IONUT TRESTIAN

CONTACT INFORMATION

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RESEARCH INTERESTS

Network measurement, network security, overlay networks, design and analysis of network protocols, social networks.

EDUCATION

Ph.D. Computer Science, Northwestern University, June, 2012 (Expected)
- Thesis Topic: TBD
- Advisor: Prof. Aleksandar Kuzmanovic

M.S. Computer Science, Northwestern University, June, 2009
B.S. Computer Science and Engineering, TU of Cluj-Napoca, Romania, June 2007
B.S. Electrical Engineering (honors), TU of Cluj-Napoca, Romania, June 2005

PUBLICATIONS
JOURNALS

I. Trestian, S. Ranjan, A. Kuzmanovic, A. Nucci. "Googling the Internet: Profiling Internet Endpoints via the World Wide Web". *In IEEE/ACM Transactions on Networking*, accepted for publication, August 2009

O. Cret, **I. Trestian**, F. De Dinechin, L. Darabant, R. Tudoran, L. Vacariu. "Accelerating The Computation of The Physical Parameters Involved in Transcranial Magnetic Stimulation Using FPGA Devices". *In Romanian Journal of Information Science and Technology*, vol. 10, no.4, 2008, pp. 361-379

CONFERENCES

I. Trestian, S. Ranjan, A. Kuzmanovic, A. Nucci. "Measuring Serendipity: Connecting People, Locations and Interests in a Mobile 3G Network". *In Proceedings of USENIX/ACM SIGCOMM IMC 2009*, Chicago, IL, November, 2009

I. Trestian, S. Ranjan, A. Kuzmanovic, A. Nucci. "Unconstrained Endpoint Profiling (Googling the Internet)". *In Proceedings of ACM SIGCOMM 2008*, Seattle, WA, August, 2008

O. Cret, **I. Trestian**, F. De Dinechin, R. Tudoran, L. Cret, L. Vacariu. "FPGA-Based Acceleration of the Computations Involved in Transcranial Magnetic Stimulation" . *In Proceedings of IEEE SPLCONF 2008*, Bariloche, Argentina, March, 2008

V. Uilecan, **I. Trestian**, T. Palade. "Coexistance issues in the 2.4 GHz ISM band". *In Proceedings of IEEE ICCP 2006*, Cluj-Napoca, Romania, September, 2006

POSTERS

I. Trestian, O. Cret, L. Cret, L. Vacariu, R. Tudoran, F. De Dinechin. "FPGA-Based Computation of the Inductance of Coils Used for the Magnetic Stimulation of the Nervous System". *Poster in Proceedings of BIODEVICES 2008*, Funchal, Portugal, January, 2008

AWARDS

Murphy Fellowship at Northwestern University, EECS Dept., 2007-08
Technical University of Cluj-Napoca Excellence Diploma 2005
Romanian State Fellowship 2000-05

Certifications Cisco Systems - CCNA(2005), Cisco Systems - CCNP(2008)

Industry Experience

Narus Inc., Mountain View, California USA
Research Intern **June 2008 to September 2008**
- Worked on adding endpoint profiling and traffic classification features to the NarusInsight Secure Suite.
- Analyzed mobility and service access patterns for Internet users.

Fortech, Cluj-Napoca, ROMANIA
Software Engineer **August 2006 to September 2007**
- Part of a team that developed a Training Assistant application for Mobile Phones (based on J2ME and J2EE).

Other Professional Experience

Northwestern University, Evanston, Illinois USA
Research Assistant **September 2008 to present**
- Northwestern Networks Group
  Worked on multiple research projects related to endpoint profiling, traffic classification and social networks.

Teaching Assistant **April 2008 to June 2009**
- Provided in-class support to undergraduate engineering students
  - Introduction to Computer Systems - EECS 213,
  - Introduction to Computer Programming(Python) - EECS 110.
- Lecturer on call for several classes
- Graded homeworks and programming assignments.

TU of Cluj-Napoca, Cluj-Napoca, ROMANIA
Research Assistant **October 2005 to June 2007**
- Accelerating the computations of the physical parameters of coils used in Transcranial Magnetic Stimulation.

Teaching Assistant **October 2005 to June 2007**
- Taught laboratory classes and seminars (Television Systems, Digital Image Processing, Logic Design, Digital Systems Design).
- Graded homeworks and programming assignments.

Service Activities Referee for ACM SIGCOMM Computer Communication Review, ACM CoNEXT 2007 Student Workshop, BROADNETS 2008, IEEE ICNP 2008, 2009, IEEE INFOCOM 2009, 2010.

Professional Courses

Graduate: Computer Architecture, Information Processing in Sensor Networks, Network Penetration and Security, Distributed Systems, Design and Analysis of Algorithms, Internet Architectures, Distributed Systems in Challenging Enviroments, Advanced Communication Networks, Operating Systems, System Theory, Digital Image Processing, Advanced Digital Communications, Wireless Communications, Random Processes in Communications and Control, Measurement and Analysis of Online Social Networks.

Undergraduate: Microwaves, Theory of Information Transmission, Telephony and Transmission Systems, Radio-Communications, Communications Techniques, Switching Systems in Telecommunications, Digital Signal Processing, Mobile Communications Systems, Assembly Language Programming, Structure of Computer Systems, Artificial Intelligence, Operating Systems, Formal Languages and Translators, Parallel Algorithms, Parallel and Distributed Computing Architectures, Graphic Processing Systems, Image Processing and Multi-agent Systems.

Course Projects Designed and implemented MIPS CPU using Mentor Graphic tool (Fall, 2007)
Designed and implemented a distributed RMI based parsing tool (Spring 2006)

Implemented a fast algorithm for computing disparity maps using MMX (Spring 2006)
Mobility Analysis over Ad-Hoc Wireless Networks in GloMoSim and Opnet(Spring 2006)
Studied practical scenarios of Wi-Fi coexistence with Bluetooth networks (Spring 2006)
Implemented graphics and animations for a computer game in OpenGL (Spring 2006)
Implemented an automated fax sending tool using Microsoft Fax Service (Summer 2005)
Developed a multicast messages parser and parameter display tool (Spring 2005)
SMS Based Application for Creating AdHoc groups on mobile phones (Fall 2004)
Implemented an answering machine for the modem using Microsoft TAPI (Fall 2003)
Developed a blind embedding and decoding watermarking algorithm (Spring 2003)
Voltage Controlled Function Generator with Operational Amplifiers (Spring 2002)

Technical Skills

Extensive software experience in networking and information technology
Programming: ASM, C, C++, Java, VBasic, C#, Python, Ruby, UNIX shell scripting, SQL, VHDL
Protocols(API): TCP/IP, UDP, MPI, IPC, RPC
Packages: Matlab, Network Simulator 2, NetFlow
Opnet, GloMoSim, OrCAD, LabView

References

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Prof. Fabian Bustamante
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Chief Technical Officer
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