

# Marco Savi, PhD

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## CURRENT POSITION

### Assistant Professor (RTD-A, ING-INF/03)

- *Date:* April 2020 - Now
- *University:* University of Milano-Bicocca, Milano, Italy
  - *Department:* Department of Informatics, Systems and Communication (DISCo)
  - *Laboratory:* Real-time Events and Decision Support (REDS)
    - \* *Lab head:* Dr. Fabio Sartori
- *Research topics (from more to less recent):*
  - Serverless Computing for Networking
  - Privacy-preserving Artificial Intelligence in Multi-access Edge Computing
  - Fog Computing
  - Network Monitoring in SDN Programmable Data-planes
  - SDN-based Network Orchestration of IP/Optical Layers
  - 5G Network Management, Orchestration and Slicing
  - NFV and Service Chaining
  - Content Caching, Energy Efficiency and Fixed/Mobile Convergence
  - Privacy and Security in the Smart Grid
  - Copper Technologies in the Access Network (xDSL and vectoring)
- *Research methodologies:*
  - Optimization models (linear programming) and algorithms (heuristics)
  - Network simulation and emulation
  - Queuing theory
  - Signal processing
- *Main duties during the career:*
  - Steering of new research lines
  - Co-supervision and tutoring of BSc/MSc (10+) and PhD (6+) students
  - Research project management
  - Preparation and editing of research project proposals (generation of around 700.000€ in competitive funding by the European Commission)
- *Academic qualifications:*
  - Italian Scientific Habilitation (Abilitazione Scientifica Nazionale) for the role of Associate Professor (Professore II Fascia) in Telecommunications (SSD: ING-INF/03)

## PREVIOUS POSITIONS

### Expert Researcher

- *Date:* April 2018 - March 2020
- *Research institution:* Fondazione Bruno Kessler (FBK), Trento, Italy
  - *Research centers:* FBK-ICT (January 2020 - March 2020), FBK CREATE-NET (April 2018 - December 2019)
  - *Research unit:* Robust and Secure Distributed Computing (RiSING)
    - \* *Research unit head:* Dr. Domenico Siracusa
- *Research and innovation projects:*
  - European/Korean H2020/IITP DECENTER (Decentralized Technologies for Orchestrated Cloud-to-Edge Intelligence), 2018-2020
    - \* *Role:* Work Package 3 Leader and EU Deputy Project Coordinator
    - \* *Deliverables:* Editor of D3.1 (technical) and of D7.1-8 (ethics requirements), author of D2.1, D3.2 (technical) and D1.2, D1.3 (management)
  - GÉANT GN4-3 WP6T1 (with GARR), 2019-2020
    - \* *Role:* Responsible and coordinator of FBK's research activities

- \* *Deliverables*: Author of D6.3, D6.5 (technical)
- 5G Experimentation in the city of Prato (with Open Fiber), 2018-2020
- \* *Role*: Responsible and coordinator of FBK's activities on SDN aspects
- \* *Reporting*: Writing of the required documentation

#### **Postdoc Researcher**

- *Date*: March 2016 - March 2018
- *Research institution*: Fondazione Bruno Kessler (FBK), Trento, Italy
  - *Research center*: FBK CREATE-NET
  - *Research unit*: Future Networks (FuN)
    - \* *Research unit heads*: Dr. Domenico Siracusa and Dr. Roberto Riggio
- *Research and innovation projects*:
  - European H2020 ACINO (Application-Centric IP/optical Network Orchestration), 2016-2018
    - \* *Role*: Responsible of FBK's research activities on resource allocation
    - \* *Deliverables*: Author of D2.2, D3.3, D3.4, D3.5 (technical), of D1.9 (management) and of D6.5 (dissemination)

#### **Contract Professor**

- *Date*: February 2015 - June 2015
- *University*: University of Bergamo, Bergamo, Italy
- *Activities*: Teaching activities to BSc students (course of "Multimedia Internet Networks")

#### **Visiting Researcher**

- *University*: University of Alcalá, Alcalá, Spain
  - *Date*: November 2018 (2 weeks)
  - *Department*: Department of Automatics
  - *Host research group*: GIST-NetServ
    - \* *Research group head*: Prof. Juan Antonio Carral
  - *Activities*: Starting a new research collaboration on topics related to SDN
- *University*: University of Melbourne, Melbourne, Australia
  - *Date*: August 2014 - February 2015 (6 months)
  - *Department*: Department of Electrical and Electronic Engineering
  - *Host research center*: Centre for Energy-Efficient Telecommunication (CEET)
    - \* *Research center director*: Dr. Kerry Hinton
  - *Activities*: Research on energy efficiency in access/aggregation networks

#### **COMPETENCES AND ROLES Member of the Italian Academic Board of the PhD in Computer Science**

- *PhD Cycle*: XXXVII
- *Date*: From October 2021
- *University*: University of Milano-Bicocca, Milano, Italy

#### **Reference Professor for the MSc in Computer Science**

- *Date*: From October 2021
- *University*: University of Milano-Bicocca, Milano, Italy

#### **Information Engineer**

- *Date*: December 2020 - Now
- *Association*: Order of Engineers of the Province of Milano, Italy
- *Registration number*: 32877

## EDUCATION

### Doctor of Philosophy (PhD) in Information Technology

- *Date:* January 2013 - June 2016
- *University:* Politecnico di Milano, Milano, Italy
  - *Department:* Department of Electronics, Information e Bioengineering (DEIB)
  - *Laboratory:* Broadband Optical Networks, Security and Advanced Internet (BONSAI)
    - \* *Lab head:* Prof. Achille Pattavina
- *Grade Point:* With merit
- *Dissertation title:* Overcoming Performance, Cost and Energy Issues in Fixed and Mobile Convergent Networks
  - *Supervisor:* Prof. Giacomo Verticale
- *Research and innovation projects:*
  - European FP7 COMBO (Convergence of Fixed and Mobile Broadband Access/aggregation Networks), 2013-2016
    - \* *Role:* Research on content caching aspects
    - \* *Deliverables:* D3.1, D4.1 (technical)
  - Feasibility study of Vectoring DSL multi-DSLAM and G.Fast (funded by an Italian telecommunication operator), 2013
    - \* *Role:* Model definition and implementation
    - \* *Reporting:* Contribution to the required documentation

### Master of Science (MSc) in Telecommunications Engineering (Networking Area)

- *Date:* October 2010 - December 2012
- *University:* Politecnico di Milano, Milano, Italy
- *Grade Point:* 110/110 (summa cum laude)

### Bachelor of Science (BSc) in Telecommunications Engineering

- *Date:* September 2007 - July 2010
- *University:* Politecnico di Milano, Milano, Italy
- *Grade Point:* 108/110

### Scientific High School Certificate

- *Date:* September 2002 - July 2007
- *School:* Liceo Scientifico "F. Lussana", Bergamo, Italy
- *Grade Point:* 100/100

## TEACHING EXPERIENCE

### Teacher

- Telecommunication Systems and Services (Graduate Course, 50 hours, 6 CFU)
  - *Academic Year:* 2021-2022 (planned)
  - *University:* University of Milano-Bicocca, Milano, Italy
  - *Role:* Responsible of the course
- From Wearable Expert Systems to Wearable Environments: Definitions, Models and Future Challenges (PhD Course, 10 hours)
  - *Academic Year:* 2021-2022 (planned)
  - *University:* University of Milano-Bicocca, Milano, Italy
- Information Systems (Graduate Course, 16 hours)
  - *Academic Years:* 2020-2021, 2021-2022 (planned)
  - *University:* University of Milano-Bicocca, Milano, Italy
- Multimedia Internet Networks (Undergraduate Course, 48 hours. 6 CFU)
  - *Academic Year:* 2014-2015
  - *University:* University of Bergamo, Bergamo, Italy
  - *Role:* Responsible of the course

### Teaching Assistant

- Telecommunication Systems and Services (Graduate Course, 10 hours)
  - *Academic Year:* 2020-2021
  - *University:* University of Milano-Bicocca, Milano, Italy
- Databases (Undergraduate Course, 20 hours)
  - *Academic Years:* 2019-2020, 2020-2021
  - *University:* University of Milano-Bicocca, Milano, Italy
- Multimedia Internet Networks (Undergraduate Course, 16 hours)
  - *Academic Year:* 2016-2017
  - *University:* University of Bergamo, Bergamo, Italy
- Telecommunication Networks (Undergraduate Course, 24 hours)
  - *Academic Year:* 2013-2014
  - *University:* University of Bergamo, Bergamo, Italy
- Networking Software Platforms (Undergraduate Course, 6 hours)
  - *Academic Years:* 2012-2013, 2013-2014
  - *University:* Politecnico di Milano, Milano, Italy

### Lab Assistant

- Telecommunication Networks and Internet (Undergraduate Course, 10 hours)
  - *Academic Year:* 2013-2014
  - *University:* Politecnico di Milano, Milano, Italy

### ADDITIONAL RESEARCH EXPERIENCE AND DUTIES

- *Editorial activity:*
  - Member of the Editorial Board (Technical Committee) of Elsevier's Computer Communications (2020-Now)
  - Member of the Editorial Board (Editor) of MDPI Network (2020-Now)
  - Member of the Editorial Board (Review Editor) of Frontiers in Communications and Networks (2020-Now)
  - Member of the Reviewer Board of MDPI Future Internet (2020-Now)
  - Guest Editor for Elsevier's Computer Networks - Special Issue on "Challenges and Solutions for Hybrid SDN" (2020-2021)
  - Guest Editor for MDPI Electronics - Special Issue on "New Trends in SDN/NFV Architectures and Routing Solutions" (2021)
- *Conference Organizing Committee member for:*
  - IEEE NetSoft 2022 - Web Chair (planned)
  - IEEE SECON 2021 - Publication Chair
- *Technical Program Committee member for:*
  - EI Workshop 2021 (co-located with CNSM 2021)
  - IEEE SECON 2021
  - ACM SDN-NFV Sec Workshop 2021 (co-located with CODASPY 2021)
  - IEEE COINS 2020 - Cloud Computing Track
  - IEEE STET Workshop 2018 (co-located with NetSoft 2018)
  - IEEE ICC 2017 - Selected Areas in Communications: Software-Defined Networking & Network Function Virtualization
  - IEEE GLOBECOM 2015 - Selected Areas in Communications: Software-Defined Networking
- *Conference session chairing activities:*
  - Session Chair at WiMob 2020 - Wireless Networks Session
  - Session Co-chair at MTSR 2020 - Track on Knowledge IT Artifacts
- *Invited as grant proposal reviewer by:*
  - National Science Center, Poland
- *Serving as reviewer for:*
  - *Relevant journals:* IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communications, IEEE Communications Magazine,

IEEE Transactions on Smart Grid, IEEE Communications Letters, IEEE Transactions on Network and Service Management, IEEE Access, IEEE Transactions on Green Communications and Networking, IEEE Transactions on Industrial Informatics, IEEE/OSA Journal of Optical Communications and Networking, IEEE Networking Letters, Computer Networks, Computer Communications, Optical Switching and Networking, Journal on Network and Systems Management

– *Relevant conferences:* IEEE ICC, IEEE GLOBECOM, IEEE Online GreenComm, IEEE/IFIP NOMS, IEEE COINS, ONDM, EuCNC, ICIN

• *Relevant invited talks, talks, panels, seminars and tutorials:*

- 25th June 2021: expert panelist at 1st Workshop on Serverless Mobile Networking for 6G Communications (co-located with ACM MobiSys 2021)
- 22nd April 2021: invited talk "P4-based Network Traffic Entropy Estimation for the Detection of DDoS Attacks", at DRCN 2021 - Workshop "Beyond SDN. Programmable data plane: Abstraction, Architectures and Applications"
- 4th December 2020: talk "The Role of Data Storage in the Design of Wearable Expert Systems", at MTSR 2020 (jointly with Fabio Sartori)
- 14th October 2020: talk "Rethinking the Design of Wearable Expert Systems: The Role of Network Infrastructures", at WiMob 2020
- 5th February 2020: invited talk "Use Case for Data Plane Programming: Distributed Denial of Service Detection", at GÉANT Symposium 2020
- 30th January 2020: talk "An Incrementally-deployable P4-enabled Architecture for Network-wide Heavy-hitter Detection" at INW 2020
- 12th November 2018: seminar "Empowering Network Monitoring through Programmability" at University of Alcalà, Department of Automatics
- 12th October 2018: invited talk "Empowering Network Monitoring through Programmability" at SDN NFV World Congress 2018
- 17th May 2017: tutorial "ACINO: From Application Blending to Application Centricity" at ONDM 2017 (sole instructor)
- 20th November 2015: talk "Impact of Processing Costs on Service Chain Placement in Network Functions Virtualization" at IEEE NFV-SDN 2015
- 11th December 2013: talk "A Decisional Attack to Privacy-friendly Data Aggregation in Smart Grids" at IEEE GLOBECOM 2013

## GRANTS AND AWARDS

• *Research grants:*

- H2020 DECENTER Project (2018-2021), funded by the European Commission (650.500€ granted to FBK)
  - \* *Role:* Member of the FBK's team leading and coordinating the proposal writing (also including Dr. Domenico Siracusa and Mr. Raffaele Giaffreda)
- H2020 GN4-3 Project (2019-2022), funded by the European Commission
  - \* *Role:* Member of the FBK's team participating to the proposal writing, as subcontractor of GARR Consortium

• *Best paper awards:*

- Paper "Virtual Network Function Placement For Resilient Service Chain Provisioning" at RNDM 2016 Workshop

• *Research awards:*

- Young Talents Award 2021 (3rd Price)
  - \* *Issuer:* University of Milano-Bicocca, Milano, Italy
  - \* *Area:* Mathematics, Computer Science, Industrial Engineering, Information Engineering

• *Travel/registration grants:*

- CoNEXT 2020 Conference

## TECHNICAL SKILLS

- *Operating systems:* Microsoft Windows, Linux
- *Programming/scripting/databases:* C, Java, Matlab, Python, MySQL
- *Operation research:* AMPL, CPLEX
- *Productivity/typesetting:* Microsoft Office Suite, LaTeX, WordPress
- *Versioning:* Git
- *Network emulation/simulation:* Network Simulator 2 (NS2), Cisco Packet Tracer, Net2Plan, Netkit, Mininet

## LANGUAGE PROFICIENCY

- *Italian:* Native language
- *English:* Proficiency (C1), TOEIC Certificate, April 2010, grade: 790/990

## PUBLICATIONS **Journal papers**

1. D. Ding, **M. Savi**, D. Siracusa, Tracking Normalized Network Traffic Entropy to Detect DDoS Attacks in P4, to appear in *IEEE Transactions on Dependable and Secure Computing*, Sept. 2021
2. E. Rojas, R. Amin, C. Guerrero, **M. Savi**, A. Rastegarnia, Challenges and Solutions for Hybrid SDN, in *Computer Networks*, vol. 195, pp. 1-5, Aug. 2021 (editorial)
3. **M. Savi**, F. Olivadese, Short-Term Energy Consumption Forecasting at the Edge: A Federated Learning Approach, in *IEEE Access*, vol. 9, pp. 95949-95969, Jul. 2021
4. R. Berto, P. Napoletano, **M. Savi**, A LoRa-Based Mesh Network for Peer-to-Peer Long-Range Communication, in *Sensors*, vol. 21, no. 13, pp. 1-12, Jun. 2021
5. D. Ding, **M. Savi**, F. Pederzoli, M. Campanella, D. Siracusa, In-Network DDoS Victim Identification Using Programmable Commodity Switches, in *IEEE Transactions on Network and Service Management*, vol. 17, no. 2, pp. 1191-1202, Jun. 2021
6. J. Alvarez-Horcajo, I. Martinez-Yelmo, D. Lopez-Parajes, J. A. Carral, **M. Savi**, A Hybrid SDN Switch Based on Portable P4 Code, in *IEEE Communications Letters*, vol. 25, no. 5, pp. 1482-1485, May 2021
7. P. Kochovski, V. Stankovski, S. Gec, F. Faticanti, **M. Savi**, D. Siracusa, S. W. Kum, Smart Contracts for Service-Level Agreements in Edge-to-Cloud Computing, in *Journal of Grid Computing*, vol. 18, no. 4, pp. 673-690, Dec. 2020
8. A. Marsico, **M. Savi**, D. Siracusa, E. Salvadori, An Automated Negotiation Framework for Application-Aware Transport Network Services, in *Optical Switching and Networking*, vol. 38, pp. 1-13, Sept. 2020
9. J. Alvarez-Horcajo, E. Rojas, I. Martinez-Yelmo, **M. Savi**, D. Lopez-Parajes, HDDP: Hybrid Domain Discovery Protocol for heterogeneous devices in SDN, in *IEEE Communications Letters*, vol. 24, no. 8, pp. 1655-1659, Aug. 2020
10. D. Ding, **M. Savi**, G. Antichi, D. Siracusa, An Incrementally-deployable P4-enabled Architecture for Network-wide Heavy-hitter Detection, in *IEEE Transactions on Network and Service Management*, vol. 17, no. 1, pp. 75-88, Mar. 2020
11. R. Doriguzzi-Corin, S. Scott-Hayward, D. Siracusa, **M. Savi**, E. Salvadori, Dynamic and Application-Aware Provisioning of Chained Virtual Security Network Functions, in *IEEE Transactions on Network and Service Management*, vol. 17, no. 1, pp. 294-307, Mar. 2020
12. A. Hmaity, **M. Savi**, L. Askari, F. Musumeci, M. Tornatore, A. Pattavina, Latency- and Capacity-aware Placement of Chained Virtual Network Functions in FMC Metro Networks, in *Optical Switching and Networking*, vol. 35, pp. 1-12, Jan. 2020
13. **M. Savi**, M. Tornatore, G. Verticale, Impact of Processing-resource Sharing

- on the Placement of Chained Virtual Network Functions, to appear in *IEEE Transactions on Cloud Computing*, May 2019
14. **M. Savi**, D. Siracusa, Application-aware Service Provisioning and Restoration in SDN-based Multi-layer Transport Networks, in *Optical Switching and Networking*, vol. 30, pp. 71-84, Nov. 2018
  15. C. Rozic, **M. Savi**, C. Matrakidis, D. Klouidis, D. Siracusa, A Dynamic Multi-layer Resource Allocation and Optimization Framework in Application-centric Networks, in *Journal of Lightwave Technology*, vol. 36, issue 20, pp. 4908-4914, Oct. 2018
  16. A. Hmaity, **M. Savi**, F. Musumeci, M. Tornatore, A. Pattavina, Protection Strategies for Virtual Network Functions Placement and Service Chains Provisioning, in *Networks*, vol. 70, no. 4, pp. 373-387, Dec. 2017
  17. **M. Savi**, R. Fratini, G. Verticale, M. Tornatore, Performance Evaluation of Video Server Replication in Metro/Access Networks, in *Computer Networks*, vol. 93, part 1, pp. 96-110, Dec. 2015
  18. **M. Savi**, G. Verticale, M. Tornatore, A. Pattavina, An Energy-Efficient Strategy for VoD Content Replication in Integrated Metro/Access Networks, in *IEEE Latin America Transactions*, vol. 13, issue 11, pp. 3627-3633, Nov. 2015 (in Spanish)
  19. **M. Savi**, C. Rottondi, G. Verticale, Evaluation of the Precision-Privacy Tradeoff of Data Perturbation for Smart Metering, in *IEEE Transactions of Smart Grid*, vol. 6, no. 5, pp. 2409-2416, Sept. 2015
  20. C. Rottondi, **M. Savi**, G. Verticale, C. Krauss, Mitigation of Peer-to-Peer Overlay Attacks in the Automatic Metering Infrastructure of Smart Grids, in *Security and Communication Networks*, vol. 8, issue 3, pp. 343-359, Feb. 2015

#### Conference papers

1. M. Ciavotta, D. Motterlini, **M. Savi**, A. Tundo, DFaaS: Decentralized Function-as-a-Service for Federated Edge Computing, to appear in *IEEE International Conference on Cloud Networking (CloudNet)*, Nov. 2021
2. D. Ding, **M. Savi**, F. Pederzoli, D. Siracusa, INVEST: Flow-based Traffic Volume Estimation in Data-plane Programmable Networks, in *IFIP Networking Conference*, Jun. 2021
3. F. Sartori, **M. Savi**, R. Melen, The Role of Data Storage in the Design of Wearable Expert Systems, in *International Conference on Metadata and Semantics Research (MTSR)*, Dec. 2020
4. **M. Savi**, F. Sartori, R. Melen, Rethinking the Design of Wearable Expert Systems: The Role of Network Infrastructures, in *IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, Oct. 2020
5. F. Faticanti, **M. Savi**, F. De Pellegrini, P. Kochovski, V. Stankovski, D. Siracusa, Deployment of Application Microservices in Multi-Domain Federated Fog Environments, in *IEEE International Conference on Omni-layer Intelligent Systems (COINS)*, Sept. 2020
6. D. Ding, **M. Savi**, D. Siracusa, Estimating Logarithmic and Exponential Functions to Track Network Traffic Entropy in P4, in *IEEE/IFIP Network Operations and Management Symposium (NOMS)*, Apr. 2020
7. **M. Savi**, D. Santoro, K. Di Meo, D. Pizzolli, M. Pincheira, R. Giaffreda, S. Cretti, S. W. Kum, D. Siracusa, A Blockchain-based Brokerage Platform for Fog Computing Resource Federation, in *Conference on Innovation in Clouds, Internet and Networks (ICIN)*, Feb. 2020 (demo paper)
8. D. Ding, **M. Savi**, G. Antichi, D. Siracusa, Incremental Deployment of Programmable Switches for Network-wide Heavy-hitter Detection, in *IEEE Conference on Network Softwarization (NetSoft)*, Jun. 2019

9. F. Pederzoli, **M. Savi**, D. Siracusa, E. Salvadori, Optimization of Secure Quantum Key Distribution Backbones in Core Transport Networks, in *Optical Fiber Communication Conference (OFC)*, Mar. 2019
10. A. Marsico, **M. Savi**, D. Siracusa, E. Salvadori, An Automated Service-downgrade Negotiation Scheme for Application-centric Networks, in *Optical Fiber Communication Conference (OFC)*, Mar. 2018
11. I. Tomkos, C. Rozic, **M. Savi**, P. Skoldstrom, V. Lopez, M. Chamania, D. Siracusa, C. Matrakidis, D. Klonidis, Application Aware Multilayer Control and Optimization of Elastic WDM Switched Optical Networks, in *Optical Fiber Communication Conference (OFC)*, Mar. 2018 (invited paper)
12. C. Rozic, **M. Savi**, C. Matrakidis, D. Klonidis, D. Siracusa, I. Tomkos, Application-centric Multi-layer Resource Allocation in Availability-aware SDN-orchestrated Networks, in *European Conference on Optical Communication (ECOC)*, Sept. 2017
13. A. Marsico, M. Santuari, **M. Savi**, D. Siracusa, A. Ghafoor, S. Junique, P. Skoldstrom, An Interactive Intent-based Negotiation Scheme for Application-centric Networks, in *IEEE Conference on Network Softwarization (NetSoft)*, Jul. 2017 (demo paper)
14. **M. Savi**, C. Rozic, C. Matrakidis, D. Klonidis, D. Siracusa, I. Tomkos, Benefits of Multi-Layer Application-aware Resource Allocation and Optimization, in *European Conference on Networks and Communications (EuCNC)*, Jun. 2017
15. C. Rozic, **M. Savi**, C. Matrakidis, D. Klonidis, D. Siracusa, I. Tomkos, A Framework for Dynamic Multi-layer Resource Allocation in Application-centric Networking, in *Optical Fiber Communication Conference (OFC)*, Mar. 2017
16. **M. Savi**, F. Pederzoli, D. Siracusa, An Application-aware Multi-layer Service Provisioning Algorithm based on Auxiliary Graphs, in *Optical Fiber Communication Conference (OFC)*, Mar. 2017
17. S. Host, W. Tarneberg, P. Odling, M. Kihl, **M. Savi**, M. Tornatore, Network Requirements for Latency-critical Services in a Full Cloud Deployment, in *International Conference on Software, Telecommunications and Computer Networks (SoftCOM)*, Sept. 2016
18. A. Hmaity, **M. Savi**, F. Musumeci, M. Tornatore, A. Pattavina, Virtual Network Function Placement For Resilient Service Chain Provisioning, in *International Workshop on Resilient Networks Design and Modeling (RNDM)*, Sept. 2016 **(best paper awarded)**
19. **M. Savi**, A. Hmaity, G. Verticale, S. Host, M. Tornatore, To Distribute or Not to Distribute? Impact of Latency on Network Function Distribution at the Edge of FMC Networks, in *International Conference on Transparent Optical Networks (ICTON)*, Jul. 2016 (invited paper)
20. **M. Savi**, M. Tornatore, G. Verticale, Impact of Processing Costs on Service Chain Placement in Network Functions Virtualization, in *IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN)*, Nov. 2015
21. **M. Savi**, O. Ayoub, F. Musumeci, Z. Li, G. Verticale, M. Tornatore, Energy-efficient Caching for Video-on-Demand in Fixed-Mobile Convergent Networks, in *IEEE Online Conference on Green Communications (Online GreenCom)*, Nov. 2015
22. Z. Li, J. C. Point, S. Ciftci, O. Eker, G. Mauri, **M. Savi**, G. Verticale, ICN Based Shared Caching in Future Converged Fixed and Mobile Network, in *IEEE International Conference on High Performance Switching and Routing (HPSR)*, Jun. 2015
23. **M. Savi**, G. Verticale, M. Tornatore, Energy-Efficient VoD Content Delivery and Replication in Integrated Metro/Access Networks, in *IEEE Latin-American Conference on Communications (LatinCom)*, Nov. 2014



24. R. Fratini, **M. Savi**, G. Verticale, M. Tornatore, Using Replicated Video Servers for VoD Traffic Offloading in Integrated Metro/Access Networks, in *IEEE International Conference on Communications (ICC)*, Jun. 2014
25. C. Rottondi, **M. Savi**, D. Polenghi, G. Verticale, C. Krauss, A Decisional Attack to Privacy-friendly Data Aggregation in Smart Grids, in *IEEE Global Communications Conference (GLOBECOM)*, Dec. 2013
26. C. Rottondi, **M. Savi**, D. Polenghi, G. Verticale, C. Krauss, Implementation of a Protocol for Secure Distributed Aggregation of Smart Metering Data, in *International Conference on Smart Grid Technology, Economics and Policies (SG-TEP)*, Dec. 2012

**Posters and Abstracts** (not included in proceedings)

1. M. Campanella, P. Benacek, I. Golub, X. Jeannin, D. Parniewicz, **M. Savi**, F. Loui, How NREs can benefit from P4, in *P4 Workshop in Europe (EUROP4)*, Sept. 2019
2. D. Ding, **M. Savi**, D. Siracusa, Estimation of Logarithmic and Exponential Functions Entirely in P4-programmable Data Planes, in *P4 Workshop in Europe (EUROP4)*, Sept. 2019
3. Z. Li, Y. Liu, J. C. Point, S. Ciftci, O. Eker, **M. Savi**, M. Tornatore, G. Verticale, Shared Cache as a Service in Future Converged Fixed and Mobile Network, in *European Conference on Networks and Communications (EuCNC)*, Jul. 2015