

MARCO BONOLA

PERSONAL INFORMATION

E-mail	marco.bonola@uniroma2.it
Telephone	+393930160598
Residence	Rome, ITALY

WORK EXPERIENCE

- | | |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Dates (from – to)• Employer• Position held | <p>From August 2012, ongoing</p> <p>Sharigo SrL</p> <p>Founder + Developer</p> |
| <ul style="list-style-type: none">• Main activities and responsibilities | <p>Besides administrative duties, development of algorithms and mobile platforms for real time logistic and urban mobility services</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Employer• Sector | <p>From July 2008 to February 2013</p> <p>Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT – National Inter-University Consortium for Telecommunications).</p> <p>CNIT is a non-profit Consortium among 37 Italian Universities, whose main purpose is to coordinate and foster basic and applied research in the telecommunication field.</p> |
| <ul style="list-style-type: none">• Position held• Main activities and responsibilities | <p>Researcher (Fixed Term Contract)</p> <p>European Research Projects, Network protocols and architecture development.</p> <p>Main activities:</p> <ol style="list-style-type: none">1. European Research Project DEMONS (FP7-257315)
Topics tackled: decentralized, cooperative, and privacy-preserving network monitoring
Main activities: architecture design, software development demo implementation, meeting discussions, documentation writing2. European Research Project PERIMETER (FP7-224024)
Topics tackled: user-centric seamless IP mobility driven by QoE between different access networks
Main activities: architecture design, software development (C programs and kernel modules) demo implementation, meeting discussions, documentation writing3. European Research Project PRISM (FP7-215350)
Topics tackled: privacy aware traffic monitoring solutions
Main activities: C/C++ demo implementation based on PCAP, MYSQL and OpenSSL libraries (Linux)4. European Research Project DISCREET (FP6-2004-IST-4)
Topics tackled: privacy aware AAA solutions
Main activities: C/C++ demo implementation based on OpenSSL X509 certificates and cryptographic libraries, Socket API (Linux)5. Private consulting
Topic tackled: network security and cryptography
Main activities:<ol style="list-style-type: none">1. TLS/SSL and DTLS extension to support novel cryptographic algorithms |

	<p>(implemented as a patched Linux OpenSSL library – both TLS and CRYPTO libraries)</p> <ol style="list-style-type: none"> 2. User-space secure IP tunnelling software based on Iptables and NFQUEUE (Integration in OpenWRT Linux based firmware) 3. Secure GW design and implementation (Linux) 4. 802.15.4 - 6LoPan network interface management for Android systems
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>November 2014 to March 2015</p> <p>Radio6sense srl</p> <p>Developer</p> <p>Development of an Android application for NFC tag configuration and verification</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>April 2012 to October 2012</p> <p>University of Rome “Tor Vergata”</p> <p>Teacher</p> <p>Course of “Configuration and Management of local networks”, Faculty of Engineering</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Sector • Position held • Main activities and responsibilities 	<p>From October 2007 to June 2008</p> <p>DOCOMO Communication Laboratories Europe GmbH, Munich, Germany</p> <p>Mobile Service Provider R&D</p> <p>Student Intern</p> <p>Protocols development and performance evaluation.</p> <p>In particular:</p> <ol style="list-style-type: none"> 1. Fast Proxy Mobile IPv6 implementation (Linux) based on Socket API, RTNL 2. IEEE 802.11 MADWIFI Linux Driver extension (new 802.11 management frame, statistic transmission, handover decisions) 3. hostapd (Linux) and wpa_supplicant (Linux) extension for 802.11 statistic analysis and MSK pre-caching and transfer. 4. Testbed set-up, demonstration and performance evaluation
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Sector • Position held • Main activities and responsibilities 	<p>From July 2011, March 2012</p> <p>SO.TEL S.r.L.</p> <p>Telecommunications</p> <p>Freelance programmer</p> <p>Zigbee PAN management software development for Linux/Android systems</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From October 2010, March 2011</p> <p>M28Studio (private architecture studio)</p> <p>Freelance Programmer</p> <p>WEB 2.0 Application Development, Resource management software - Python/Django framework</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Sector 	<p>From November 2003 to June 2004</p> <p>Iannuzzi & Salvato S.r.L.</p> <p>Software for INA/Assitalia Insurance Agencies</p>

<ul style="list-style-type: none"> • Position held • Main activities and responsibilities 	<p>Part Time Programmer</p> <p>Visual Basic application development (management/accounting software)</p>
-------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------

TEACHING ACTIVITIES

<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From January 2014 to February 2014</p> <p>Università della Calabria, department of “Ingegneria dell’informazione”</p> <p>Professor</p> <p>Lessons and exams. Master course of “Crittografia nelle reti”</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>February 2014</p> <p>Università della Calabria, department of “Ingegneria dell’informazione”</p> <p>Professor</p> <p>Lessons and exams. Master course “Protocolli per la sicurezza informatica”</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From February 2012 to June 2012</p> <p>Università di Roma “Tor Vergata”, department of “Ingegneria elettronica”</p> <p>Professor</p> <p>Lessons and exams. Course “Configurazione e gestione reti locali”</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From September 2011 ongoing</p> <p>Università di Roma “Tor Vergata”, faculty of “Lettere”</p> <p>Professor</p> <p>Lessons and exams. Master Course “Servizi di sicurezza” and “Applicazioni della Crittografia”</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From September 2009, February 2011</p> <p>Università di Roma “Tor Vergata”, faculty of “Scienze Infermieristiche”</p> <p>Adjunct Professor</p> <p>Lessons and exams (course “Fondamenti di Informatica”)– teaching material at http://byron.netgroup.uniroma2.it/~marlon/informatica/</p>
<ul style="list-style-type: none"> • Dates (from – to) <ul style="list-style-type: none"> • Employer • Position held • Main activities and responsibilities 	<p>From September 2009, February 2011</p> <p>Centro di ricerca interdipartimentale “Vito Volterra”</p> <p>Professor</p> <p>Lessons. (Master for ENAV) Course “Reti Ethernet, IP e wireless”</p>

EDUCATION AND TRAINING

<ul style="list-style-type: none"> • Title of qualification 	<p>Ph.D. in Telecommunication and Microelectronic Engineering</p>
<ul style="list-style-type: none"> • Date 	<p>From October 2007 to April 2011</p>
<ul style="list-style-type: none"> • Name and type of organization providing education and training 	<p>Università di Roma “Tor Vergata”</p>
<ul style="list-style-type: none"> • Principal subjects/occupational skills covered 	<p>Title of the Thesis: “UPMT – Universal Per-application Mobility Management Using Tunnels” – http://netgroup.uniroma2.it/UPMT</p> <p>Coding Activities: C userspace tools and kernel modules development. Source code</p>

browser at: <http://minerva.netgroup.uniroma2.it/netgroup/browser/netgroup/upmt>

Research activities:

1. User centric privacy-aware AAA based on pseudonyms and blind credentials
2. IP Mobility Management solutions for ABC scenarios
3. Per-packet load balancing through heterogeneous access networks

Teaching activities at Faculty of Telecommunication Engineering – Laboratories and slides at: <http://byron.netgroup.uniroma2.it/~marlon/RAT>

1. "Port stealing and ARP poisoning attack emulation with NETKIT" – 4 hours seminar
2. "Ethernet/IP interaction emulated with NETKIT" – 6 hours seminar
3. Complementary classes to Networking courses

Extra activities:

1. Google Summer of Code 2010: IP/UDP encapsulation kernel module – source code at: <http://svn.ninux.org/ninuxdeveloping/browser/ipudp>

• Publications

F. Patriarca, S. Salsano, M. Bonola, P. Cerqua, "UPMT Per-Application Mobility Management solution: a Demo for Linux and Android terminals", MobiWac '12 Proceedings of the 10th ACM international symposium on Mobility management and wireless access, ISBN: 978-1-4503-1623-1 doi:10.1145/2386995.2387026

Bonola, M.; Salsano, S., "Per-application Mobility management: Performance evaluation of the UPMT solution," Wireless Communications and Mobile Computing Conference (IWCMC), 2011 7th International, 4-8 July 2011, doi: 10.1109/IWCMC.2011.5982892

M. Bonola, S. Salsano: "Achieving Scalability in the UPMT Mobility Management Solution". Future Network & Mobile Summit 2010

Bonola, M.; Salsano, S.; Polidoro, A., "UPMT: Universal Per-Application Mobility Management Using Tunnels," Global Telecommunications Conference, 2009. GLOBECOM 2009. IEEE , vol., no., pp.1,8, Nov. 30 2009-Dec. 4 2009 doi: 10.1109/GLOCOM.2009.5425883

Giuseppe Bianchi, M. Bonola, Vincenzo Falletta, F. S. Proto, Simone Teofili: "The SPARTA Pseudonym and Authorization System". Science of Computer Programming. Volume 74: 23-33 (2008). ISSN: 0167-6423. DOI: 10.1016/j.scico.2008.09.010

•RFC

S. Krishnan, J. Laganier, M. Bonola, A. Garzia Martinez, "Secure Proxy ND Support for SEcure Neighbor Discovery (SEND)", rfc6496

• Title of qualification awarded

Master's Degree in Telecommunication Engineering. Mark: 110/110 e lode

• Date

July 2007

• Name and type of organization providing education and training

Università di Roma "Tor Vergata"

• Principal subjects/occupational skills covered

Master's degree Thesis: "Designing and development of a distributed pseudonymization system", Thesis supervisor Prof. Giuseppe Bianchi

Topics tackled: Authentication, Authorization & Accounting, public key encryption/signature algorithms (RSA, ElGamal, ring signature, blind signature), PKI, X.509, pseudonym systems.

Bachelor degree Thesis: "Firewall and NAT traversal for Voice over IP systems", Thesis supervisor Prof. Nicola Blefari Melazzi

Topics treated: VoIP, RTP, RTCP, NAT/Firewall traversal solutions for VoIP systems.

• Publications

Giuseppe Bianchi, M. Bonola, Vincenzo Falletta, F. S. Proto, Simone Teofili: "The SPARTA Pseudonym and Authorization System". Electronic Notes in Theoretical

**PERSONAL SKILLS
AND COMPETENCES**

- Mother tongue | Italian
- Other languages |
English | Fluent, very good reading and writing