Luca Baldesi

Curriculum Vitae

Profile

I'm a Ph.D. student at the Department of Information Engineering and Computer Science (DISI) at the University of Trento, Italy. I received my Bachelor and Master degrees in Computer Engineering from the University of Florence in 2011 and 2013 respectively. I have held a position as a research fellow at the University of Trento (2013-2014). My research interests are in the area of computer networks and content distribution. Currently, my work focuses on: video streaming on community networks, centrality-based optimization and graph theory.

Education

2011–2013 **Masters of Computer Science Engineering**, *The University of Florence*, Italy, 110/110 cum laude.
Career Mention

2007–2011 **Bachelor of Computer Science Engineering**, *The University of Florence*, Italy, 107/110.

Masters Thesis

Title *Analysis of the Bluetooth protocol and robustness testing of its implementations in mobile devices and operating systems*

Supervisors Professor Tommaso Pecorella & Ph.D. Leonardo Maccari

Description This thesis investigates the security of Bluetooth devices against black box fuzzy attacks.

Experience

Vocational

2014–Present **Ph.D. student**, *University of Trento*, Trento, Italy.
Research in distributed networked system optimization: local strategies, cross-layer approaches and centrality driven distribution, supervised by Prof. Renato Lo Cigno.

2016–2016 **Ph.D. period abroad**, *University of California*, Irvine.
Visiting PhD. student for nine months working in the computer science department on random graph properties and generators, supervised by Prof. Athina Markopoulou and Prof. Carter T. Butts.
Project contribution:

- Small: Network Sampling and Construction Methods for Inference and Anonymization; I focused on a novel framework for graph data generation and anonymization leveraging global network characteristics.

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2013–2014	**Research fellowship**, *University of Trento*, Trento, Italy.

Research in the fields of peer-to-peer live streaming video and Wireless Community Networks. Involved in the EIT "Smart Ubiquitous Content" and "Open Source P2P Streaming" projects. Project contribution:

- EIT - Smart Ubiquitous Content; the project goal was to empower economic, massive content delivery in heterogeneous networks. I contributed on the Streaming and Traffic Management

- Open Source P2P Streaming; sub-project of the European FP7 Confine project; I contributed on evaluating and tailoring existing P2P distribution systems in the environment of Wireless Community Networks.

Teaching activities

2013–present	**Thesis co-advising**, *University of Trento*, Trento, Italy.

- Lorenzo Ghiro, Luca Baldesi, and Renato Lo Cigno. Logic topology adaptation strategy comparison for P2P video distribution on wireless community netwroks, 2014

2014–2015	**Teaching assistant**, *University of Trento*, Trento, Italy.

- *Simulation and Performance Evaluation* course at the Department of Information Engineering and Computer Science.

- *Privacy, Trust and Security* course part of the SCoDeM master at the Department of Information Engineering and Computer Science.

Research skills

Presentations International conferences and projects meetings.

Reviews:

- IEEE ComSoc Journal on Selected Areas in Communications

- Elsevier Journal of Systems and Software

- ACM SIGCOM Computer Communication Review

- IFIP Networking Conference

- ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems

- IEEE Vehicular Networking Conference

- IEEE Global Communication Conference

- IEEE International Conference on Communications: Ad-hoc and Sensor Networking Symposium

Computer skills

Advanced	GNU/Linux system administration, C, Ruby/Rails, Python, ReST architectural style and GIT workflow.
Intermediate	Java, C++, MySQL, Docker and LXC virtualisation solutions.
Basic	Arduino prototyping, OpenWRT systems.

Languages

Italian	Mothertongue
English	Advanced (B2)

Publications

[1] Luca Baldesi, Leonardo Maccari, and Renato Lo Cigno. Optimized Cooperative Streaming in Wireless Mesh Networks. In *2016 15th IFIP Networking Conference*, 2016

[2] Luca Baldesi and Leonardo Maccari. NePA TesT: Network Protocol and Application Testing Toolchain for Community Networks. In *2016 12th Annual Conference on Wireless On-demand Network Systems and Services (WONS)*, pages 1–8, Jan 2016

[3] Luca Baldesi, Leonardo Maccari, and Renato Lo Cigno. Improving P2P streaming in Wireless Community Networks. *Computer Networks*, 93, Part 2:389 – 403, 2015

[4] Luca Baldesi, Leonardo Maccari, and Renato Lo Cigno. Improving P2P Streaming in Community-Lab Through Local Strategies. In *2014 IEEE 10th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, pages 33–39. IEEE, 2014

[5] Luca Baldesi, Leonardo Maccari, and Renato Lo Cigno. Live P2P Streaming in CommunityLab: Experience and Insights. In *The 13th IEEE IFIP Annual Mediterranean Ad Hoc Networking Workshop*, 2014

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