

CURRICULUM VITAE

LORENZO DE CARLI

February 2012

Graduate Student
Computer Sciences Department
1210 West Dayton Street
Madison, Wisconsin 53706-1685

+1 608 262-6611 (Office)
<my first name> at cs dot wisc dot edu
www.cs.wisc.edu/~lorenzo/

EDUCATION

- 2008-present Ph.D. in Computer Sciences at UW-Madison, Madison, WI, USA
Advisors: Somesh Jha and Karthikeyan Sankaralingam
- 2005-2007 M.Sc. in Computer Engineering at Politecnico di Torino, Turin, Italy
Advisors: Fulvio Risso and Mario Baldi
Thesis: *Combined use of multiple network connections in the same device*
- 2001-2005 B.Sc. in Computer Engineering at Politecnico di Torino, Turin, Italy

WORK EXPERIENCE AND OCCUPATIONS

- 2008-present Research assistant at UW-Madison, WI, USA
Research area: Flexible lookup modules for network devices
- Summer 2011 Research intern at International Computer Science Institute (ICSI), Berkeley, CA, USA
- Summer 2010 Research intern at Microsoft Research, Bangalore, Karnataka, India
- Summer 2009 Software intern at VMware Inc., Palo Alto, CA, USA
- 2007-2008 Research assistant at Politecnico di Torino, Turin, Italy
Research area: Algorithms and languages for deep packet inspection

PUBLICATIONS

- R. Bhagwan, L. De Carli, V. N. Padmanabhan, K. P. N. Puttaswamy. Deja Vu: Fingerprinting Network Problems. *ACM CoNEXT*, December 2011.
- N. Vaish, T. Kooburat, L. De Carli, K. Sankaralingam, C. Estan. Experiences in Co-designing a Packet Classification Algorithm and a Flexible Hardware Platform. *ACM/IEEE ANCS*, October 2011.
- A. Kumar, L. De Carli, S. J. Kim, M. de Kruijf, K. Sankaralingam, C. Estan, S. Jha. Design and Implementation of the PLUG Architecture for Programmable and Efficient Network Lookups. *International Conference on Parallel Architectures and Compilation Techniques (PACT)*, September 2010.
- L. De Carli, Y. Pan, A. Kumar, C. Estan, K. Sankaralingam. PLUG: Flexible Lookup Modules for Rapid Deployment of New Protocols in High-speed Routers. *ACM SIGCOMM*, August 2009.
- A. Baldini, L. De Carli, F. Risso. Increasing Performance of TCP Data Transfers Through Multiple Parallel Connections. *IEEE ISCC*, July 2009.

RELEVANT SKILLS AND INTERESTS

- Programming skills
- * Fluent in C, C++, Java, Python and C#
 - * Working knowledge of Bash scripting and SQL
 - * Experience with several development tools, both for Unix and Windows (gcc, make, Visual Studio, Eclipse)
 - * Experience with the Matlab environment and syntax
 - * Familiarity with the design and development of network-based applications using the socket API
 - * Familiarity with the design and development of graphic applications using the OpenGL library
- Other IT skills
- * Installation and management of Windows and Linux in SOHO contexts
- Language skills
- * Good knowledge of English (TOEFL)
 - * Native language: Italian

ACHIEVEMENTS

- Software development experience
- * **PLUG framework:** an API for simulating the execution of network lookups on communication-exposed processors. Developed as part of the research work at UW-Madison. Written in C++.
 - * **OBR library:** a set of Matlab scripts for object-based rendering. OBR consists in rendering a picture using a library of objects, creating an highly abstracted version of the original image. Written in MATLAB.
 - * **PATTHEL library:** a socket parallelization library allowing to transmit a single data flow over multiple parallel network paths. Developed as part of the master thesis at Politecnico di Torino. Written in C++.
 - * **RemoteDK:** a software suite for screen/audio capture and streaming. Written in C#.
 - * **Dccp:** a 3D pinball game based on the OpenGL graphic library and the Newton physics library. Written in C++.
 - * **DM_QT:** a viewer for Matlab-generated 3D meshes, based on the VTK visualization library and the QT toolkit. Written in C++.
 - * **Knock:** a software suite demonstrating the technique of port-knocking for stealthy remote authentication. Written in C.

REFERENCES

References provided upon request.