

Alfonso Iacovazzi

Curriculum Vitæ

PROFESSIONAL EXPERIENCE

Mar 14 – Feb 15 **Postdoctoral Researcher**, CINFAI - Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere, ITALY.

Promoter Andrea Baiocchi

Mar 13 – Feb 14 **Postdoctoral Researcher**, Department of Information, Electronic and Telecommunication Engineering (DIET), SAPIENZA University of Rome, ITALY.

Promoter Andrea Baiocchi

EDUCATION

Nov 09 – Mar 13 **PhD in Information and Communication Engineering**, Department of Information, Electronic and Telecommunication Engineering (DIET), SAPIENZA University of Rome, ITALY.

Thesis *Network Communication Privacy: Traffic Masking against Traffic Analysis*

Advisor Prof. Andrea Baiocchi

PhD Focus The focus of my PhD was Traffic Masking. An increasing number of recent experimental works have been demonstrating the supposedly secure channels in the Internet are prone to privacy breaking under many respects, due to traffic features leaking information on the user activity and traffic content. I aimed at understanding if and how complex it is to obfuscate the information leaked by traffic features, namely packet lengths, direction, times.

Abroad Term I spent 9 months of my PhD abroad working with Fabio Ricciato and Alessandro D'alconzo at Forschungszentrum Telekommunikation Wien (FTW), Vienna - Austria

Feb 05 – Dec 08 **M.Sc. in Communication Engineering**, SAPIENZA University of Rome, Italy.

Final grade Full marks (110/110).

Thesis *Design of a statistical classifier to real time identify SSH encrypted application flows*

Advisor Prof. Andrea Baiocchi

Sep 01 – Feb 05 **B.Sc. in Communication Engineering**, SAPIENZA University of Rome, Italy.

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

Thesis *Analysis, implementation and performance evaluation of a Connection Admission Control algorithm for dynamic radio resource management in third generation systems*

Advisor Prof. Francesco Delli Priscoli

Sep 96 – Jul 01 **High School**, Scientific Lyceum "Leonardo Da Vinci", Fasano, Italy.

PUBLICATIONS

Journals and Magazines

- [1] *Protecting traffic privacy for massive aggregated traffic* (with Andrea Baiocchi), Computer Networks, Computer Networks 77 (2015): 1-17.
- [2] *Internet traffic privacy enhancement with masking: optimization and trade-offs* (with Andrea Baiocchi), Parallel and Distributed Systems, IEEE Transactions on 25.2 (2014): 353-362.
- [3] *Elementary Secure-Multiparty Computation for massive-scale collaborative network monitoring: a quantitative assessment* (with Alessandro D'Alconzo, Fabio Ricciato, Martin Burkhart), Computer Networks 57.17 (2013): 3728-3742.

Conference Proceeding

- [1] *Traffic Matrix Estimation Enhanced by SDNs Nodes in Real Network Topology* (with Marco Polverini, Antonio Cianfrani, Andrea Baiocchi and Marco Listanti), INFOCOM 2015, April 2015, Hong Kong, China
- [2] *What are you Googling? - Inferring search type information through a statistical classifier* (with Ludovico Bettini and Andrea Baiocchi), GLOBECOM 2013, December 2013, Atlanta, USA
- [3] *From ideality to practicability in statistical packet features masking* (with Andrea Baiocchi), IWCMC 2012, August 2012, Limassol, Cyprus
- [4] *Padding and Fragmentation for Masking Packet Length Statistics* (with Andrea Baiocchi), 4th International Workshop on Traffic Monitoring and Analysis, TMA 2012, March 2012, Vienna, Austria
- [5] *Optimum Packet Length Masking* (with Andrea Baiocchi), 22nd International Teletraffic Congress (ITC 22), September 2010, Amsterdam, Netherlands
- [6] *Real Time Identification of SSH Encrypted Application Flows by Using Cluster Analysis Techniques* (with Gianluca Maiolini, Andrea Baiocchi and Antonello Rizzi) IFIP Networking 2009, May 2009, Aachen, Germany

RESEARCH EXPERIENCE

Mar 14 – now Participant in PON – SIGMA National Project

Focus Design and development of an integrated system in cloud environment able to acquire, integrate and process heterogeneous data from different sensor networks with an advanced multirisk management.

Nov 10 – Mar 12 Participant at COST Action IC0703 "Data Traffic Monitoring and Analysis (TMA): theory, techniques, tools and applications for the future networks

Focus TMA-based techniques can play a key role in the operation of real networks. Today, the lack of insight and early recognition of emerging risks and/or performance issues can expose the network infrastructure to stability and security problems. TMA is therefore the basis for prevention and response in network security, as typically the detection of attacks and intrusions requires the analysis of detailed traffic records, e.g. packet traces.

TEACHING

- 2013 – 2014 *Teaching assistant* for the class “Telecommunications”, taught by Andrea Baiocchi, SAPIENZA University of Rome
- 2012 – 2013 *Teaching assistant* for the class “Telecommunications”, taught by Andrea Baiocchi, SAPIENZA University of Rome
- 2010 – 2011 *Teaching assistant* for the class “Telecommunications”, taught by Andrea Baiocchi, SAPIENZA University of Rome

CERTIFICATIONS

- 2014 **Cisco Certified Entry Networking Technician (CCENT)**, CISCO.
- Skill Covered** The curriculum covers networking fundamentals, WAN technologies, basic security and wireless concepts, routing and switching fundamentals, and configuring simple networks.
- 2009 **EC-ASP: ELSAGDATAMAT Certification for AMTEC Security Professional**, *Elsag Datamat s.p.a.*, Finmeccanica Group.
- Skill Covered** Basic routing network configuration, planning and design of security infrastructures, use of a management and deployment configuration system, installation and integration of SVPN infrastructures, troubleshooting activities.

EXTRA-CURRICULAR ACTIVITIES

- Sep 96 – Jul 06 **B.Sc. in Classical Guitar**, *Conservatory “Nino Rota”*, Monopoli, Italy.
- Final grade** Full marks (10/10) and summa cum laude.

COMPUTER SKILLS

- Operating System Microsoft Windows 3.11/9X/NT/2000/XP/07, GNU/Linux and others UNIX-like
- Programming JAVA, C, L^AT_EX
- Scientific Software MATLAB, AMPL, CORE, WEKA, TSHARK
- Others Office and OpenOffice suite

LANGUAGES

- Italian** Mother Tongue
- English** Self-assessment (Common European Framework of Reference for Languages, CEFR)
- Reading B2 (Independent user)
- Listening B1 (Independent user)
- Speaking B1 (Independent user)
- Writing B1 (Independent user)

SPARE TIME ACTIVITIES

- Hobbies Music: classical guitar performer as soloist, and in music chamber formations
- Interests Reading and mathematics

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