases, Oracle and SQL programming**, UCB Lyon 1, TP (32h).

intern supervisory

2009 Co-supervisory of a end-of-study Project, 4 months, Valentin Roland and Francois Dumas.

Co-supervisor : Pr. Fabrice Valois.

Title : Optimization of a realistic CORONIS sensor network topology.

Topic : The aim of this project is to evaluate performance in energy, control packets and latency of network organization between the tree of clusters classically used by Coronis Systems and a self-organization protocol developed at CITI Laboratory.

2008 Co-supervisory of a end-of-study Project, 4 months, Carole Verbeck and Yiming Lu.

Co-supervisor : Pr. Fabrice Valois.

Title : Performance of routing protocols in noised environment.

Topic : The project consists in analyzing traditional routing protocols of the literature, under realistic conditions and assumptions (many interferences, collision and noise). The simulation will be done with the platform of WSNNet simulation, developed in CITI Laboratory.

List of Publications

International Proceedings

1. **Karel Heurtefeux**, Florence Maraninchi and Fabrice Valois. AreaCast : a cross-layer approach for a communication by area in wireless sensor networks. In *IEEE International Conference on Networks (ICON'11)*, Singapore, December 2011.
2. Stéphane Devismes, **Karel Heurtefeux**, Yvan Rivierre, Ajoy K. Datta and Lawrence L. Larmore. Self-Stabilizing Small k-Dominating Sets. In *International Conference on Networking and Computing (ICNC)*, Osaka, Japan, December 2011.
3. **Karel Heurtefeux** and Fabrice Valois. Distributed Localization Protocol for Routing in a Noisy Wireless Sensor Network. In *5th International Workshop on Localized Communication and Topology Protocols for Ad hoc Networks (LOCAN'09)*, in conjunction with MSN, Wu Yi Shan, China, December 2009.
4. **Karel Heurtefeux** and Fabrice Valois. Distributed Qualitative Localization for Wireless Sensor Networks. In *7th International Conference on AD-HOC Networks and Wireless*, Sophia Antipolis, France, September 2008.
5. **Karel Heurtefeux** and Fabrice Valois. Topology Control Algorithms : a qualitative study during the sensor networks life. In *3rd International Workshop on Localized Communication and Topology Protocols for Ad hoc Networks (LOCAN'07)*, in conjunction with MASS, Pisa, Italy, October 2007.
6. **Karel Heurtefeux** and Fabrice Valois. Self-Organisation protocols : Behavior during the sensor network life. In *IEEE International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC'07)*, Athens, Greece, September 2007.

French Proceedings

1. **Karel Heurtefeux**, Florence Maraninchi and Fabrice Valois. AreaCast : une communication par zone dans les réseaux de capteurs sans fil. In *Rencontres Francophones sur les Aspects Algorithmiques de Télécommunications (AlgoTel)*, Cap Estérel, France, May 2011.
2. Stéphane Devismes, **Karel Heurtefeux**, Yvan Rivierre, A. K. Datta and L. L. Larmore. Algorithme auto-stabilisant construisant un ensemble k-dominant minimal borné. In *Rencontres francophones du Parallélisme (RenPar)*, Saint-Malo, France, May 2011.
3. **Karel Heurtefeux** et Fabrice Valois. Localisation distribuée pour routage en environnement bruité dans les réseaux de capteurs. In *Colloque francophone sur l'ingénierie des protocoles (CFIP)*, Strasbourg, France, October 2009. **Best Paper Award**
4. **Karel Heurtefeux** et Fabrice Valois. Localisation collaborative pour réseaux de capteurs. In *Colloque francophone sur l'ingénierie des protocoles (CFIP)*, Les Arcs, France, March 2008
5. **Karel Heurtefeux** et Fabrice Valois. Protocoles d'auto-organisation : une étude qualitative au cours de la vie des réseaux de capteurs. In *9ème Journées Doctorales Informatique et Réseau (JDIR)*, Villeneuve d'Ascq, France, January 2008.

Seminars

1. Self-Organisation for Wireless Sensor Networks and Self-Organisation applied to localization : QLoP
October 2008 - Northwestern Polytechnical University, Xi'an, China
2. Self-Organisation for Wireless Sensor Networks
September 2008 - Shanghai Jiao Tong University, Shanghai, China
3. Self-Organisation for Wireless Sensor Networks
September 2008 - Zhejiang University, HangZhou, China

Meetings

1. Localisation distribuée pour routage en environnement bruité dans les réseaux de capteurs
October 2009 - Premières journées du projet SEmba du cluster Informatique, Signal, Logiciel Embarqué
2. QLoP : Localisation collaborative dans les réseaux de capteurs.
Journées ResCom - February 2008 - Marne-la-Vallée, France
3. QLoP : Localisation qualitative dans les réseaux de capteurs
Journées EmSoC - Octobre 2007 - Aussois, France
4. Poster : Contrôle de topologie : étude qualitative au cours de la vie d'un réseau de capteurs
Ecole d'été ResCom (Réseau de Communication) - juin 2007 - Calcatoggio, Corse
5. Protocoles d'auto-organisation : comportement au cours de la vie d'un réseau de capteurs
Réunion ARESA - mai 2007 - Grenoble, France
6. Protocoles d'auto-organisation : comportement au cours de la vie d'un réseau de capteurs
Journées ResCom (Réseau de Communication) - mars 2007 - Paris, France