# **FRANCESCO LIBERATI**

# Curriculum Vitae ai fini della pubblicazione

Rome 05/11/2020

# Part I – General Information

Full Name	Francesco Liberati
Place of Birth	Rome
Spoken Languages	Italian (mother tongue), English (professional), Spanish (upper intermediate),
	French (basic), Chinese (basic)

## Part II - Education

## **PhD in Systems Engineering**

Type: PhD.

**Year**: Nov 2011 – 31 Oct 2014, graduated on 16 March 2015.

Institution: University of Rome "La Sapienza".

# Master's Degree in Systems Engineering

*Type*: University graduation.

*Year*: November 2009 – October 2011, graduated on 11/10/2011.

Institution: University of Rome "La Sapienza".

Notes: Final grade 110/110 cum laude, average exam grade 30/30 (12 exams).

# **Bachelor's Degree in Automation Engineering**

Type: University graduation.

**Year**: 2006 – November 2009, graduated on 10/11/2009.

Institution: University of Rome "La Sapienza".

Notes: Final grade 110/110 cum laude, average exam grade 29/30 (32 exams).

## **Licensure in Engineering**

<u>Type</u>: Licensure. <u>Year</u>: 2012.

Institution: University of Rome "La Sapienza".

**Notes**: Professional abilitation to the Engineering Practice - Industrial Engineering.

# Part III - Appointments

# **IIIA – Academic Appointments**

Research Fellow in Automatic Control (Assegnista di Ricerca, art. 22, Legge 240/2010, SSD ING-INF/04)

Start: 01/03/2020.

End: 28/02/2021 (ongoing).

<u>Institution</u>: Department of Computer, Control and Management Engineering "Antonio Ruberti", University of Rome "La Sapienza".

# Contract Professor "Systems and Control Methods for Cyber-Physical Security"

Start: 24/02/2020.

End: 30/04/2021 (ongoing).

Institution: Department of Informatics, University of Rome "La Sapienza".

## Research Fellow in Automatic Control (Assegnista di Ricerca, art. 22, Legge 240/2010, SSD ING-INF/04)

<u>Start</u>: 01/01/2019.

End: 31/12/2019.

<u>Institution</u>: Department of Computer, Control and Management Engineering "Antonio Ruberti", University of Rome "La Sapienza".

# **Visiting Researcher, Automatic Control**

<u>Start</u>: 16-01-2019. End: 31-03-2019.

<u>Institution</u>: Laboratory of Automatic Control, University of Brussels (Service d'Automatique et d'Analyse des Systèmes École polytechnique de Bruxelles Université libre de Bruxelles 50, av. F.D. Roosevelt, CP 165/55 1050 Bruxelles – Belgique).

# Fixed-term Researcher (Ricercatore a tempo determinato di tipologia A, art. 24, comma 3, lett. A, Legge 240/2010, SSD ING-INF/04)

<u>Start</u>: 2 May 2015. <u>End</u>: 1 May 2017.

Institution: eCampus University, Via Isimbardi, 10, 22060 Rome and Milan, Italy.

#### Research Fellow in Automatic Control (Assegnista di Ricerca, art. 22, Legge 240/2010, SSD ING-INF/04)

Start: 01/04/2015. End: 30/04/2015.

<u>Institution</u>: Department of Computer, Control and Management Engineering "Antonio Ruberti", University of Rome "La Sapienza".

## **IIIB – Other Appointments**

# Scientific responsible for the "Cybersecurity Research Group" at CRAT

<u>Start</u>: 27/04/2016. End: 30/04/2017.

<u>Institution</u>: Consortium for the Research in Automation and Telecommunication (CRAT), Via Giovanni Nicotera, 29 00195 Roma, P.IVA: 08882901005, <a href="http://www.crat.eu/">http://www.crat.eu/</a>.

## **Guest Editor of Electronics (ISSN 2079-9292)**

Year: 2020-2021 (ongoing).

Institution: Electronics (ISSN 2079-9292).

<u>Position</u>: "Guest Editor" of Electronics (editor mdpi), for the Special Issue "Cyber-Physical Security in Smart Grids: System Analysis and Control Design".

# **Invited Speaker at the International ENEFM Congress**

*Date*: 22-28 October 2019.

<u>Institution</u>: "5th International Congress on Energy Efficiency and Energy Related Materials (ENEFM)", October 22-28, 2019 in Oludeniz, Turkey.

# **Topic Editor of Electronics (ISSN 2079-9292)**

<u>Start</u>: 15/11/2019. End: present (ongoing).

Institution: Electronics (ISSN 2079-9292).

## **Editorial Board member of Smart Cities (ISSN 2624-6511)**

<u>Start</u>: 8/10/2019. <u>End</u>: present (ongoing).

Institution: Smart Cities (ISSN 2624-6511).

### **Associate Editor for Contributed Papers**

<u>Start</u>: 9/12/2019. <u>End</u>: 28/10/2020.

<u>Institution</u>: "2020 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)", The Hague, 25-28

October 2020.

## **Project Manager H2020 Energy Research**

Start: 1/5/2017. End: 31/12/2018.

Institution: The Innovation and Networks Executive Agency (INEA), European Commission Chaussée de

Wavre 910, B-1040 Brussels (Belgium), https://ec.europa.eu/inea/en.

# Part IV - Teaching experience

# Contract professor for the course of "Systems and Control Methods for Cyber-Physical Security" at Sapienza University of Rome

Year: from 24/02/2020 to 30/04/2021 (ongoing).

Institution: Department of Informatics, University of Rome "La Sapienza".

# Professor for the Course of "Analisi e Modellistica dei Sistemi" (SSD ING-INF/04), eCampus University

*Year*: from academic year 2015-2016 to 30/04/2017.

*Institution*: eCampus University Via Isimbardi, 10, 22060 Novedrate, Italy.

# Professor for the Course of "Sistemi di Controllo Avanzati" (SSD ING-INF/04), eCampus University

Year: from academic year 2015-2016 to 30/04/2017.

Institution: eCampus University, Via Isimbardi, 10, 22060 Novedrate, Italy.

# Lectures for the Course of "Controlli Automatici" (SSD ING-INF/04), University of Rome "La Sapienza"

**Year**: Academic years 2013/2014 and 2014/2015.

Institution: University of Rome "La Sapienza".

# Lectures for the Course of "Control of Autonomous Multi-Agent Systems" (SSD ING-INF/04), University of Rome "La Sapienza"

<u>Year</u>: Academic years 2014/2015 and 2018/2019. <u>Institution</u>: University of Rome "La Sapienza".

# Lectures for the Course of "Control of Communication and Energy Networks" (SSD ING-INF/04), University of Rome "La Sapienza"

Year: Academic years 2016/2017, 2018/2019 and 2019/2020.

Institution: University of Rome "La Sapienza".

# Lectures for the course of "Fondamenti di Automatica" (SSD ING-INF/04) at Sapienza University of Rome

Year: 2014.

<u>Institution</u>: Department of Computer Control and Management Engineering, University of Rome "La

Sapienza".

# Lectures for the Course of "Automazione I" (SSD ING-INF/04), University of Rome "La Sapienza"

*Year*: 14/03/2012.

<u>Institution</u>: Department of Computer Control and Management Engineering, University of Rome "La

Sapienza".

# Part V - Society memberberships, Awards and Honors

#### **IEEE Member**

Years: 2012, 2013, 2014, 2016, 2017, 2019, 2020.

*Title*: Member of "The Institute of Electrical and Electronics Engineers" (IEEE). Member number 92187482.

# Iscritto nell'Albo degli Ingegneri della Provincia di Roma

Year: from 13/04/2015 to November 2018.

<u>Title</u>: member of the Albo degli Ingegneri della Provincia di Roma, nella sezione A - settore/i: Industriale.

# Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

# "SESAME" H2020 EU Research Project

Year: From 12 July 2019 to present (ongoing).

Title: SESAME: "Smart European Space Access through Modern Exploitation of data science".

Program: EU Research and innovation program H2020, grant ID: 821875

(https://cordis.europa.eu/project/id/821875).

#### "5G-SOLUTIONS" H2020 EU Research Project

Year: From 1 February 2020 to present (ongoing).

*Title*: 5G-SOLUTIONS: "5G Solutions for European Citizens".

Program: EU Research and innovation program H2020, grant ID: 856691

(https://cordis.europa.eu/project/id/856691).

# "ATENA" H2020 EU Research Project

Year: From 1 July 2016 to 30 April 2017.

Title: ATENA: "Advanced Tools to assEss and mitigate the criticality of ICT compoNents and their

dependencies over Critical InfrAstructures".

<u>Program</u>: EU Research and innovation program H2020, grant ID: 700581

(https://cordis.europa.eu/project/id/700581).

#### "TNOVA" FP7 EU Research Project

Year: From 31 December 2014 to 31 December 2016.

Title: TNOVA: "Network Functions as-a-Service over Virtualised Infrastructures".

Program: EU Research and innovation program FP7, grant ID: 619520,

(https://cordis.europa.eu/project/id/619520).

### "CockpitCI" FP7 EU Research Project

Year: From 1 January 2012 to 31 December 2013.

<u>Title</u>: "CockpitCI: Cybersecurity on SCADA: risk prediction, analysis and reaction tools for Critical

Infrastructures".

Program: EU Research and innovation program FP7, grant ID: 285647,

(https://cordis.europa.eu/project/id/285647).

## "BONVOYAGE" H2020 EU Research Project

Year: From 1 July 2015 to 30 June 2016.

Title: "BONVOYAGE: From Bilbao to Oslo, intermodal mobility solutions and interfaces for people and

goods, supported by an innovative communication network".

Program: EU Research and innovation program H2020, grant ID: 635867,

(https://cordis.europa.eu/project/id/635867).

## "SWIPE" FP7 EU Research Project

**Year**: From 1 July 2014 to 31 December 2014.

<u>Title</u>: "SWIPE: Space Wireless sensor networks for Planetary Exploration". <u>Program</u>: EU Research and innovation program FP7, grant ID: 312826,

(https://cordis.europa.eu/project/id/312826).

#### "MOBINCITY" FP7 EU Research Project

<u>Year</u>: From 1 July 2012 to 31 December 2014. Title: MOBINCITY: "Smart Mobility in Smart City".

Program: EU Research and innovation program FP7, grant ID: 314328,

(https://cordis.europa.eu/project/id/314328).

### "SmartV2G" FP7 EU Research Project

<u>Year</u>: From 1 June 2016 to 30 April 2017, and from 1 January 2014 to 31 May 2014, and from 1 February 2013 to 31 July 2013.

Title: "SmartV2G: Smart Vehicle to Grid Interface".

Program: EU Research and innovation program FP7, grant ID: 284953,

(https://cordis.europa.eu/project/id/284953).

#### "MICIE" FP7 EU Research Project

Year: From 8 February 2010 to 31 December 2010.

<u>Title</u>: MICIE: "Tool for sistemic risk analysis and secure mediation of data exchanged across linked CI information infrastructures"

information infrastructures".

Program: EU Research and innovation program FP7, grant ID: 225353,

(https://cordis.europa.eu/project/id/225353).

## "ChargeAdvisor-INCENSE" EU Research Project

Year: From 8/06/2015 to 30/11/2015.

<u>Title</u>: Charge Advisor: " Next Generation Charging Experiences for Plug-in Electric Vehicle ".

Program: EU Research and innovation program FP7/INCENSE acceleration program, grant ID: 632852,

(http://www.chargeadvisor.eu/project/web/home.php).

# Part VII - Research Activities

#### **Control in Smart Grids**

<u>Keywords</u>: model predictive control, optimal control, reinforcement learning, smart grids, demand side management, control of renewable energy integration, control of distributed energy resources, control of electric vehicles integration.

<u>Brief Description</u>: My main research field over the last year has been in the design of control algorithms for addressing various research control problems in the smart grid domain, such as:

- a) Design of centralized and distributed control systems for managing the massive integration of electric vehicles. This research has addressed both theoretical aspects (e.g., stability) and practical control design, simulation, implementation and test in operational environment, in cooperation with major international players in the sector (e.g., Enel X). The main methodologies I have investigated in this field so far are: model predictive control, optimal control (e.g., Pontryagin's maximum principle), stochastic optimal control and reinforcement learning;
- b) Design of smart grid energy management systems (including control of storage and other distributed energy resources) with applications such as: optimal power flow, power grid losses minimization, smoothing of power profiles from intermittent renewable generation, etc.
- c) Design of advanced control algorithms for building management systems. The goal is to optimally control the energy resources in the building (smart appliances, storage, electric vehicle, renewable generation, heating loads, etc.) to achieve objectives such as: energy bill minimization, maximization of renewable self-consumption, maximization of occupants' comfort, local energy trading in a district, provisioning of flexibility ancillary services to the grid, etc.
- d) Control of distributed energy resources (e.g., storage and doubly-fed induction generators, via feedback linearization techniques) and battery management systems, for prolonging life of battery and maximizing its performance.

## Cyber-physical Systems and Critical Infrastructure Protection Modelling and Control

<u>Keywords</u>: critical infrastructure, interdependency, cyber-physical systems, cyberattacks, modelling of cyber-physical systems.

Brief Description: In this area, I have mainly addressed research problems focused on:

- a) Modelling of interconnected and interdependent critical infrastructures. I worked on both standard state-space models and on probabilistic models (e.g., Bayes networks), with the aim of capturing the relation of interdependence among critical infrastructures and the consequent possible propagation of adverse events. Such models also play an important role in the detection and identification of the attacks.
- b) Design of energy management systems able to improve the resiliency of distribution and transmission grids, by considering also the information about the current and predicted risk level. Studies have addressed for example the optimal reconfiguration and black start procedures in electricity grids, to make the grid more resilient to cyberattacks.
- c) An additional important research activity regards the review of the state of the art in the field of cyber-physical attacks to the smart grid, with a journal paper submission about to being finalized.

# **Other Resource Management Problems**

*Keywords*: ICT, telecommunication networks, transportation networks.

<u>Brief Description</u>: Many additional research studies have been carried out in the broad area of optimal resource management in networks and systems. Among these, I have carried out research in the fields of optimal (e.g., energy efficient) routing problems in wireless sensor networks and general communication networks, optimal management of virtualized networks (e.g., resource management problems for efficient allocation of virtualized network functions), optimal traffic control problems, optimization of operations management and assembly line control, etc.

# Part VIII - List of all Publications

#### **International Journal Publications:**

- F. Liberati, A. Di Giorgio, A. Giuseppi, A. Pietrabissa and F. Delli Priscoli, "Efficient and Risk-Aware Control of Electricity Distribution Grids," in IEEE Systems Journal. 2020. doi: https://doi.org/10.1109/JSYST.2020.2965633.
- 2. Liberati, Francesco. "Model Predictive Control of a Road Junction." Smart Cities 3.3 (2020): 806-817. <a href="https://doi.org/10.3390/smartcities3030041">https://doi.org/10.3390/smartcities3030041</a>.

- 3. F. Liberati, A. Di Giorgio, A. Giuseppi, A. Pietrabissa, E. Habib, and L. Martirano, "Joint Model Predictive Control of Electric and Heating Resources in a Smart Building," in IEEE Transactions on Industry Applications. doi: https://doi.org/10.1109/TIA.2019.2932954.
- Liberati, F., Garone, E., Constrained Control of Linear Discrete-Time Systems Under Quartic Performance Criterion, (2019) IEEE Control Systems Letters, vol. 4, no. 2, pp. 301-306, April 2020. DOI: https://doi.org/10.1109/LCSYS.2019.2924901.
- 5. Pietrabissa, A., Liberati, F., Dynamic distributed clustering in wireless sensor networks via Voronoi tessellation control, (2017) International Journal of Control, 92 (5), pp. 1001-1014. DOI: <a href="https://doi.org/10.1080/00207179.2017.1378441">https://doi.org/10.1080/00207179.2017.1378441</a>.
- Adamsky, F., Aubigny, M., Battisti, F., Carli, M., Cimorelli, F., Cruz, T., Di Giorgio, A., Foglietta, C., Galli, A., Giuseppi, A., Liberati, F., Neri, A., Panzieri, S., Pascucci, F., Proenca, J., Pucci, P., Rosa, L., Soua, R., Integrated protection of industrial control systems from cyber-attacks: the ATENA approach, (2018) International Journal of Critical Infrastructure Protection, 21, pp. 72-82. DOI: <a href="https://doi.org/10.1016/j.ijcip.2018.04.004">https://doi.org/10.1016/j.ijcip.2018.04.004</a>.
- 7. Liberati, F., Di Giorgio, A., Economic model predictive and feedback control of a smart grid prosumer node, (2018) Energies, 11 (1), art. no. 48. DOI: <a href="https://doi.org/10.3390/en11010048">https://doi.org/10.3390/en11010048</a>.
- 8. Liberati, F., Giuseppi, A., Pietrabissa, A., Suraci, V., Di Giorgio, A., Trubian, M., Dietrich, D., Papadimitriou, P., Delli Priscoli, F., Stochastic and exact methods for service mapping in virtualized network infrastructures, (2017) International Journal of Network Management, 27 (6), art. no. e1985. DOI: <a href="https://doi.org/10.1002/nem.1985">https://doi.org/10.1002/nem.1985</a>.
- 9. Kourtis, M.-A., McGrath, M.J., Gardikis, G., Xilouris, G., Riccobene, V., Papadimitriou, P., Trouva, E., Liberati, F., Trubian, M., Batallé, J., Koumaras, H., Dietrich, D., Ramos, A., Riera, J.F., Bonnet, J., Pietrabissa, A., Ceselli, A., Petrini, A., T-NOVA: An open-source MANO stack for NFV infrastructures, (2017) IEEE Transactions on Network and Service Management, 14 (3), art. no. 7997799, pp. 586-602. DOI: https://doi.org/10.1109/TNSM.2017.2733620.
- 10. Oddi, G., Pietrabissa, A., Liberati, F., Di Giorgio, A., Gambuti, R., Lanna, A., Suraci, V., Delli Priscoli, F., An any-sink energy-efficient routing protocol in multi-hop wireless sensor networks for planetary exploration, (2017) International Journal of Communication Systems, 30 (7), art. no. e3020. DOI: <a href="https://doi.org/10.1002/dac.3020">https://doi.org/10.1002/dac.3020</a>.
- 11. Di Giorgio, A., Liberati, F., Lanna, A., Pietrabissa, A., Priscoli, F.D., Model Predictive Control of Energy Storage Systems for Power Tracking and Shaving in Distribution Grids, (2017) IEEE Transactions on Sustainable Energy, 8 (2), pp. 496-504. DOI: <a href="https://doi.org/10.1109/TSTE.2016.2608279">https://doi.org/10.1109/TSTE.2016.2608279</a>.
- 12. Di Giorgio, A., Liberati, F., Near real time load shifting control for residential electricity prosumers under designed and market indexed pricing models, (2014) Applied Energy, 128, pp. 119-132. DOI: <a href="https://doi.org/10.1016/j.apenergy.2014.04.032">https://doi.org/10.1016/j.apenergy.2014.04.032</a>.
- 13. Pietrabissa, A., Liberati, F., Oddi, G., A distributed algorithm for Ad-hoc network partitioning based on Voronoi Tessellation, (2016) Ad Hoc Networks, 46, pp. 37-47. DOI: <a href="https://doi.org/10.1016/j.adhoc.2016.03.008">https://doi.org/10.1016/j.adhoc.2016.03.008</a>.
- 14. Di Giorgio, A., Liberati, F., Canale, S., Electric vehicles charging control in a smart grid: A model predictive control approach, (2014) Control Engineering Practice, 22 (1), pp. 147-162. DOI: <a href="https://doi.org/10.1016/j.conengprac.2013.10.005">https://doi.org/10.1016/j.conengprac.2013.10.005</a>.
- 15. Foglietta, C., Panzieri, S., Macone, D., Liberati, F., Simeoni, A., Detection and impact of cyber attacks in a critical infrastructures scenario: The CockpitCl approach, (2013) International Journal of System of Systems Engineering, 4 (3-4), pp. 211-221. DOI: <a href="https://doi.org/10.1504/IJSSE.2013.057669">https://doi.org/10.1504/IJSSE.2013.057669</a>.
- 16. Di Giorgio, A., Liberati, F., A Bayesian network-based approach to the critical infrastructure interdependencies analysis, (2012) IEEE Systems Journal, 6 (3), art. no. 6189364, pp. 510-519. DOI: <a href="https://doi.org/10.1109/JSYST.2012.2190695">https://doi.org/10.1109/JSYST.2012.2190695</a>.

# **Book Chapters:**

- 17. Azzoni, P., Rogo, F., Coveri, C., Steger, M., Rom, W., Fiaschetti, A., Liberati, F., Noll, J., Applying SHIELD in new domains, (2017) Measurable and Composable Security, Privacy, and Dependability for Cyberphysical Systems: The SHIELD Methodology, pp. 414-448. DOI: <a href="https://doi.org/10.1201/9781138042858">https://doi.org/10.1201/9781138042858</a>.
- 18. Fiaschetti, A., Azzoni, P., Noll, J., Uribeetxeberria, R., Pietrabissa, A., Priscoli, F.D., Suraci, V., Mignanti, S., Liberati, F., Panfili, M., Di Giorgio, A., Morgagni, A., The SHIELD approach, (2017) Measurable and Composable Security, Privacy, and Dependability for Cyberphysical Systems: The SHIELD Methodology, pp. 105-158. DOI: <a href="https://doi.org/10.1201/9781138042858">https://doi.org/10.1201/9781138042858</a>.
- 19. Di Giorgio, A., Liberati, F., A model predictive control-based approach for plug-in electric vehicles charging: Power tracking, renewable energy sources integration and driver preferences satisfaction, (2015) Power Systems, 88, pp. 203-240. DOI: <a href="https://doi.org/10.1007/978-981-287-317-0">https://doi.org/10.1007/978-981-287-317-0</a> 7.

## **International Conference Publications:**

- 20. Liberati, F., Tortorelli, A., Mazquiaran, C., Imran, M., & Panfili, M. (2020). Optimal Control of Industrial Assembly Lines. 7th International Conference on Control, Decision and Information Technologies (CoDIT'20), June 29 July 2, 2020, Prague, Czech Republic, accepted.
- 21. R. Germanà, F. Liberati and A. Di Giorgio, "Decentralized Model Predictive Control of Plug-in Electric Vehicles Charging based on the Alternating Direction Method of Multipliers," *2020 28th Mediterranean Conference on Control and Automation (MED)*, Saint-Raphaël, France, 2020, pp. 739-745, doi: https://doi.org/10.1109/MED48518.2020.9183137.
- 22. Giuseppi, A. Pietrabissa, F. Liberati and A. Di Giorgio, "Controlled Optimal Black Start Procedures in Smart Grids for Service Restoration in Presence of Electrical Storage Systems," 2020 28th Mediterranean Conference on Control and Automation (MED), Saint-Raphaël, France, 2020, pp. 746-751, doi: <a href="https://doi.org/10.1109/MED48518.2020.9183176">https://doi.org/10.1109/MED48518.2020.9183176</a>.
- F. Delli Priscoli, A. Giuseppi, F. Liberati and A. Pietrabissa, "Traffic Steering and Network Selection in 5G Networks based on Reinforcement Learning," 2020 European Control Conference (ECC), Saint Petersburg, Russia, 2020, pp. 595-601, doi: <a href="https://doi.org/10.23919/ECC51009.2020.9143837">https://doi.org/10.23919/ECC51009.2020.9143837</a>.
- 24. Giuseppi, A. Tortorelli, R. Germanà, F. Liberati and A. Fiaschetti, "Securing Cyber-Physical Systems: An Optimization Framework based on OSSTMM and Genetic Algorithms," 2019 27th Mediterranean Conference on Control and Automation (MED 2019), Akko, Israel, 2019, pp. 50-56. doi: <a href="https://doi.org/10.1109/MED.2019.8798506">https://doi.org/10.1109/MED.2019.8798506</a>.
- 25. D. Giorgio, A. Giuseppi, R. Germanà and F. Liberati, "Decentralised Model Predictive Control of Electric Vehicles Charging," 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, 2019, pp. 3216-3222, doi: <a href="https://doi.org/10.1109/SMC.2019.8914040">https://doi.org/10.1109/SMC.2019.8914040</a>.
- 26. Tortorelli, A. Giuseppi, F. Lisi, E. De Santis, F. Liberati, Operations Management of Satellite Launch Centres, 25th Ka and Broadband Communications Conference, 30 Sept. 2 October 2019, Sorrento, Italy. <a href="https://arxiv.org/ftp/arxiv/papers/2001/2001.09472.pdf">https://arxiv.org/ftp/arxiv/papers/2001/2001.09472.pdf</a>.
- 27. Di Giorgio, A., Giuseppi, A., Liberati, F., Pietrabissa, A., Controlled electricity distribution network black start with energy storage system support, (2017) 2017 25th Mediterranean Conference on Control and Automation, MED 2017, art. no. 7984213, pp. 781-786. DOI: <a href="https://doi.org/10.1109/MED.2017.7984213">https://doi.org/10.1109/MED.2017.7984213</a>.
- 28. Di Giorgio, A., Liberati, F., Germanà, R., Presciuttini, M., Celsi, L.R., Delli Priscoli, F., On the control of energy storage systems for electric vehicles fast charging in service areas, (2016) 24th Mediterranean Conference on Control and Automation, MED 2016, art. no. 7535947, pp. 955-960. DOI: <a href="https://doi.org/10.1109/MED.2016.7535947">https://doi.org/10.1109/MED.2016.7535947</a>.
- 29. Riera, J.F., Batalle, J., Bonnet, J., Dias, M., McGrath, M., Petralia, G., Liberati, F., Giuseppi, A., Pietrabissa, A., Ceselli, A., Petrini, A., Trubian, M., Papadimitrou, P., Dietrich, D., Ramos, A., Melian, J., Xilouris, G., Kourtis, A., Kourtis, T., Markakis, E.K., TeNOR: Steps towards an orchestration platform for multi-PoP NFV deployment, (2016) IEEE NETSOFT 2016 2016 IEEE NetSoft Conference and Workshops:

- Software-Defined Infrastructure for Networks, Clouds, IoT and Services, art. no. 7502419, pp. 243-250. DOI: <a href="https://doi.org/10.1109/NETSOFT.2016.7502419">https://doi.org/10.1109/NETSOFT.2016.7502419</a>.
- Martirano, L., Marrocco, R., Liberati, F., Di Giorgio, A., KNX protocol compliant load shifting and storage control in residential buildings, (2015) IEEE Industry Application Society - 51st Annual Meeting, IAS 2015, Conference Record, art. no. 7356796. DOI: <a href="https://doi.org/10.1109/IAS.2015.7356796">https://doi.org/10.1109/IAS.2015.7356796</a>.
- 31. Giorgio, A.D., Liberati, F., Lanna, A., Real time optimal power flow integrating large scale storage devices and wind generation, (2015) 2015 23rd Mediterranean Conference on Control and Automation, MED 2015 Conference Proceedings, art. no. 7158794, pp. 480-486. DOI: <a href="https://doi.org/10.1109/MED.2015.7158794">https://doi.org/10.1109/MED.2015.7158794</a>.
- 32. Liberati, F., Oddi, G., Lanna, A., Pietrabissa, A., A lightweight sensor scheduling algorithm for clustered wireless sensor networks, (2015) 2015 23rd Mediterranean Conference on Control and Automation, MED 2015 Conference Proceedings, art. no. 7158881, pp. 953-959. DOI: <a href="https://doi.org/10.1109/MED.2015.7158881">https://doi.org/10.1109/MED.2015.7158881</a>.
- Di Giorgio, A., Liberati, F., Lanna, A., Electric energy storage systems integration in distribution grids, (2015) 2015 IEEE 15th International Conference on Environment and Electrical Engineering, EEEIC 2015 - Conference Proceedings, art. no. 7165354, pp. 1279-1284. DOI: https://doi.org/10.1109/EEEIC.2015.7165354.
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### **Workshop Publications:**

- 49. Coppola G., Caleno F., Di Giorgio A., Mercurio A., Liberati F., Zuccaro L., "OPERATIONAL INTERFACES FOR EV SMART CHARGING," International Conference on Electricity Distribution (CIRED). CIRED WORKSHOP, 2014, Rome, 11-12 June, 2014. <a href="http://www.cired.net/publications/workshop2014/papers/CIRED2014WS">http://www.cired.net/publications/workshop2014/papers/CIRED2014WS</a> 0270 final.pdf
- 50. Seminaroti, M.; Canale, S.; Di Giorgio, A.; Liberati, F.; Sassano, A., "A Lot-Sizing based algorithm for demand side management and optimal electric vehicle charging," Operational Research (EURO | INFORMS), 2013 26th European Conference on, 1-4 July, 2013.
- 51. Monreal, J.; Peral, P.; Di Giorgio, A.; Liberati, F.; Martinez, A.; Fernandez, V., "SMARTV2G: Algorithms for EV infrastructure planning," EVS27 Symposium, Barcelona, Spain, November 17-20, 2013.
- 52. Macone, D.; Liberati, F.; Simeoni, A.; Delli Priscoli, F.; Castrucci, M.; Panzieri, S.; lassinovski, S.; Minichino, M.; Ciancamerla, E., "Detection of and Reaction to Cyber Attacks in a Critical Infrastructures Scenario: the CockpitCl Approach," The International Defense and Homeland Security Simulation Workshop, 19-21 September 2012, Vienna, Austria.

## **Technical Reports:**

- 53. Mattei, G.; Liberati, F., "Option pricing models: the Black & Scholes equation", Department of Computer, Control, and Management Engineering Antonio Ruberti Technical Reports, Report n. 11, 2013.
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# Deliverables of International Research and Innovation Projects (FP7 e H2020 EU Programs)

- 55. Deliverable "D3.2: Intelligent and Adaptive Models", progetto di ricerca europeo "SESAME: Smart European Space Access through Modern Exploitation of data science", grant ID: 821875, framework program H2020 (https://cordis.europa.eu/project/id/821875).
- 56. Deliverable D3.3: "Service mapping", progetto di ricerca europeo "T-NOVA: Network Functions as-a-Service over Virtualised Infrastructures", grant ID: 619520, framework program FP7 (<a href="https://cordis.europa.eu/project/id/619520">https://cordis.europa.eu/project/id/619520</a>), version 3.1 final, 12 gennaio 2016, dissemination level: PUBLIC, <a href="https://cordis.europa.eu/docs/projects/cnect/0/619520/080/deliverables/001-TNOVAD33ServiceMappingv10Ares20162347437.pdf">https://cordis.europa.eu/docs/projects/cnect/0/619520/080/deliverables/001-TNOVAD33ServiceMappingv10Ares20162347437.pdf</a>.
- 57. Deliverable "D7.3: Pilot experience 2 report: Italy", "Smart Mobility in Smart City", grant ID: 314328, framework program FP7 (https://cordis.europa.eu/project/id/314328), dissemination level: confidential.

*Note*: The deliverables listed above are exclusively those for which I was Editor. In addition, I have also contributed to dozens of other project deliverables.

Place and date: Rome, 05/11/2020

The declarant

(Francesco LIBERATI)