Guillaume-Jean Herbiet

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Ph.D. student in dynamic networks and distributed systems
University of Luxembourg
Faculty of Sciences, Technology and Communication
Computer Science and Communication Group

Education

- **Georgia Institute of Technology** — **Atlanta, GA, USA**
  College of Computing, Master of Science in Computer Science. — *2007 (GPA: 4.0/4.0)*
- **Dimplôme d'ingénieur Supélec (Master's degree in Engineering)** — **Metz, France**
  Speciality: Computer Sciences and Telecommunications. — *2007*
- **French Baccalauréat (French "A" levels)** — **Longwy, France**
  Scientific major: mathematics, physics, chemistry. Awarded with high honors. — *2001 (TB, First class)*

Coursework: Computer networks, wireless and ad hoc networks, personal and mobile communications, network security, internetworking protocols, network management, distributed computing, collaborative computing, statistics and probabilities.

Research and Teaching Experience

- **Thales Communications France** — **Colombes, France**
  Research engineer — *2006 – 2007*
  - Development of an ad hoc protocol stack for tactical communications devices in collaboration with Rockwell Collins Inc.
  - Optimization of ad hoc routing protocol (OLSR) for TDMA-based channel access
  - QoS Routing protocol with end-to-end bandwidth guarantee on ad hoc networks
  - Multicast routing protocol for ad hoc networks, compatible with PIM-SM
- **University of Luxembourg** — **Luxembourg**
  Teaching assistant, Master MICS2 — *2008 – Present*
  - Master thesis co-supervision of Imen Laabidi: realistic urban mobility simulation (2009)
  - Practical works in middleware and network simulation
  - Student supervision in projects related optimization of distributed algorithms and solutions
- **Georgia Institute of Technology** — **Atlanta, GA, USA**
  Teaching assistant in Network Management, Master of Science in Computer Science — *2007*
  - Course office hours
  - Assignments and exams preparation and grading

Invited lectures and talks

- **ERCIM Social Network Analysis Workgroup** — **Dublin, Ireland**
  Meeting on Algorithmic Aspects of Social Network Analysis — *2010*
  - Presentation of SHARC and SAw-SHARC, two contributions on the field of distributed community detection over dynamic networks
  - Open discussion with members of the workgroup
- **Invited lecture at the Georgia Institute of Technology Lorraine** — **Metz, France**
  Introduction to wireless ad hoc networks — *2008*
  - Joint Electrical Engineering and Computer Science bachelor class on Computer Communication and Networking (ECE3076 / CS3251)
  - Invited by Prof. Henry Owen

Computer Skills

Languages: C, C++, Java, LaTeX, Perl, PHP, Python, shell scripting, SQL
Scientific software: GNUPlot, Mathematica, Matlab, NS-2, NS-3, OMNeT++, OPNET
Operating systems: Mac OS, GNU/Linux (Debian, ArchLinux), Microsoft Windows

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Foreign Languages

French: Native speaker
English: Fluent (TOEFL: 208/300), work and study experience in native English-speaking countries
Spanish: Fair writing, reading and speaking skills
German: Good notions to be reactivated
Chinese: Some notions

Miscellaneous

Driving license
Sports: Scuba-diving, swimming, bicycling, hiking
Interests: Photography, theater, classical movies

Publications and other contributions

International conferences with proceedings and reviews

[1] Guillaume-Jean Herbiet and Pascal Bouvry. Urbisim: a framework for simulation of ad hoc networks in realistic urban environment. In *GIIS'09: Proceedings of the Second international conference on Global Information Infrastructure Symposium*, pages 373–378, Piscataway, NJ, USA, 2009. IEEE Press.

[2] Guillaume-Jean Herbiet and Pascal Bouvry. SHARC: community-based partitioning for mobile ad hoc networks using neighborhood similarity. In *IEEE WoWMoM 2010 (IEEE WoWMoM 2010)*, Montreal, Canada, 6 2010.

Other contributions

- **An Attack Detection Scheme for the Optimized Link State Routing Protocol** *2007*
  Use of an extended state machine and temporal formalism to capture safe behavior of the routing protocol and detect eventual misbehaving nodes.
- **Client Perceived Performance in a Campus Network with a Wireless LAN Controller** *2007*
  End-user performance assessment of various wireless and mobile communication using 802.11 and impact of the introduction of a Wireless Controller System in a campus network.
- **Voice over Wireless IP call capacity and quality improvement** *2007*
  Study of VoIP call capacity using 802.11 and determination of several improvements to achieve better support depending on topology and transmission mode (infrastructure or ad hoc)
- **Prospective study on the network infrastructure of the Metz General Hospital** *2006*
  Solutions for introduction of wireless-based services for medical record access and update, VoIP, video monitoring, ...
- **Prototyping of a secured Wi-Fi architecture on the Georgia Tech Lorraine campus** *2006*
  Designing a solution, based on 802.11i standard, for secure deployment and authentication of wireless network users on campus, implementing a concrete architecture relying on a RADIUS server interfacing with the campus directory (LDAP)
- **Analysis of mobile Ad hoc networks routing solutions** *2005*
  Studying the different protocols for routing in a mobile Ad hoc network and their applications, comparing their performances
- **Network discovery and monitoring application** *2005*
  Utilizing SNMP queries to discover a LAN and update map on network events, building a PHP based application to display information and an interactive map of the network.
- **Deployment of an H-323 based videoconferencing architecture** *2004*
  Installing and configuring an H-323 gateway (Gatekeeper), interfacing with campus directory for authentication, developing an administration interface

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References

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