Michele Colajanni

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WORK EXPERIENCE

31/12/2020 – CURRENT – Bologna
FULL PROFESSOR – UNIVERSITY OF BOLOGNA

31/10/2000 – 30/12/2020 – Modena
FULL PROFESSOR – UNIVERSITY OF MODENA AND REGGIO EMILIA

31/10/1998 – 30/10/2000 – Modena
ASSOCIATE PROFESSOR – UNIVERSITY OF MODENA AND REGGIO EMILIA

31/01/1996 – 21/12/1996 – Yorktown Heights, United States
VISITING RESEARCHER – IBM T.J.WATSON RESEARCH CENTER

31/10/1994 – 30/10/1998 – Roma
ASSISTANT PROFESSOR – UNIVERSITY OF ROME TOR VERGATA

EDUCATION AND TRAINING

PHD IN INFORMATION ENGINEERING – University of Roma Tor Vergata

LANGUAGE SKILLS

Mother tongue(s):   **ITALIAN**

Other language(s):

ENGLISH

PUBLICATIONS

Michele Colajanni published more than 250 peer reviewed articles in top journals and conference proceedings.

The following is a partial list of the recent publications in top journals.
The complete list can be found through Google Scolar (https:/scholar.google.com)

Fog-based secure communications for low-power IoT devices

ACM Transactions on Internet Technology, v. 19, n. 2, 1-21
https://dl.acm.org/doi/abs/10.1145/3284554 – 2019

Scalable, confidential and survivable software updates

IEEE Transactions on Parallel and Distributed Systems, v. 33, n. 1, 176-191
https://ieeexplore.ieee.org/abstract/document/9459483 – 2021

Deep reinforcement adversarial learning against botnet evasion attacks

IEEE Transactions on Network and Service Management, v. 17, n. 4, 1975-1987
https://ieeexplore.ieee.org/abstract/document/9226405 – 2020

Glyph: Efficient ML-Based Detection of Heap Spraying Attacks

IEEE Transactions on Information Forensics and Security, v. 16, n. 1
https://ieeexplore.ieee.org/abstract/document/9171343 – 2020

Hardening random forest cyber detectors against adversarial attacks

IEEE Transactions on Emerging Topics in Computational Intelligence, v. 4, n. 4
https://ieeexplore.ieee.org/abstract/document/9099383 – 2020

PROJECTS

The following is a partial list of the last six research projects with coordination role.

2016 – 2020
Analysis System for Gathered Raw Data (ASGARD)

Funds: Horizon 2020/FCT-1-2015
Role: Responsable of the Research Unit

09/2022 – 08/2025
Cyber Risk Management and Governance

Funds: Next Generation EU
Role: Principal Investigator

06/2020 – 06/2022
Safety and Security for Smart Production (SS4SP)

Funds: Technology innovation - Ministry of Economic Development
Role: Principal investigator

2018 – 2021
Secure Industry 4.0 (I4S)

Funds: EU POR-FESR Emilia Romagna
Role: Principal investigator

2018 – 2021
Interoperable and efficient systems for the secure management of industrial supply chains though blockchain technologies

Funds: EU POR-FESR Emilia Romagna
Role: Principal Investigator

2018 – 2021
UNAVOX - Cyber Training Virtual Polygon

Funds: National Military Research Plan (PNRR)
Role: Responsable of the Research Unit

ACADEMIC ACTIVITY

Research

- His research activities include technologies and management of cybersecurity, the design and testing of scalable and resilient systems even through big data analytics and machine learning methods
- He has benefited from research contracts with the CNR, MIUR, MAECI, MISE, MoD, the European Community and many companies, as well as visiting scientist positions at the Philip Research Lab and the IBM T.J. Watson Research Center in Yorktown Heights, New York
- He has been supervisor of 20 PhD theses in Computer Engineering
- He has been PC Chair of 9 international conferences and workshops, and member of over 400 scientific committees of international conferences
- Winner of 14 research projects in the last decade
- His scientific production includes more than 250 peer-reviewed articles, and more than 500 presentations in meetings, conferences, including invited lectures and keynote speeches

University courses (post Bachelor)

- Cybersecurity, Laurea magistrale, University of Bologna, from 2021/2022 to 2022/2023
- Scalable and Reliable Services, Laurea magistrale, University of Bologna, from 2021/2022 to 2022/2023
- Cloud systems and applications, Laurea magistrale, University of Modena, from 2018/2019 to 2020/2021
- Network systems and services, Laurea magistrale, University of Modena, from 2004/2005 to 2017/2018
- Information security, Laurea magistrale, University of Modena, from 2004/2005 to 2020/202

Academic courses in Postgraduate programs

- "Cyber risk management" and "Chief Information Secuity Officer", Advanced program in *Cybersecurity management*, Bologna Business School, yearly from 2018 to 2022
- "Methodologies and techniques of cyber attacks", Master in *Cybersecurity - Public policies, norms and management*, LUISS Guido Carli, Roma, yearly from 2017/2028 to 2021/2022
- "Risk management", "Cybersecurity", and "Management of cyber incidents", Master in *Cyber Defense*, *Digital Forensics* and *Cyber Security Governance*, Ministry of Defense, Stelmilit, Chiavari, yearly from 2013/2014 to 2020/2021
- "Cybersecurity: Analysis and evaluation of cyber risks", Advanced School of the Bank of Italy, Rome, february 2020
- "The impact of the digital revolution on cybersecurity", University Specialization Course in *Intelligence and national security*, University of Florence, yearly from 2015/2016 to 2017/2018

Management activities

- President of the Scientific Board of the Computer Security Incident Response Team (Emilia Romagna region), from 2022
- Responsible of the spoke *Cybersecurity* of the University of Bologna - Next Generation EU

- President of the *Cyberwarfare* Conference since 2018
- Founder and Director of the *Interdepartment Research Center on Security and Safety*, University of Modena and Reggio Emilia, from 2007 to 2018
- (CSIRT) of the Region Regione Emilia-Romagna
- Founder and Director of the *Interdepartment Research Center on Security and Safety*, University of Modena and Reggio Emilia, from 2007 to 2018
- Founder and Director of the joint *CyberLab* with the Tel Aviv University funded by the Ministry of Foreign Affairs, from 2016 to 2019
- Founder and Director of the *Cyber Academy*, a 6 months residential training program for ethical hackers, University of Modena and Reggio Emilia, from 2015 to 2020
- Director of the University Masters in "Cyber Defense" and in "Digital Forensics", Stato Maggiore Difesa, Stelmilit, Chiavari, from 2012/2013 to 2018/2019
- Director of the University Master in "Cyber Defense Governance", Stato Maggiore Difesa, Chiavari, Stelmilit, from 2018/2019 to 2020/2021
- Co-Director of the academic Master in "Public Management and Innovation", a joint program among the University of Bologna, Ferrara and Modena, from 2019/2020 to 2021/2022
- Director of the advanced course in "Cybersecurity Governance", Bologna Business School, University of Bologna, from 2018 to 2022
- Director of the University advanced course in "Security Manager" from 2010 to 2016, University of Modena and Reggio Emilia
- Founder and Scientific director of the 4 weeks summer camp "Ragazze digitali", University of Modena and Reggio Emilia, from 2013 to 2021. Since 2022, the camp has become a regional program supported by ART-ER, Emilia Romagna

Dissemination

Since 2015 Prof. Colajanni has carried out pro bono about 35 interventions per year on cybersecurity topics on the occasion of events that have been organized by many organizations including the Presidency of the Council of Ministers, Ministry of Defense, Chamber of Deputies, Ministry of Foreign Affairs and International Cooperation, Postal and Communications Police, MIlitary Academy of Modena, Confindustria Emilia, Confindustria Romagna, Confindustria Venezia, NATO schools, Chambers of Commerce, Banks, Insurance companies, Lions, Rotary, trade and professional associations, Scientific academies, Regions, Municipalities, Foundations, secondary schools

OTHER INFORMATION

Commissions

Michele Colajanni is a member of various commissions and organizations, such as
- WG Cyber security of the AIPCR Commission on smart roads of the Italian Ministry of Infrastructure and Transportation
- Commission of Italian Association of Quality Culture (AICQ) on Industry 4.0
- Executive commission of the Foundation "Telefono Azzurro" on child protection
- Scientific Board of AIPSA - Italian Association of Corporate Security Professionals
- EU CyberNet – The bridge to cybersecurity expertise in the European Union
- Member of the National Academy of Sciences, Letters and Arts of Modena (The Academy was founded in 1683)

Best paper awards

- 18th IEEE International Symposium on Network Computing and Applications (2019)
- 17th IEEE International Symposium on Network Computing and Applications (2018)
- International Conference on Emerging Security Information, Systems and Technologies SECURWARE (2013)
- WWW/Internet 2010 Conference (2010)
- IEEE/IST Workshop on Monitoring, Attack Detection and Mitigation (2006)

Other awards

- Unicef "Golden spider", category Research an Innovation, 2017
- ELIS Fellow, 2010-2012