

# Fabrizio Granelli

DISI – University of Trento, Via Sommarive 9, 38123 Trento (TN), ITALY

Phone:

E-Mail: [fabrizio.granelli@unitn.it](mailto:fabrizio.granelli@unitn.it)

## Summary

Fabrizio Granelli is Full Professor at the Dept. of Information Engineering and Computer Science (DISI) of the University of Trento (Italy), IEEE ComSoc Distinguished Lecturer for 2021-24 and IEEE ComSoc Director for Conference Development for 2022-23. From 2012 to 2014, he was Italian Master School Coordinator in the framework of the European Institute of Innovation and Technology ICT Labs Consortium. He was Delegate for Education at DISI in 2015-2016 and member of the Executive Committee of the Trentino Wireless and Optical Testbed Lab in 2012-16. He was IEEE ComSoc Distinguished Lecturer for 2012-15, IEEE ComSoc Director for Online Content in 2016-17 and IEEE ComSoc Director for Educational Services in 2018-19. From 2018 he is collaborating with University of New Mexico, Albuquerque, NM, USA as Research Associate Professor. He was visiting professor at the State University of Campinas (more than six months - SP, Brazil) and The University of Tokyo (two months - Tokyo, Japan). Since November 2022, he is Rector's Delegate for Information Technology and Services, and from January 2023 he is Program Lead for the EIT Digital Master School Major on Cloud and Network Infrastructures.

Prof. Granelli was Chair of the Joint IEEE VTS/ComSoc Italian Chapter (2018-21) and coordinator of the research and didactical activities on Next Generation Networks at DISI. He was advisor of more than 100 B.Sc. and M.Sc. theses and 12 Ph.D. theses. Since 2000 he is consistently teaching networking courses at the University of Trento (at B.Sc., M.Sc. and Ph.D. levels), at least covering 18 ECTS per academic year (24 ECTS in 2018/19, 27 ECTS in 2021/22).

He is currently Associate Editor-in-Chief of the IEEE Communications Surveys and Tutorial journal, Senior Editor of the IEEE Transactions on Green Communications and Networking, and Associate Editor of IEEE Communications Magazine.

He is author or co-author of more than 250 papers published in international journals (more than 100), books and conferences in networking, with reference to wireless networks, cognitive radios and networks, green networking and softwarized networking, AI for communications and networks. His research activities are currently focused on modeling, virtualization and resource allocation in wireless and mobile networks, with focus on 5G and beyond cellular networks and novel data/audiovisual mobile communication services.

He demonstrated good capabilities in R&D, by coordinating research teams at national and international levels as local or general coordination of research projects, for a total of more than 16 MEuros of funding.

H-index (March. 1, 2024): 39 (Google Scholar), 32 (Scopus)

## Employment History

**Full Professor (ING-INF/03, 09/F2)**

**[13 Dec. 2021-now]**

University of Trento (Italy)

**Associate Professor (ING-INF/03, 09/F2)**

**[1 Dec. 2010-12 Dec. 2021]**

University of Trento (Italy)

**Assistant Professor (ING-INF/03)**

**[1 Sept. 2000-30 Nov. 2010]**

University of Trento (Italy)

## **Education / Titles**

**Italian Habilitation for Full Professorship (Abilitazione nazionale Prof. Ordinario – Settore 09/F2). [2017-2023]**

Italian Ministry of Education, Research and University (MIUR)

**Ph.D. in Telecommunications Engineering**

**[1997-2001]**

University of Genoa (Italy)

Dissertation title: "Advanced Processing Techniques for Multimedia Communications"

Advisors: Prof. G. Vernazza, Prof. S. Serpico

**M.Sc. Degree in Electronics Engineering.**

**[1991-1997]**

University of Genoa (Italy)

Thesis title: "Video coding using autocompensation of the motion field and vector quantization of the difference field"

Advisor: Prof. S. Serpico, Co-Advisor: Dr. M. Accame

## **Fellowships**

**Research Associate Professor**

**[June 2018-May 2021 & Sept. 2022-Aug. 2025]**

University of New Mexico, NM, USA

**Visiting Professor**

**[April 2016, September 2016, March 2018]**

The University of Tokyo, Tokyo, Japan

**Visiting Professor**

**[August 2016]**

State University of Campinas (UNICAMP), SP, Brazil

**Visiting Professor [August- September 2015]**

State University of Campinas (UNICAMP), SP, Brazil

**Visiting Professor**

**[August 2014]**

State University of Campinas (UNICAMP), SP, Brazil

**Visiting Professor**

**[April-May 2013]**

State University of Campinas (UNICAMP), SP, Brazil

**Visiting Professor**

**[August 2010]**

State University of Campinas (UNICAMP), SP, Brazil

**Visiting Professor**

**[August 2004]**

State University of Campinas (UNICAMP), SP, Brazil

## Positions in IEEE and ComSoc

<b>Director for Conference Development, IEEE ComSoc</b>	<b>[2022-2023]</b>
IEEE ComSoc	
<b>Chair, IEEE P1954 Standardization Working Group</b>	<b>[2022-2025]</b>
IEEE ComSoc / Standards Association	
<b>Distinguished Lecturer, IEEE ComSoc (two terms)</b>	<b>[2021-2024]</b>
IEEE ComSoc	
<b>Chair and Founder, IEEE ComSoc Aerial Communications ETI</b>	<b>[2020-now]</b>
IEEE ComSoc Aerial Communications ETI	
<b>Chair, IEEE ComSoc TAOS Technical Committee</b>	<b>[2019-2020]</b>
IEEE ComSoc Transmission, Access and Optical Systems TC	
<b>IEEE ComSoc Director for Educational Services</b>	<b>[2018-2019]</b>
IEEE Communications Society	
<b>Chair, IEEE Joint VTS/ComSoc Italy Chapter</b>	<b>[2018-2021]</b>
IEEE Italy Section	
<b>Vice-Chair, IEEE ComSoc TAOS Technical Committee</b>	<b>[2017-2018]</b>
IEEE ComSoc Transmission, Access and Optical Systems TC	
<b>IEEE ComSoc Director for Online Content</b>	<b>[2016-2017]</b>
IEEE Communications Society	
<b>Chair, IEEE ComSoc Standardization Research Group on Software Defined and Virtualized Wireless Access</b>	<b>[2014-2016]</b>
IEEE Communications Society	
<b>IEEE ComSoc Distinguished Lecturer (two terms)</b>	<b>[2012-2015]</b>
IEEE Communications Society	
<b>Member-at-Large</b>	<b>[2014-2015]</b>
IEEE Globecom/ICC Technical Committee (GITC)	
<b>Secretary, IEEE ComSoc TAOS Technical Committee</b>	<b>[2015-2016]</b>
IEEE ComSoc Transmission, Access and Optical Systems TC	
<b>Chair, IEEE ComSoc CSIM Technical Committee</b>	<b>[2009-2010]</b>
IEEE ComSoc Communications Systems Integration and Modeling TC	
<b>Vice-Chair, IEEE ComSoc CSIM Technical Committee</b>	<b>[2007-2008]</b>
IEEE ComSoc Communications Systems Integration and Modeling TC	

**Secretary, IEEE ComSoc CSIM Technical Committee** [2005-2006]

IEEE ComSoc Communications Systems Integration and Modeling TC

**Senior Member, IEEE** [2005]

IEEE

## Organization Committees

**General Co-Chair** [2024]

IEEE International Conference on Machine Learning for Communications and Networking 2024

**Technical Program Committee Chair** [2023]

IEEE Smart Grid Com 2023

**Workshop Co-Chair** [2023]

IEEE Globecom 2023 Workshop on "The path towards 6G: Standardization and Research Vision"

**Workshop Co-Chair** [2023]

IEEE ICC 2023 Workshop on "CyberNet: Cyber-Physical Security in Mission-Critical Tactical Networks"

**Technical Program Committee Chair** [2022]

IEEE Globecom 2022

**Steering Committee Chair** [2022-now]

IEEE NF-SDN conference

**Symposium Co-Chair, Green Communications and Networking** [2022]

IEEE ICC

**Workshop Co-Chair** [2021-now]

IEEE DroneCom @ IEEE Infocom

**Tutorials Co-Chair** [2021]

IEEE Meditcom 2021

**General Co-Chair** [2021]

IEEE LATINCOM 2021

**Workshops Co-Chair** [2020]

IEEE NFV SDN 2020

**General Chair** [2020->21]

European Wireless 2020 (moved to 2021 for COVID-19 outbreak)

**General Chair** [2020]

IEEE LATINCOM 2020

<b>Technical Program Chair</b>	<b>[2020]</b>
ISAECT 2020	
<b>Symposium Co-Chair, SAC – Access Networks &amp; Systems and Power Line Communications</b>	<b>[2020]</b>
IEEE ICC	
<b>Technical Program Co-Chair</b>	<b>[2019]</b>
IEEE NFV SDN 2019	
<b>Technical Program Co-Chair</b>	<b>[2018]</b>
IEEE NFV SDN 2018	
<b>Symposium Co-Chair, Green Communications and Networking</b>	<b>[2018]</b>
IEEE ICC	
<b>Symposium Co-Chair, Green Computing, Networking and Communication Systems</b>	<b>[2018]</b>
International Conference on Computing, Networking and Communications (ICNC 2018)	
<b>GITC Advisor, IEEE ICC 2017</b>	<b>[2017]</b>
IEEE ICC	
<b>Workshops Co-Chair, IEEE ICC 2016</b>	<b>[2016]</b>
IEEE ICC	
<b>Founder, General Chair, IEEE ComSoc Summer School</b>	<b>[2015, 2016]</b>
IEEE Communications Society Summer School	
<b>Symposium Co-Chair, SAC – Green Communications and Networking Track</b>	<b>[2014]</b>
IEEE Globecom	
<b>Steering Committee Chair, IEEE CAMAD</b>	<b>[2013-now]</b>
IEEE Workshop on Computer-Aided Modeling, Analysis and Design of Communication Links and Networks	
<b>Symposium Co-Chair, Communications QoS, Reliability and Modeling</b>	<b>[2007-2009, 2012]</b>
IEEE Globecom	
<b>General Chair, IEEE CAMAD</b>	<b>[2006, 2010, 2013]</b>
IEEE Workshop on Computer-Aided Modeling, Analysis and Design of Communication Links and Networks	
<b>TPC Chair, IEEE CAMAD</b>	<b>[2004, 2008]</b>
IEEE Workshop on Computer-Aided Modeling, Analysis and Design of Communication Links and Networks	
<b>Founder, General Co-Chair, WICON and MOBILIGHT</b>	<b>[2005, 2009]</b>
International Conference on Wireless Internet	

## **Editorial Boards (Associate Editor / Editor-in-Chief positions)**

<b>IEEE Communications Surveys and Tutorials</b>	<b>[2007-2017]</b>
IEEE, Associate Editor	
<b>International Journal on Communication Systems</b>	<b>[2007-2019]</b>
Wiley	
<b>IEEE Communications Letters</b>	<b>[2007-2011]</b>
IEEE, Associate Editor	
<b>Journal on Wireless Communications and Networking</b>	<b>[2008-2011]</b>
EURASIP, Associate Editor	
<b>IEEE Journal on Selected Areas in Communications - Series on Green Communications and Networking</b>	<b>[2015-2016]</b>
IEEE, Associate Editor	
<b>IEEE Transactions on Green Communications and Networking</b>	<b>[2016-2020]</b>
IEEE, Area Editor	
<b>IEEE Communications Surveys and Tutorials</b>	<b>[2017-2022]</b>
IEEE, Associate Editor-in-Chief	
<b>IEEE Communications Magazine</b>	<b>[2018-now]</b>
IEEE, Associate Editor	
<b>IEEE Transactions on Green Communications and Networking</b>	<b>[2020-now]</b>
IEEE, Senior Editor	

## **Guest Editorial Activity**

### **ACM Journal on Mobile Networks and Applications**

WLAN Optimization at the MAC and Network Levels (2005)

Ultra-Wide Band for Sensor Networks (2006)

Recent Advances in IEEE 802.11 WLANs: Protocols, Solutions and Future Directions (2009)

### **ACM TOMACS**

Modeling and Simulation of Cross-Layer Interactions in Communication Networks (2010)

### **Hindawi Journal of Computer Systems, Networks and Communications**

Lightweight Mobile and Wireless Systems: Technologies, Architectures and Services (2010)

### **IEEE Communications Magazine**

Feature Topic "Energy Efficient Cognitive Radio Networks" (2014)

### **IEEE Communications Surveys and Tutorials**

Energy and the Smart Grid (2014)

### **Digital Communications and Networks**

Mobile edge computing (6 (2), 187-188, 2020)

P Chatzimisios, F Granelli, RM Abid

### **IEEE Transactions on Intelligent Transportation Systems**

Intent-based Networking for 5G-Envisioned Internet of Connected Vehicles (2020)

### **Elsevier Sustainable Cities and Societies**

COVID-19 and alike Crisis Control in Smart Healthy Cities (2021)

### **Hindawi Mobile Communications and Mobile Computing**

Quantum Communication Networks (2021)

### **IEEE Wireless Communications Magazine**

AI for Open Programmable Virtualized Networks in 6G (2022)

## **Didactic Activity and Services**

**Program Lead, Cloud and Network Infrastructures** [2023-now]

EIT Digital Master School

**Rector's Delegate for Information Technology and Services** [Nov. 2022-now]

University of Trento

**Delegate for Internationalization** [2022-now]

DISI – University of Trento

**Delegate for EIT Digital** [2022-now]

DISI – University of Trento / European Institute of Technology

**Delegate for Tutors and Teaching Support** [2018-now]

DISI – University of Trento

**Local Coordinator of the Cloud and Networking Infrastructure EIT Digital Major** [2011-now]

EIT Digital Trento (formerly Internet Technology and Architectures)

**ECE-595 Network Softwarization course (48 hours)** [2020-21]

University of New Mexico (NM, USA)

**Delegate for Education** [2015-2016]

DISI – University of Trento

**Master School Coordinator for Italy** [2012-2014]

European Institute of Innovation and Technology ICT Labs Consortium (now EIT Digital)

**Network Modeling and Design course (72 hours)** [2002-now]

M.Sc. Degree in Telecommunications Engineering → Now "Networking I"

**Networking (Reti) course (48 hours)** [2001-now]

B.Sc. Degree in Information and Communications Engineering

**Design of Networks and Communication Systems course (48 hours)** [2010-2021]

B.Sc. and M.Sc. Degrees in Telecommunications Engineering

**Digital Signal Processing course (48 hours)** [2001-2007]

M.Sc. Degree in Telecommunications Engineering

**Softwarized and Virtualized Mobile Networks (formerly Wireless Networks) course (48 hours)** [2019-21]

M.Sc. Degree in Telecommunications Engineering → Now "Networking II"

**Next Generation Networks course (48 hours)** [2021-2022]

B.Sc. Degree in Information and Communications Engineering

## **Tutorials, Keynotes and Invited Speeches**

**Computing in Communication Networks (course)** [2021-now]

ComSoc Portfolio Course (8 hours, 3 times / year)

**Energy efficient networks & computing at the network edge (keynote)** [2022-23]

Keynote @ IEEE Latincom 2022 & @ IEEE ICC 2023 Workshop



- Computing in Communication Networks (tutorials)** [2019-2022]  
 @ IEEE Globecom 2019, IEEE VTC 2020 Spring, IEEE NetSoft 2020, IEEE VTC 2020 Fall, IEEE Globecom 2020, IEEE NFV SDN 2020, IEEE CCNC 2021, IEEE NetSoft 2021, IEEE NFV-SDN 2021, IEEE NetSoft 2022, IEEE ICC 2022
- Virtualization and Softwarization in Wireless Networks: Overview and Perspectives (keynote)** [2019]  
 @ IEEE Black Sea Comm 2019
- 5G Network Slicing (tutorial)** [2018-19]  
 @ IEEE WCNC'18, IEEE ICC 2018, IEEE NFV SDN 2018, IEEE Black Sea Comm 2019
- Virtualization and 5G (tutorial)** [2017]  
 @ European Wireless, IEEE WCNC'17
- Energy Efficiency in Wireless/5G Networks (tutorial)** [2014-16]  
 @ MASCOTS 2014, IEEE VTC FALL 2014, IEEE CCNC'15, IEEE Globecom'15, IEEE CCNC'16, IEEE WCNC'16  
 @ IEEE ICC 2016 (most attended tutorial of the conference)
- Communications for the Smart Grid (invited speech)** [2016]  
 @ International Summer School on Hybrid Microgrids (Pavia, July 11-15, 2016)
- Virtualization and 5G Networks (keynote speech)** [2016]  
 @ IEEE ICC 2016 Workshop on "Novel Medium Access and Resource Allocation for 5G Networks"
- Communications for the Smart Grid (invited speech)** [2013]  
 @ SBRC 2013
- Communications for Power Engineers (tutorial)** [2011]  
 @ IEEE SmartGridComm 2011
- Cognitivity in TCP/IP Networks (invited speech)** [2010]  
 @ IEEE Globecom 2010 Workshop on "Mobile Computing and Emerging Communication Networks"

## Major Research Projects

**Holistic, Omnipresent, Resilient Services for Future 6G Wireless and Computing Ecosystems (HORSE)** [2023-2025]

EU Horizon-JU-RIA, Topic: HORIZON-JU-SNS-STREAM-B-01-04, **Role: Consortium Coordinator**, Budget: 7MEuros (692k Euros for CNIT)

**PNRR CN1 Spoke 9 "Digital Society and Smart Cities"** [2022-2025]

PNRR, **Role: UniTN Coordinator**, Budget: 609 kEuros

**Knowledge as a Service (KaaS) – Phase III** [2022]

IEEE, **Role: Coordinator**, Budget: 120k\$ (70k\$ for CNIT)

**End-to-end Fiber and 5G** [2021]

OXYS S.r.l., **Role: Coordinator**, Budget: 60k\$

**Knowledge as a Service (KaaS) – Phase II** [2021]

IEEE, **Role: Coordinator**, Budget: 100k\$ (80k\$ for CNIT)

**DAVOSS** [2018-2021]

NATO Science for Peace Programme, **Role: Coordinator**, Budget: 270 kEuros

**Knowledge as a Service (KaaS) – Phase I** [2020]

IEEE, **Role: Coordinator**, Budget: 80k\$ (55k\$ for CNIT)

**TEAM** [2014-2018]

Mobility project w/Japan and S.Korea, European Union

**e2CALL** [2013-2016]

FIAT Research Center, **Role: Coordinator**, Budget: 85 kEuros

**SUSTAINABLE INTERNET** [2013-2015]

Science without Frontiers, Brazilian government

**FITTING, EV2GRID** [2013]

European Institute of Innovation and Technology, Budget: 35 kEuros

**GREENET** [2011-2014]

EU Marie Curie Initial Training Network, Budget: 480 kEuros

**MOTUS** [2009-2014]

Italian Ministry of Economic Development, Budget: 975 kEuros

**Microwave Packet Radio Algorithms Proposals and Simulations** [2009-2010]

Alcatel Lucent, **Role: Coordinator**, Budget: 50 kEuros

**ISAC, EUBRANEX** [2008-2010]

EU ERASMUS MUNDUS, Coordinator for Univ. of Trento

**WORLD** [2008-2010]

Italian Ministry of Education and Research, Budget: 47.5 kEuros

**Joint Mobility Projects** [2008-2010]

Italy-Japan, Italy-USA, Italy-Brazil

**SAFESPOT - Smart Vehicles on Smart Roads** [2005-2008]

EU Integrated Project, Budget: 150 kEuros

## Awards

**Best paper award** [2023]

IEEE 13th Annual Computing and Communication Workshop and Conference

**2018 Distinguished Technical Achievement Recognition Award** [2018]

IEEE ComSoc Green Communications and Computing Technical Committee

**Italian Habilitation for Full Professorship** [2017]

Italian Ministry of Education, Research and University (MIUR)

**Exemplary Editor** [2015]

IEEE Communications Surveys and Tutorials

**Best paper award** [2014]

IEEE U-MEDIA 2014

**Best paper award** [2012]

IEEE CAMAD 2012

**Excellent reviewer and editorial member** [2011]

IEEE Communications Surveys and Tutorials



**TELECOM Italy Best thesis award**  
Telecom Italy

**[1997]**

**Main International Collaborations:**

Istituzione	Paese	Contatto	Argomento
<b>Stanford University</b>	CA, USA	Prof. A. Goldsmith	Resource allocation
<b>State University of Campinas</b>	SP, Brasil	Prof. Nelson L.S. da Fonseca	Network modelling
<b>The University of New Mexico</b>	NM, USA	Prof. Michael Devetsikiotis	5G Slicing and IoT
<b>The University of Tokyo</b>	Japan	Prof. Akihiro Nakao	Network Slicing and 5G
<b>CTTC</b>	Spain	Prof. C. Verikoukis	Network virtualization and 5G
<b>Nokia Systems</b>	Germany	Dr. S. Redana	LTE / 5G
<b>TU Dresden</b>	Germany	Prof. F. Fitzek, Prof. R. Bassoli	Network coding, low latency, quantum comms

## PUBLICATIONS LIST

### 0. Authored Books (1)

#### **Computing in Communication Networks – From Theory to Practice**

F. Fitzek, F. Granelli, P. Seeling

Elsevier Academic Press, May 2020, **Paperback ISBN: 9780128204887.**

<https://www.elsevier.com/books/computing-in-communication-networks/fitzek/978-0-12-820488-7>

### 1. Journal Publications (106)

#### **The Role of Socioeconomic Factors in Improving the Performance of Students Based on Intelligent Computational Approaches**

Y Muhammad, MA Hassan, S Almotairi, K Farooq, F Granelli, ...

Electronics 12 (9), 2023

#### **A Framework to define a Measurement-Based Model of MEC Nodes in the 5G System**

R Fedrizzi, CE Costa, F Granelli

IEEE Networking Letters, 2023.

#### **An Intelligent Multi-Floor Navigational System Based on Speech, Facial Recognition and Voice Broadcasting Using Internet of Things**

M Ullah, X Li, MA Hassan, F Ullah, Y Muhammad, F Granelli, L Vilcekova, ...

Sensors 23 (1), 275, 2023

#### **An adaptive GA-based slice provisioning method for vertical industries in 5G and beyond networks**

R Fedrizzi, R Behraves, C Costa, F Granelli

Computer Networks 218, 109397, 2022.

#### **A New Agent-Based Intelligent Network Architecture**

ST Arzo, D Scotece, R Bassoli, F Granelli, L Foschini, FHP Fitzek

arXiv preprint arXiv:2211.01924, accepted for publication on J-IOT

#### **Guest Editorial: AI for Open Programmable Virtualized Networks in 6G**

F Granelli, CE Costa, M Erol-Kantarci, J Zheng

IEEE Wireless Communications 29 (5), 10-11

#### **Foreword to the Special Section on Information and Communication Technologies (ICT) for a New Space Vision**

C Sacchi, F Granelli, M Marchese, K Cheung, M Noble

IEEE Transactions on Aerospace and Electronic Systems 58 (5), 3743-3745, 2022.

#### **Multi-Agent-Based Traffic Prediction and Traffic Classification for Autonomic Network Management Systems for Future Networks**

ST Arzo, Z Akhavan, M Esmaeili, M Devetsikiotis, F Granelli

Future Internet 14 (8), 230, 2022.

#### **Impact of Background Traffic on the BBR and CUBIC Variants of the TCP Protocol**

DM Casas-Velasco, F Granelli, NLS da Fonseca

IEEE Networking Letters 4 (3), 147-151, 2022.

#### **An Analytical Study on Functional Split in Martian 3D Networks**

S Bonafini, C Sacchi, R Bassoli, F Granelli, K Kondepu, FHP Fitzek

IEEE Transactions on Aerospace and Electronic Systems, 2022.

#### **Towards the Sign Function Best Approximation for Secure Outsourced Computations and Control**

M Babenko, A Tchernykh, B Pulido-Gaytan, A Avetisyan, S Nesmachnow, ...

Mathematics 10 (12), 2006, 2022.

**End-to-end performance assessment of a 3D network for 6G connectivity on Mars surface**

S Bonafini, C Sacchi, R Bassoli, K Kondepudi, F Granelli, FHP Fitzek  
Computer Networks, 109079, 2022.

**A Novel Architecture for Future Classical-Quantum Communication Networks**

F Granelli, R Bassoli, J Nötzel, FHP Fitzek, H Boche, NLS da Fonseca  
Wireless Communications and Mobile Computing 3, 2022.

**Essential Technologies and Concepts for Massive Space Exploration: Challenges and Opportunities**

ST Arzo, D Sikeridis, M Devetsikiotis, F Granelli, R Fierro, M Esmaeili, ...  
IEEE Transactions on Aerospace and Electronic Systems, 2022.

**Special issue on selected papers from the IEEE Latin America on Communications (LATINCOM)**

F Granelli, O Caicedo, GB Figueiredo, NLS da Fonseca  
Photonic Network Communications, 1-2, 2022.

**MSN: A Playground Framework for Design and Evaluation of MicroServices-Based sdN Controller**

ST Arzo, D Scotece, R Bassoli, D Barattini, F Granelli, L Foschini, ...  
Journal of Network and Systems Management 30 (1), 1-31, 2022.

**Guest Editorial Special Issue on Intent-Based Networking for 5G-Envisioned Internet of Connected Vehicles**

S Garg, M Guizani, YC Liang, F Granelli, N Prasad, RRV Prasad  
IEEE Transactions on Intelligent Transportation Systems 22 (8), 5009-5017, 2021.

**Evaluating a Digital Twin of an IoT Resource Slice: an Emulation Study using the ELIoT Platform**

F. Granelli, R. Capraro, M. Lorandi and P. Casari  
IEEE Networking Letters, doi: 10.1109/LNET.2021.3097556.

**A Survey on Technologies, Standards and Open Challenges in Satellite IoT**

Marco Centenaro, Cristina E. Costa, Fabrizio Granelli, Claudio Sacchi, Lorenzo Vangelista  
IEEE Communications Surveys and Tutorials, 23 (3), 1693-1720, 2021.

**Guest Editorial: Softwarized Networking for Next Generation Industrial Cyber-Physical Systems**

S Garg, H Wang, F Granelli, H Li  
IEEE Transactions on Industrial Informatics 17 (8), 5506-5510, 2021.

**A Theoretical Discussion and Survey of Network Automation for IoT: Challenges and Opportunity**

ST Arzo, C Naiga, F Granelli, R Bassoli, M Devetsikiotis, FHP Fitzek  
IEEE Internet of Things Journal, 8 (15), 12021-12045, 2021.

**An Open Source Testbed for Virtualized Communication Networks**

Z Xiang, S Pandi, J Cabrera, F Granelli, P Seeling, FHP Fitzek  
IEEE Communications Magazine 59 (2), pp. 77-83, 2021

**Global communications newsletter**

S Bregni, NGR Cely, F Granelli, C Lozano, O Dobre, O Caicedo, ...  
IEEE Communications Magazine 59 (2), pp. 5-8, 2021

**Multi-Agent Based Autonomic Network Management Architecture**

ST Arzo, R Bassoli, F Granelli, FHP Fitzek  
IEEE Transactions on Network and Service Management, 2021, in press

**IEEE Latin-American Conference on Communications 2020 (LATINCOM)**

F Granelli, C Lozano, O Dobre, O Caicedo, GC Florez Navarro, ...

IEEE COMMUNICATIONS MAGAZINE 59 (2), pp. 6-6, 2021

**Member Services Board: New Services for a New World Interview with Ricardo Veiga, Director of Member Services**

S Bregni, F Granelli

IEEE COMMUNICATIONS MAGAZINE 59 (1), 2021

**Special issue on" mobile edge computing"**

P Chatzimisios, F Granelli, RM Abid

DIGITAL COMMUNICATIONS AND NETWORKS 6 (2), 187-188, 2020

**Design of an On-Demand Agile 5G Multi-Access Edge Computing Platform Using Aerial Vehicles**

F Granelli, C Costa, J Zhang, R Bassoli, FHP Fitzek

IEEE Communications Standards Magazine 4 (4), 34-41

**Global Communications Newsletter**

F Benedetto, S Ullo, B Masini, G Pasolini, F Granelli, TM Syed, E Tan, ...

IEEE Communications Magazine 58 (10), 9-12, 2020.

**Development of Cluster-Based Energy Management Scheme for Residential Usages in the Smart Grid Community**

MMU Rashid, F Granelli, M Hossain, M Alam, FS Al-Ismaïl, R Shah

Electronics 9 (9), 2020.

**Study of Virtual Network Function Placement in 5G Cloud Radio Access Network**

ST Arzo, R Bassoli, F Granelli, FHP Fitzek

IEEE Transactions on Network and Service Management, 2020

**Development of Home Energy Management Scheme for a Smart Grid Community**

MMU Rashid, F Granelli, M Hossain, M Alam, FS Al-Ismaïl, AK Karmaker, ...

Energies 13 (17), 2020

**A business and legislative perspective of V2X and mobility applications in 5G networks**

Usman, M., Qaraqe, M., Asghar, M.R., (...), Granelli, F., Abbasi, Q.H.

IEEE Access, Vol. 8, pp. 67426-67435, 2020

**CubeSat-Based 5G Cloud Radio Access Network: A novel paradigm for on-demand anytime-anywhere connectivity**

Bassoli, R., Granelli, F., Sacchi, C., Bonafini, S., Fitzek, F.

IEEE Vehicular Technology Magazine, 15 (2), 39-47, 2020

**Glue Technologies for Space Systems: An Introduction to a New AESS Technical Panel**

Sacchi, C., Schlegel, C., Rossi, T., (...), Granelli F., Murrone, M., Conci, N.

IEEE Aerospace and Electronic Systems Magazine, 35 (1), pp. 46-54, 2020.

**CPAC: Energy-efficient algorithm for IoT sensor networks based on enhanced hybrid intelligent swarm Open Access**

Wang, Q., Liu, W., Yu, H., (...), Gao, S., Granelli, F.

Computer Modeling in Engineering and Sciences, 121 (1), pp. 83-103, 2019

**Smart energy pricing for demand-side management in renewable energy smart grids**

Borges, Y.G.F., Schouery, R.C.S., Miyazawa, F.K., Granelli, F., da Fonseca, N.L.S., Melo, L.P.

International Transactions in Operational Research, Nov. 5, 2019.

<https://doi.org/10.1111/itor.12747>

**Cognitive Software-Defined Networking Using Fuzzy Cognitive Maps**



Giovanni Baggio, Riccardo Bassoli, Fabrizio Granelli  
IEEE Transactions on Cognitive Communications and Networking 5 (3), pp. 517-539, 2019.

**Toward 5G cloud radio access network: An energy and latency perspective**

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(Prof. F. Granelli)