

Cédric Bonhomme

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Objectives A position in the field of computer science with special interests in security applications, privacy and software.

Experience SMILE "SECURITY MADE IN LËTZEBUERG" 2017 - PRESENT
CIRCL/CASES

R&D ENGINEER 2009 - 2017
LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY

Android reverse engineering visualization (for malware identification)

- model injection and visualization capabilities with JSMF;
- the JSMF metamodel is build based on a protobuf schema file (using a PEGJS grammar). More information.

Development of a shelter database management platform for the Red Cross (more information).

Development of a SaaS technology watch solution based on Flask, MongoDB and Gevent.

Participation in the MICIE European project.

Participation in the WiSafeCar project

- analysis and design of a solution based on Multi-Agent Systems (with SPADE).

Participation in the BUGYO Beyond European project with the following objectives:

- analysis of the evolving nature of the policy of security of critical infrastructures;
- propose various scenarios of implementation for measuring levels of assurance;
- implementation of a solution for BUGYO Beyond (with JADE).

Computer skills

Programming language:

- depth knowledge : Python, C, Bash;
- good knowledge : JavaScript, Java, C++, Perl;
- intermediate knowledge: Objective Caml, Go, Rust, PHP;
- basic knowledge: Haskell.

Descriptive language:

- HTML 5, XML;
- L^AT_EX.

Systems:

- good knowledge : GNU/Linux;
- system used : OpenBSD;
- virtualization : Xen, VMware ESXi, KVM (Kernel-based Virtual Machine).

Cloud computing:

- deployment of SaaS applications on the Heroku and Google App Engine PaaS platforms;
- experience with the Amazon EC2 and S3 IaaS services.

Cryptography & Security:

- study of RSA (Python implementation) and ElGamal;
- hybrid cryptography (PGP), PKI;
- knowledge of network related protocols (TCP/IP, BGP, OSPF, DNS);
- knowledge of network security (including remote access security).

Risk management:

- study of the security standards: ISO/IEC 2700x, ISO/IEC 15408;
- security audit: EBIOS.

Publications

C. Bonhomme, G. Arnould, D. Khadraoui, "Dynamic Carpooling Mobility Services based on Secure Multi-Agent Platform", in Global Information Infrastructure and Networking Symposium 2012 (GIIS'12), Choroní, Venezuela, December 2012.

M. Ouedraogo, H. Mouratidis, A. Hecker, C. Bonhomme, D. Khadraoui, D. Preston, "A New Approach to Evaluating Security Assurance", in 7th International Conference on Information Assurance and Security, Melaka, Malaysia, December 2011.

G. Guemkam, C. Feltus, P. Schmitt, C. Bonhomme, D. Khadraoui, Z. Guessoum, "Reputation Based Dynamic Responsibility to Agent Assignment for Critical Infrastructure". IAT 2011: 272-275

C. Bonhomme, C. Feltus, M. Petit, "Dynamic Responsibilities Assignment in Critical Electronic Institutions - A Context-Aware Solution for in Crisis Access Right Management", in Proceedings of the The sixth International Conference on Availability, Reliability and Security ("ARES 2011 - The International Dependability Conference"), Vienna, Austria.

G. Guemkam, C. Feltus, C. Bonhomme, P. Schmitt, B. Gâteau, D. Khadraoui, Z. Guessoum, "Financial Critical Infrastructure: A MAS Trusted Architecture for Alert Detection and Authenticated Transactions", in Proceeding of the Sixth IEEE Conference on Network Architectures and Information Systems Security (SAR-SSI 2011), La Rochelle, France.

T. Schaberreiter, C. Bonhomme, J. Aubert, C. Incoul, "Support tool development for real-time risk prediction in interdependent critical infrastructures", in International Workshop on Risk and Trust in Extended Enterprises (RTEE2010), November 1st - 4th, 2010, San Jose, CA, USA.

C. Bonhomme, C. Feltus, and D. Khadraoui, "Multi-Agent based Decision Mechanism for Incident Reaction in Telecommunication Network" (poster), in Proceedings of the The eighth ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2010), Hammamet, Tunisia.

P. Schmitt, C. Bonhomme, J. Aubert, and B. Gâteau, "Programming electronic institutions with UTOPIA", in Demo Session of the 22nd International Conference

on Advanced Information Systems Engineering (CAiSE'10), 2010.

P. Schmitt, C. Bonhomme, and B. Gâteau, “Easy programming of Agent based Electronic Institution with UTOPIA”, in the 10th international conference on New Technologies of Distributed Systems (NOTERE 2010), Tozeur - Tunisia, May 31 - June 2, 2010.

C. Feltus, D. Khadraoui, and C. Bonhomme, “Electric blackout prevention: Toward a computer-mediated weather alert broadcasting solution”, in International Conference on Society and Information Technologies (ICSIT 2010), pp. 45-50, April 6th - 9th, 2010 Orlando, Florida, USA.

Education	<i>Master SSIC</i> , University Paul Verlaine - Metz	2008 - 2009
	<i>Master 1</i> , University Paul Verlaine - Metz	2007 - 2008
	<i>Bachelor degree in computer science</i> , University Paul Verlaine - Metz	2006 - 2007
	<i>DEUG MIAS (Mathematics, Computer Science and Physics)</i> , University Paul Verlaine - Metz	2002 - 2005
	<i>A-levels in science</i> , Majors : Mathematical, Physics. Sarreguemines	2002

Extra-curricular activities

Contributor to some free projects

- contributions through various projects
<https://github.com/cedricbonhomme>.

Language skills

- French: native language;
- English: read, written and spoken;
- German: average understanding.

Miscellaneous

- driving license category B;
- sports: ice skating, bike and running;
- hobby: photography.