

# Emanuele Miucci

## *Curriculum Vitæ*

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### PERSONAL INFORMATION

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### PROFESSIONAL EXPERIENCE

- Mar 15 – Now **Researcher**, *Telecom Italia Lab and Department of Information, Electronic and Telecommunication Engineering (DIET) at SAPIENZA University of Rome, ITALY.*
- Promoters Ing. Alessandro Tosti and Prof. Vincenzo Eramo
- Focus** Algorithms for Resource Allocation in Network Functions Virtualization Infrastructures.
- Jan 14 – Feb 15 **Postdoctoral Researcher**, *Department of Information, Electronic and Telecommunication Engineering (DIET), SAPIENZA University of Rome, ITALY.*
- Promoter Prof. Vincenzo Eramo
- Focus** Evaluation of energy saving in Virtual Router Networks.
- Nov 13 – Dec 13 **Research Collaborator**, *Department of Information, Electronic and Telecommunication Engineering (DIET), SAPIENZA University of Rome, ITALY.*
- Promoter Prof. Vincenzo Eramo
- Focus** Implementation of a simulation software for the evaluation of energy savings in virtual router networks with migration support.

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### EDUCATION

- Nov 10 – Apr 14 **PhD in Information and Communication Engineering**, *Department of Information, Electronic and Telecommunication Engineering (DIET), SAPIENZA University of Rome, ITALY.*
- Thesis** *Energy Aware Design of Internet Routers*
- Advisors** Prof. Vincenzo Eramo
- PhD Focus** Strategies for energy saving in IP Network exploiting routers virtualization solutions and Virtual Routers Migration techniques.

- Classes** During my PhD studies I had the opportunity to follow two classes:
1. A class on the *Combinatorial Optimization*, taught by Antonio Sassano for the students in Engineering Management, SAPIENZA University of Rome
  2. A class on *Models and Applications of Network Traffic Engineering*, taught by Izhak Rubin for the master students in Information and Communication Engineering, SAPIENZA University of Rome

Mar 07 – Jul 10 **M.Sc. in Communication Engineering**, SAPIENZA University of Rome, Italy.

**Final grade** Full marks (110/110) and summa cum laude.

**Thesis** *Validation of Analytical Models for the evaluation of Power Consumption in Optical Switches*

**Advisor** Prof. Vincenzo Eramo

Sep 03 – Feb 07 **B.Sc. in Communication Engineering**, SAPIENZA University of Rome, Italy.

**Final grade** (104/110)

**Thesis** *Protocols for Instant Messaging: XMPP and proprietary protocols*

**Advisor** Prof. Marco Listanti

Sep 98 – Jul 03 **High School**, Scientific Lyceum "Guglielmo Marconi", Foggia (FG), Italy.

**Final grade** (100/100)

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## AWARDS

Oct 2014 Best Paper in International Conference on ICT Convergence 2014

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## RESEARCH EXPERIENCE

Jan 11 – Now Participation to Conference/Workshop:

1. ITALIAN NETWORKING WORKSHOP 2011, Cavalese, IT, Jan 2011.
2. ICTON 2011, Stockholm, Sweden, Jun 2011.
3. NOC&OC, Newcastle upon Tyne, UK, Jul 2011.
4. ICTC 2011, Seoul, Corea, Sep 2011.
5. ITALIAN NETWORKING WORKSHOP 2012, Courmayeur, IT, Jan 2012.
6. ITALIAN NETWORKING WORKSHOP 2013, Bormio, IT, Jan 2013.
7. ICTON 2013, Cartagena, Spain, Jun 2013.
8. Workshop EPFI ITC 2014, Karlskrona, Sweden, Sep 2014.

Nov 10 – Now Participant in the evaluation commissions of prestigious international journals and conferences in the field of ICT

Nov 10 – Nov 11 Participant in BONE (Building the Future Optical Network in Europe), NoE FP7 2008-2011

**Focus** The BONE-project looks into the future and builds and supports the final "Network of the Future" through education and training, research tools and testlabs on new technologies and architectures.

Jan 11 – Nov 11 Participant in STRONGEST (Scalable, Tunable and Resilient Optical Networks Guaranteeing Extremely-high Speed Transport), IP FP7 2010-2012

**Focus** STRONGEST is an Integrated Project having as the first goal the design and demonstration of an evolutionary ultra-high capacity multilayer transport network, based on optimized integration of Optical and Packet nodes, and equipped with a multi-domain, multi-technology control plane.

Nov 11 – Jul 13 Participant in PRIN project SFINGI (Software router to Improve Next-Generation Internet)

**Focus** SFINGI aims at defining the ability of software routers in dealing, in a virtualized environment, with complex applications requiring a high degree of resource sharing, scalability, reliability and reduced energy consumption, in other words SFINGI focus on network virtualization support in software routers.

#### RESEARCH EXPERIENCE IN FOREIGN UNIVERSITIES

Aug 13 – Nov 13 Research experience at the Georgia Institute of Technology of Atlanta, Georgia, United States

Promoter Prof. Mostafa H. Ammar

**Focus** Study of Migration Policies in Virtual Router Networks using Markovian Decision Processes.

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#### COMPUTER SKILLS

Attitude Quickness in getting familiar with new languages, software, operating systems.  
Analysis & design TCP/IP networks, system design, distributed database systems.  
Operating System Microsoft Windows XP/Vista/7/8, GNU/Linux and others UNIX-like  
Programming JAVA, C, C++, Sql, L<sup>A</sup>T<sub>E</sub>X  
Networking TCP/IP (intra and extra domain routing, transport layer), 802.11, Cisco IOS  
Scientific Software MATLAB, AMPL, WireSHARK  
Graphic Software Adobe After Effects, Photoshop and Illustrator. CINEMA 4D and RealFlow  
Others Office and OpenOffice suite

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#### LANGUAGES

**Italian** Mother Tongue

**English** Self-assessment (Common European Framework of Reference for Languages, CEFR)

Reading B2 (Independent user)

Listening B2 (Independent user)

Speaking B2 (Independent user)

Writing B2 (Independent user)

**French** Self-assessment (Common European Framework of Reference for Languages, CEFR)

Reading B1 (Independent user)

Listening B1 (Independent user)

Speaking A2 (Basic user)

Writing A2 (Basic user)

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## SPARE TIME ACTIVITIES

- Hobbies Music; Sport: run, boxing, hiking
- Interests Reading and technology. Good knowledge of the main software for the 3D graphics and postproduction

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## PUBLICATIONS

### Journals and Magazines

- [1] V. Eramo; S. Testa; E. Miucci, *Evaluation of Power Saving and Feasibility Study of Migrations Solutions in a Virtual Router Network*, Journal of Electrical and Computer Engineering, vol. 2014, Article ID 910658, 14 pages, 2014 [doi: 10.1155/2014/910658]
- [2] Eramo, V.; Miucci, E.; Ammar, M., *Study of Migration Policies in Energy-Aware Virtual Router Networks*, Communications Letters, IEEE , vol.18, no.11, pp.1919,1922, Nov. 2014 doi: 10.1109/LCOMM.2014.2360190

### Chapter of Books

- [1] V. Eramo; E. Miucci; A. Cianfrani; A. Germoni; M. Listanti, *SOA-Based Optical Packet Switching Architectures*, chapter 4 of "Selected Topics on Optical Amplifiers in Present Scenario", InTech 2012, pp. 67,84. [doi: 10.5772/35695]

### Conference Proceeding

- [1] V. Eramo; E. Miucci; A. Cianfrani; A. Germoni; M. Listanti, *An analytical model evaluating the performance of small size asynchronous optical packet switches*, International Conference on Transparent Optical Networks - ICTON , pp. 1-4, 2011, [doi: 10.1109/ICTON.2011.5970814]
- [2] V. Eramo; E. Miucci; A. Cianfrani; A. Germoni; M. Listanti, *Comparison in power consumption of MVMC and BENES optical packet switches*, Networks and Optical Communications (NOC), 2011 16th European Conference on , vol., no., pp.125,128, 20-22 July 2011
- [3] Eramo, V.; Miucci, E.; Cianfrani, A; Germoni, A; Listanti, M., *Evaluation of the energy consumption per bit in BENES optical packet switch*, ICT Convergence (ICTC), 2011 International Conference on , vol., no., pp.136,141, 28-30 Sept. 2011 [doi: 10.1109/ICTC.2011.6082567]
- [4] Eramo, V.; Miucci, E.; Cianfrani, A; Germoni, A; Listanti, M., *Evaluation of power consumption of Spanke Optical Packet Switch*, ICT Convergence (ICTC), 2011 International Conference on , vol., no., pp.501,506, 28-30 Sept. 2011 [doi: 10.1109/ICTC.2011.6082648]
- [5] Eramo, V.; Listanti, M.; Cianfrani, A; Miucci, E., *Evaluation of power saving in an MPLS/IP network hosting a virtual router layer of a single service provider*, ICT Convergence (ICTC), 2013 International Conference on , vol., no., pp.12,17, 14-16 Oct. 2013 [doi: 10.1109/ICTC.2013.6675297]
- [6] Eramo, V.; Miucci, E.; Listanti, M.; Cianfrani, A; Testa, S., *Migration time experimental evaluation in a Quagga based-software router*, ICT Convergence (ICTC), 2013 International Conference on , vol., no., pp.80,83, 14-16 Oct. 2013 [doi: 10.1109/ICTC.2013.6675311]

- [7] Eramo, V.; Miucci, E., *Joint Use of Adaptive Link Rate and Virtual Router Migration Techniques to Reduce the Power Consumption in Telecommunication Networks*, ICT Convergence (ICTC), 2014 International Conference on , Oct. 2014

Workshop Participation

- [1] V. Eramo, A. Cianfrani, E. Miucci, M. Listanti, D. Carletti, L. Gentilini , *Virtualization and Virtual Router Migration: Application and Experimental Validation*, Workshop EPFI ITC 2014, Sep. 2014, Karlskrona, Sweden

29th july 2015

Signature:



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