

PERSONAL INFORMATION Filippo Poltronieri



EDUCATION AND TRAINING

- 2017 – current **PhD - Student in Engineering Science**
University of Ferrara, Department of Engineering, Ferrara, Italy
- 2014 – 2017 **Master of Science in Computer Engineering, 110/110 cum laude**
University of Ferrara, Ferrara, Italy
Thesis Project: "A symmetric encryption based solution for Group Communication in a Mobile Ad Hoc Network"
Main subjects: Distributed Systems, Artificial Intelligence, Control Systems, Operative Research, Database, Concurrent Programming, Number Theory and Cryptosystems, and Peer to Peer Networks.
- 2011 – 2014 **Bachelor of Science in Information Engineering**
University of Ferrara, Ferrara, Italy

WORK EXPERIENCE

- March 2018 – September 2018 **Research Associate**
Florida Institute for Human and Machine Cognition (IHMC), Pensacola, FL, USA.
- Research in tactical networks. Secure exchange of information for P2P group communication based systems. Application of Attribute Based Encryption techniques to secure information in a multi-domain architecture, e.g. coalition of different nations.
- Research in Internet of Things (IoT) and Internet of Battlefield Things (IoBT) for the integration of different data representation formats.
- Development of a prototype to interface with heterogeneous IoBT military equipment.
- Full Stack Developer (C++, Java, Kotlin, Android, and Ruby).
- August 2016 – November 2017 **Research Assistant**
Florida Institute for Human and Machine Cognition (IHMC), Pensacola, FL, USA.
- Research in information-security applied to mobile and tactical military networks.
- Developing of a prototype of a Key Management System to realize secure group communication in Mobile Ad Hoc Networks.

ADDITIONAL INFORMATION

Review Activities

- International Journal of Distributed Sensor Networks (IJDSN), SAGE
- Wireless Communications and Mobile Computing, Wiley Hindawi
- The 2019 IEEE Military Communications Conference (MILCOM)
- 2019 IEEE Global Communications Conference (GLOBECOM)
- The 2019 Symposium on Computers and Communications (ISCC)
- The 2018 IEEE Military Communications Conference (MILCOM)

Teaching and Tutoring

- **2019-current:** tutor of the "Operating Systems" class, taught by Prof. Cesare Stefanelli, at the Department of Engineering of the University of Ferrara, Italy.
- **2018-current:** tutor of the "Computer Networks" class, taught by Dr. Mauro Tortonesi, at the Department of Engineering, University of Ferrara, Italy.
- **2017-current:** lectures on "Multithreading in Java" and "POSIX Threads" for the "Operating System" class at Department of Engineering of the University of Ferrara, Italy.

- Stefano Avvisi, Francesco Caselato, Marco Franchini, Marco Govoni, Chiara Luciani, Filippo Poltronieri, Giulio Riberio, Cesare Stefanelli, and Mauro Tortonesi. Wireless middleware solutions for smart water metering. *Sensors*, 19(8):1853, 2019
- Filippo Poltronieri, Lorenzo Campioni, Rita Lenzi, Alessandro Morelli, Niranjan Suri, and Mauro Tortonesi. Secure multi-domain information sharing in tactical networks. In *MILCOM 2018-2018 IEEE Military Communications Conference (MILCOM)*, pages 1–6. IEEE, 2018
- Carlo Giannelli, Filippo Poltronieri, Cesare Stefanelli, and Mauro Tortonesi. Supporting the development of next-generation fog services. In *2018 IEEE 23rd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)*, pages 1–6. IEEE, 2018
- Filippo Poltronieri, Cesare Stefanelli, Niranjan Suri, and Mauro Tortonesi. Phleas: A simulation-based approach for the evaluation of value-based fog services. In *2018 IEEE 23rd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)*, pages 1–6. IEEE, 2018
- Filippo Poltronieri, Roberto Fronteddu, Cesare Stefanelli, Niranjan Suri, Mauro Tortonesi, Matthew Paulini, and James Milligan. A secure group communication approach for tactical network environments. In *2018 International Conference on Military Communications and Information Systems (ICMCIS)*, pages 1–8. IEEE, 2018
- Niranjan Suri, Roberto Fronteddu, Eelco Cramer, Maggie Bready, Kelvin Marcus, Ronald In'1 Velt, Jan Nilsson, Mattia Mantovani, Lorenzo Campioni, Filippo Poltronieri, et al. Experimental evaluation of group communications protocols for tactical data dissemination. In *MILCOM 2018-2018 IEEE Military Communications Conference (MILCOM)*, pages 133–139. IEEE, 2018
- Filippo Poltronieri, Laurel Sadler, Giacomo Benincasa, Timothy Gregory, John M Harrell, Somya Mehta, and Christine Moulton. Enabling efficient and interoperable control of loT devices in a multi-force environment. In *MILCOM 2018-2018 IEEE Military Communications Conference (MILCOM)*, pages 757–762. IEEE, 2018
- Filippo Poltronieri, Cesare Stefanelli, Suri Niranjan, Mauro Tortonesi, et al. Analyzing and evaluating information-centric and value-based fog service architectures in military environments: The phleas simulator. In *23rd International Command and Control Research and Technology Symposium (ICCRTS 2018)*, pages 1–12. International Command and Control Institute, 2018
- Filippo Poltronieri, Lorenzo Campioni, Lenzi Rita, Mantovani Mattia, Alessandro Morelli, Cesare Stefanelli, Suri Niranjan, Mauro Tortonesi, et al. Efficient and secure multi-domain information sharing in tactical networks. In *23rd International Command and Control Research and Technology Symposium (ICCRTS 2018)*, pages 1–10. International Command and Control Institute, 2018
- Pradhan Manas, Filippo Poltronieri, Mauro Tortonesi, et al. Generic architecture for edge computing based on sp4 for military hack operations. In *IEEE 5th World Forum on Internet of Things (WF-IoT)-Special Session on Military Applications of IoT*, pages 1–6. IEEE, 2019

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

English

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

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
 Common European Framework of Reference (CEFR) level

Job related skills - Experience with these programming languages: C, C++, Java, Golang, Kotlin, and Ruby.
- Experience with Windows and Linux/UNIX based operating systems.
- Experience in scripting programming (bash) for UNIX based operating systems.
- Experience in backend and frontend development, project and toolchain management
- Developing Android applications with Java and Kotlin.
- Experience in Computer Network programming.

Communication skills I have worked in an international research team during my experience at IHMC and I am currently working in the Distributed Systems Research Group at University of Ferrara as Ph.D. student.
As part of my job, I collaborate with national and international researchers.

Driving licence B