Mattia Fogli

- ## WORK EXPERIENCE

01/11/2023 – CURRENT Ferrara, Italy
POSTDOCTORAL RESEARCHER UNIVERSITY OF FERRARA

Department Department of Engineering

2024 – CURRENT Ferrara, Italy
ADJUNCT PROFESSOR UNIVERSITY OF FERRARA

2023/2024: Operating Systems and Internet Laboratory (LP - Technologies for the Digital Industry)

Department Department of Engineering

03/05/2022 – CURRENT Ferrara, Italy
LECTURER UNIVERSITY OF FERRARA

03/05/2022: CyberChallenge
17/04/2023: CyberChallenge
29/04/2023: SII40
29/04/2024: CyberChallenge

12/2020 – CURRENT Ferrara, Italy
TEACHER FORMART

2020/2021: Internet of Things (IFTS)
2021/2022: Cloud Computing (IFTS)
2022/2023: Cloud Computing (IFTS)
2023/2024: Cloud Computing (IFTS)

Address Via Antonio Fortunato Oroboni 40, 44122, Ferrara, Italy

2021 – 2023 Ferrara, Italy
TUTOR UNIVERSITY OF FERRARA

2021/2022: Operating Systems (LT - Electronics and Computer Engineering)
2022/2023: Operating Systems (LT - Electronics and Computer Engineering)
2022/2023: Distributed Systems (LM - Computer Science and Automation Engineering)

Department Department of Engineering │ **Address** Via Saragat 1, 44122, Ferrara, Italy

09/2019 – 08/2020 Pensacola, United States
RESEARCH INTERN FLORIDA INSTITUTE FOR HUMAN AND MACHINE COGNITION

Multi-cluster workload management in tactical networks

Address 40 South Alcaniz St., 32502, Pensacola, United States

08/2017 – 10/2017 Cento, Italy
UNDERGRADUATE INTERNSHIP CENTRO COMPUTER

Address Via Ferrarese 33, 44042, Cento, Italy

EDUCATION AND TRAINING

14/09/2014 – 14/02/2018 Ferrara, Italy
BACHELOR OF SCIENCE University of Ferrara

Address Department of Engineering, Via Saragat 1, 4122, Ferrara, Italy |

Field of study Electronics and Computer Engineering

25/02/2018 – 23/03/2020 Ferrara, Italy
MASTER OF SCIENCE University of Ferrara

Address Department of Engineering, Via Saragat 1, 44122, Ferrara, Italy |

Field of study Computer Science and Automation Engineering | **Final grade** Cum Laude

04/10/2020 – 08/03/2024 Ferrara, Italy
DOCTOR OF PHILOSOPHY University of Ferrara

Address Department of Engineering, Via Saragat 1, 44122, Ferrara, Italy | **Field of study** Engineering Science |

Final grade Cum Laude

LANGUAGE SKILLS

Mother tongue(s):   **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROJECTS

02/2022 – CURRENT
Technical Team Member

NATO IST-193 RTG on "Edge Computing at the Tactical Edge"

08/2019 – 03/2022
Contributor

NATO IST-168 RTG on "Adaptive Information Processing and Distribution to Support Command and Control"

PUBLICATIONS

2024
Exploiting Microservices and Serverless for Digital Twins in the Cloud-to-Edge Continuum

Future Generation Computer Systems

10.1016/j.future.2024.03.052

2024
ODTE: A Metric for Digital Twin Entanglement

IEEE Open Journal of the Communications Society

10.1109/OJCOMS.2024.3385659

2024
[Requirements and Design Architecture for Digital Twin End-to-End Trustworthiness](#)

IEEE Internet Computing

2023
[Measuring Digital Twin Entanglement in Industrial Internet of Things](#)

2023 IEEE International Conference on Communications, ICC 2023

2023
[Requirements and Design Patterns for Adaptive, Autonomous, and Context-aware Digital Twins in Industry 4.0 Digital Factories](#)

Computers in Industry

2023
[Chaos Engineering for Resilience Assessment of Digital Twins](#)

IEEE Transactions on Industrial Informatics

2023
[A Taxonomy for Workload Deployment Orchestration in the Edge-Cloud Continuum](#)

10th IFIP WG 6.12 European Conference on Service-Oriented and Cloud Computing, ESOCC 2023

2023
[Application-Aware Network Traffic Management in MEC-Integrated Industrial Environments](#)

Future Internet

2022
[A Framework for QoS-Enabled Semantic Routing in Industrial Networks: Overall Architecture and Primary Protocols](#)

2022 IEEE Future Networks World Forum, FNWF 2022

Accepted for Publication

2022
[Joint Orchestration of Content-Based Message Management and Traffic Flow Steering in Industrial Backbones](#)

23rd IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks, WoWMoM 2022

2022
[Edge-Powered In-Network Processing for Content-Based Message Management in Software-Defined Industrial Networks](#)

2022 IEEE International Conference on Communications, ICC 2022

10.1109/ICC45855.2022.9838863

2022
[Quantifying the Performance of Cloud-Oriented Container Orchestrators on Emulated Tactical Networks](#)

IEEE Communications Magazine

10.1109/MCOM.003.00975

2022
[Software-Defined Networking in wireless ad hoc scenarios: Objectives and control architectures](#)

Journal of Network and Computer Applications

10.1016/j.jnca.2022.103387

2021
[Towards a COTS-Enabled Federated Cloud Architecture for Adaptive C2 in Coalition Tactical Operations: A Performance Analysis of Kubernetes](#)

2021 IEEE Military Communications Conference, MILCOM 2021

10.1109/MILCOM52596.2021.9653050

2021
[QoS-Enabled Semantic Routing for Industry 4.0 Based on SDN and MOM Integration](#)

22nd IEEE International Conference on High Performance Switching and Routing, HPSR 2021

10.1109/HPSR52026.2021.9481869

2021
[Performance Evaluation of Kubernetes Distributions (K8s, K3s, KubeEdge) in an Adaptive and Federated Cloud Infrastructure for Disadvantaged Tactical Networks](#)

2021 International Conference on Military Communication and Information Systems, ICMCIS 2021

10.1109/ICMCIS52405.2021.9486396

2020
[Federated Control of Distributed Multi-Partner Cloud Resources for Adaptive C2 in Disadvantaged Networks](#)

IEEE Communications Magazine

10.1109/MCOM.001.2000246

- **CONFERENCES AND SEMINARS**

30/10/2023 – 03/11/2023 Boston, United States
TPC Member

2023 IEEE Military Communications Conference, MILCOM 2023 - Workshop on SEMUT

28/05/2023 – 01/06/2023 Rome, Italy
Presenter

2023 IEEE International Conference on Communications, ICC 2023

12/10/2022 – 14/10/2022 Montreal, Canada
Virtual Presenter

2022 IEEE Future Networks World Forum, FNWF 2022

14/06/2022 – 17/06/2022 Belfast, United Kingdom
Presenter

2022 IEEE 23rd International Symposium on a World of Wireless, Mobile and Multimedia Networks, WoWMoM 2022

15/05/2022 – 19/05/2022 Seoul, South Korea
Virtual Presenter

2022 IEEE International Conference on Communications, ICC 2022

28/11/2021 – 01/12/2021 San Diego, United States
Session Chair

2021 IEEE Military Communications Conference, MILCOM 2021

28/11/2021 – 01/12/2021 San Diego, United States
Presenter

2021 IEEE Military Communications Conference, MILCOM 2021

04/05/2021 – 05/05/2021 The Hague, Netherlands
Virtual Presenter

2021 International Conference on Military Communication and Information Systems, ICMCIS 2021

HONOURS AND AWARDS

04/05/2021
Best Young Scientist Paper Award – 2021 International Conference on Military Communication and Information Systems, ICMCIS 2021

Link https://www.sto.nato.int/Lists/STONewsArchive/displaynewsitem.aspx?ID=631

15/11/2022
NATO IST Panel Young Scientist Award – NATO IST Panel Awards Committee

NETWORKS AND MEMBERSHIPS

2020 – CURRENT
IEEE

2020 – CURRENT
IEEE Communications Society

2020 – CURRENT
IEEE Computer Society

20/05/2024