Pier Luigi Ventre

Curriculum Vitae

PERSONAL DETAILS

Name	Pier Luigi Ventre
"whoami"	Post-doc researcher at CNIT unit of the Univ. of Rome "Tor Vergata"
Interests	SDN, NFV, Virtualization and IPv6 Segment Routing
Address	Via Sibilla Aleramo 11, San Cesareo, Rome, 00030, Italy
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Linkedin	`https://www.linkedin.com/in/pierluigiventre`
G.Scholar	`https://scholar.google.it/citations?user=PVsrgK4AAAAJ&hl=it`
Homepage	`http://netgroup.uniroma2.it/people/postdoc/pier-ventre/`

PRESENT

Post-doc researcher at Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT) unit of the University of Rome "Tor Vergata". Doing research on Software Define Networking, Network Function Virtualization, Virtualization and IPv6 Segment Routing

WORK EXPERIENCE

Post-doc Researcher 05/2018 – present

CNIT - Rome, Italy

Working on GÉANT 4 Project-Phase 2 and doing research on Software Defined Networking. In particular, I have been involved in the development of the GÉANT BoD use case and in the Pilot activities.

Working on ROSE and doing research on IPv6 Segment Routing: SDN architecture and Southbound APIs, Service Function Chaining for legacy VNFs and performance evaluation of Linux kernel implementation

Software Engineering Contractor 01/2018 – 05/2018

ONF - Rome, Italy

I worked on ONOS, the open source SDN network operating system and on Trellis, the SDN based leaf-spine fabric. I have been involved also in QA activities, daily code-review and end-user support.

Researcher 03/2017 – 12/2017

CNIT - Rome, Italy

I worked on GÉANT 4 Project-Phase 2 and did research on Software Defined Networking. In particular, I have been involved in the development of the GÉANT SDX use case and in the Pilot activities.

Ph.D, Electronics Engineering 11/2014 – 04/2018

University of Rome "Tor Vergata" - Rome

I did research on Software Defined Networking , Wireless Software Defined Networking, OpenFlow, Network Function Virtualization, Virtualization, Information Centric Networking and Mobile/Pervasive Computing.

Visiting Research Scholar 08/2016 – 02/2017

ON.Lab - Menlo Park, San Francisco Bay Area, Stati Uniti

I worked on ONOS, the open source SDN network operating system, on ONOS Intent Framework and on Trellis, the SDN based leaf-spine fabric. I have been involved also in QA activities, daily code-review and end-user support.

Researcher 05/2016 – 07/2016

CNIT - Rome, Italy

I worked on GÉANT 4 Project-Phase 2 and did research on Software Defined Networking. In particular, I have been involved in the development of the GÉANT SDX use case and in the development of the Corsa devices driver for ONOS.

Assistant lecturer 04/2016 – 05/2016

University of Rome "Tor Vergata" - Rome

I Provided hand-on lessons on the Amazon Web Services and on Microsoft Azure for the course "Cloud and Mobile/Edge Cloud" in the context of the Master "Big Data for Business".

Researcher 09/2015 – 04/2016

CNIT - Rome, Italy

I worked on GÉANT 4 Project-Phase 1 and did research on Software Defined Networking. In particular, I have been involved in the development of the GÉANT SDX use case and in the testing and realization of PoCs.

Assistant lecturer 10/2015 – 01/2016

University of Rome "Tor Vergata" - Rome

I held the exercise lessons of the course "Networking and Internet Protocols 1" for the Master's degree in ICT and Internet Engineering.

Assistant lecturer 10/2014 – 01/2015

University of Rome "Tor Vergata" - Rome

I held the exercise lessons of the course "Tecnologie e Protocollli per Internet 1" for the Master's degree in "Ingegneria di Internet".

Researcher 09/2013 – 03/2015

GARR - Rome, Italy

I was one of the beneficiary of the scholarship "Orio Carlini", granted by the Italian NREN GARR, with a research project on Software Defined Networks. I have been involved in the Exotic OFELIA project and in the DREAMER project

PROJECTS

ROSE 10/2017 - present

https://netgroup.github.io/rose/

GN4 Phase 2/GN4-JRA1 05/2016 - present

https://www.geant.org

ONOS 01/2015 - present

https://onosproject.org/

Trellis 01/2015 - present

https://www.opennetworking.org/trellis/

Superfluidity 07/2015 - 03/2018
http://superfluidity.eu

Scissor 01/2015 - 01/2018
https://scissor-project.com

GN4 Phase 1/GN4-JRA2 09/2015 - 04/2016
https://www.geant.org

Global SDN Deployment powered by ONOS 04/2015 - 03/2016
https://onosproject.org/

NEST testbed project 05/2015 - 06/2015
Internal Project

DREAMER project 11/2013 - 03/2015
http://netgroup.uniroma2.it/twiki/bin/view/DREAMER

Exotic OFELIA project 10/2013 - 11/2013
http://netgroup.uniroma2.it/twiki/bin/view/Netgroup/CoNet

WORK SKILLS AND COMPETENCIES

Core Competencies
Network Design, Software Design, Troubleshooting, System Tests, Unit Tests, SDN, NFV, Cloud Computing, Segment Routing, SR-MPLS, SRv6, MPLS, TCP/IP, ICN/CCN, REST, Switching, Routing, Traffic Engineering, Linux Networking, Linux Kernel, Floodlight, RYU, ONOS, OF-DPA, Scientific Writing and Scientific Project Proposals.

Programming Languages
JAVA, NodeJS, C, C++, Python, Bash and Golang.

Network Protocols
Ethernet, VLAN, MPLS, ARP, NDP, DHCP, DHCPv6, IPv4, IPv6, OSPF, BGP, UDP, TCP, ICN/CCN, REST/HTTP, VXLAN, GRE, OpenFlow, OVSDB, NETCONF, Yang and RESTCONF.

Network technologies
Linux Bridge, Open vSwitch, OpenFlow 1.3 Software Switch (CPQD), Quagga/FRRouting, CCNx, DPDK, TRex, VPP, Netkit and Mininet.

Cloud technologies
VirtManager, libvirt, QEMU, KVM, XEN, Unikernels, Containers, VMs, OpenStack, Nomad, OpenVim, VMware Fusion, Oracle Virtual Box, Amazon Web Services, NeST, OFELIA, GÉANT OpenFlow Facility (GOFF) and GÉANT Testbed Service (GTS).

Computer technologies
JUnit, Android, Linux (Debian and Ubuntu), MAC OS, Windows, Microsoft Office Suite, Google DOCs Suite, LaTeX, Eclipse, Intellij IDEA, Oracle DB, MySQL, SQLite, MongoDB, Cassandra, ARM and MIPS.

EDUCATION AND TRAINING

Ph.D. Electronics Engineering 2014-2018

University of Rome "Tor Vergata"

Ph.D. in Electronics Engineering, University of Rome "Tor Vergata". I did research on Software Defined Networking , wireless Software Defined Networking, OpenFlow, Network Function Virtualization, Virtualization and Mobile/Pervasive Computing under the supervision of Prof. Stefano Salsano. Final mark: "Full marks with honors".

Thesis

"Software Defined Networks for WAN Service Providers"

Reviewers

Prof. Antonio Cianfrani, Prof. Paolo Giaccone.

MSc. Computer Engineering 2011-2014

University of Rome "Tor Vergata"

Laurea Specialistica in Ingegneria Informatica, University of Rome "Tor Vergata", Faculty of Engineering, under the supervision of Prof. Stefano Salsano and Prof Francesco Lo Presti. Equivalent to Master's degree in Computer Engineering. Final mark: 110/110 cum laude equivalent to "Full marks with honors".

Thesis

"Design, Implementation and Testing of SDN applications for ICN and Ethernet VLL".

BSc. Computer Engineering 2006-2011

University of Rome "Tor Vergata"

Laurea Triennale in Ingegneria Informatica, University of Rome "Tor Vergata", Faculty of Engineering, under the supervision of Prof. Stefano Salsano and Prof Francesco Lo Presti. Equivalent to Bachelor's degree in Computer Engineering. Final mark: 110/110

Thesis

"Progettazione e Sviluppo di un' architettura scalabile Client – Server per la stima delle prestazioni in reti IP" (Design and development of a scalable Client Server architecture for performance estimations of IP Networks).

Math and Science High School diploma 2001-2006

Liceo Scientifico Statale "Francesco Di Assisi"

Math and Science High School diploma, Liceo Scientifico Statale "Francesco Di Assisi". Final mark: 88/100

INTERNATIONAL JOURNALS

Salsano, S., Patriarca, F., Presti, F.L., Ventre, P.L., and Gentile, V. (2018). Accurate and efficient measurements of IP level performance to drive interface selection in heterogeneous wireless networks. IEEE Transactions on Mobile Computing.

Siracusano, G., Salsano, S., Ventre, P.L., Detti, A., Rashed, O., and Blefari-Melazzi, N. (2018). A framework for experimenting ICN over SDN solutions using physical and virtual testbeds. Computer Networks, 134, 245-259.

Ventre, P.L., Salsano, S., Gerola, M., Salvadori, E., Usman, M., Buscaglione, S., Prete, L., Hart J., and Snow, W. (2017). SDN-Based IP and Layer 2 Services with an Open Networking Operating System in the GÉANT Service Provider Network. IEEE Communications Magazine, 55(4), 71-79.

Salsano, S., Ventre, P.L., Lombardo, F., Siracusano, G., Gerola, M., Salvadori, E., Santuari, M., Campanella, M., and Prete, L. (2016). Hybrid IP/SDN networking: open

implementation and experiment management tools. IEEE Transactions on Network and Service Management, 13(1), 138-153.

INT. CONFERENCES/WORKSHOPS WITH PEER REVIEW

Ventre, P.L., Ortiz, J., Mendiola, A., Fernández, C., Pavlidis, A., Sharma, P., Buscaglione, S., Stamos, K., Sevasti, A. and Whittaker, D. (2017). Deploying SDN in GÉANT production network. In Network Function Virtualization and Software Defined Networks (NFV-SDN), 2017 Second Conference on. IEEE.

Palmisano, D., Ventre, P.L., Caponi, A., Siracusano, G., Salsano, S., Bonola, M., and Bianchi, G. (2017, September). D-STREAMON — NFV-Capable Distributed Framework for Network Monitoring. In Teletraffic Congress (ITC 29), 2017 29th International (Vol. 2, pp. 30-35). IEEE.

Ventre, P.L., Caponi, A., Siracusano, G., Palmisano, D., Salsano, S., Bonola, M., and Bianchi, G. (2017, June). D-STREAMON: from middlebox to distributed NFV framework for network monitoring. In Local and Metropolitan Area Networks (LANMAN), 2017 IEEE International Symposium on (pp. 1-2). IEEE.

Ventre, P.L., Pisa, C., Salsano, S., Siracusano, G., Schmidt, F., Lungaroni, P., and Blefari-Melazzi, N. (2016, November). Performance Evaluation and Tuning of Virtual Infrastructure Managers for (Micro) Virtual Network Functions. In Network Function Virtualization and Software Defined Networks (NFV-SDN), IEEE Conference on (pp. 141-147). IEEE.

Gerola, M., Lucrezia, F., Santuari, M., Salvadori, E., Ventre, P.L., Salsano, S., and Campanella, M. (2016, October). ICONA: a peer-to-peer approach for Software Defined Wide Area Networks using ONOS. In Software-Defined Networks (EWSDN), 2016 Fifth European Workshop on (pp. 37-42). IEEE.

Ventre, P.L., Jakovljevic, B., Schmitz, D., Salsano, S., Gerola, M., Prete, L., Buscaglione, S. Aznar, J. and Stamos, K. (2016, June). Revisiting Open eXchange Points with Software Defined Networking. In Local and Metropolitan Area Networks (LANMAN), 2016 IEEE International Symposium on (pp. 1-2). IEEE.

Ventre, P.L., Jakovljevic, B., Schmitz, D., Papazois, A., Salsano, S., Santuari, M., Gerola, M., Mendiola, A., Usman, M., and Sevasti, A. (2016, June). GÉANT SDX-SDN based open exchange point. In NetSoft Conference and Workshops (NetSoft), 2016 IEEE (pp. 345-346). IEEE.

Salsano, S., Veltri, L., Davoli, L., Ventre, P.L., and Siracusano, G. (2016, April). PMSR—Poor Man's Segment Routing, a minimalistic approach to Segment Routing and a Traffic Engineering use case. In Network Operations and Management Symposium (NOMS), 2016 IEEE/IFIP (pp. 598-604). IEEE.

Davoli, L., Veltri, L., Ventre, P.L., Siracusano, G., and Salsano, S. (2015, September). Traffic engineering with Segment Routing: SDN-based architectural design and open source implementation. In Software Defined Networks (EWSDN), 2015 Fourth European Workshop on (pp. 111-112). IEEE.

Salsano, S., Ventre, P.L., Lombardo, F., Siracusano, G., Gerola, M., Salvadori, E., Santuari, M., Campanella, M., and Prete, L. (2015, September). Mantoo-a set of

management tools for controlling SDN experiments. In Software Defined Networks (EWSDN), 2015 Fourth European Workshop on (pp. 123-124). IEEE.

Gerola, M., Santuari, M., Salvadori, E., Salsano, S., Ventre, P.L., Campanella, M., Lombardo, F., and Siracusano, G. (2015, April). ICONA: Inter cluster ONOS network application. In Network Softwarization (NetSoft), 2015 1st IEEE Conference on (pp. 1-2). IEEE.

Salsano, S., Blefari-Melazzi, N., Presti, F. L., Siracusano, G., and Ventre, P.L. (2014, September). Generalized virtual networking: An enabler for service centric networking and network function virtualization. In Telecommunications Network Strategy and Planning Symposium (Networks), 2014 16th International (pp. 1-7). IEEE.

Salsano, S., Ventre, P.L., Prete, L., Siracusano, G., Gerola, M., and Salvadori, E. (2014, September). OSHI-Open Source Hybrid IP/SDN networking (and its emulation on Mininet and on distributed SDN testbeds). In Software Defined Networks (EWSDN), 2014 Third European Workshop on (pp. 13-18). IEEE.

OTHER PUBLICATIONS

Prete, L., Mendiola, A., Stamos, K., Ventre, P.L., Papazois, A., Fernandez, C., Ortiz, J., Salsano, S., Sevasti A., Boswell, D. (2017). Empowering GÉANT deployments with ONOS brigades. In paper presentation at Terena Networking Conference (TNC), 2017 GÉANT International Symposium.

Salsano, S., Siracusano, G., Detti, A., Pisa, C., Ventre, P.L., and Blefari-Melazzi, N. (2014). Controller selection in a Wireless Mesh SDN under network partitioning and merging scenarios. arXiv preprint arXiv:1406.2470.

Campanella, M., Prete, L., Ventre, P.L., Gerola, M., Salvadori, E., Santuari, M., Salsano, S., and Siracusano, G. (2014, May). Bridging Open-Flow/SDN with IP/MPLS. In poster presentation at Terena Networking Conference (TNC), 2017 GÉANT International Symposium.

SCOLARSHIPS AND AWARDS

Ph.D. Scholarship granted by the University of Rome "Tor Vergata" for November 2014 to October 2017.

Winner of "TechRadar Prize 2015" granted by Cisco Systems for a project on domestic health called "CareUP" at Cisco Live! Milan DevNet Hackathon 2015.

Winner of "Premio Carassa 2014" for the best paper on the "Networking" topic co-authored and presented by a young researcher at GTTI2014.

Scholarship "Orio Carlini" granted by the Italian NREN GARR – first year granted from October 2013 to September 2014, confirmed for the second year until March 2015.

PERSONAL SKILLS AND COMPETENCES

Languages

Italian (mother tongue), English (professional knowledge).

Organizational

Ability to organize own work independently, Setting priorities, Taking responsibilities, Meeting deadlines and goals, Ability to work in stressful situations, Excellent ability to work in groups, Good organizer and analyzer.

ADDITIONAL INFORMATION

References available upon request
Own car and Italian driving license
Willing to consider transfers