

Luca Mannella, Ph.D.

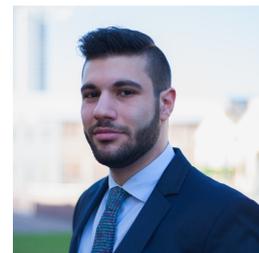
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🐦 @LukeMannella

in LucaMannella

🌐 <https://github.com/LucaMannella>

🌐 <https://www.polito.it/en/staff?p=luca.mannella>



Employment History

- Nov 2020 – ongoing **Researcher and Teaching Assistant**, Department of Control and Computer Engineering, Politecnico di Torino, Turin, Italy.
- Sep 2018 – Oct 2020 **Researcher**, IoT & Pervasive Technology research area, LINKS Foundation, Turin, Italy.
- Dec 2016 – Nov 2017 **Head of Marketing and Communication department**, JEToP, Turin, Italy.
- Mar 2016 – Nov 2016 **Social Media Manager**, JEToP, Turin, Italy.
- Sep 2015 – Feb 2017 **Teaching Assistant Student**, Politecnico di Torino, Turin, Italy.
- Dec 2013 – May 2014 **Android Developer**, Take Off S.r.l., Turin, Italy.

Education

- Nov 2020 – Oct 2024 **Ph.D. in Computer Engineering** Politecnico di Torino.
Thesis title: *Securing IoT Gateways in Smart Home Environments.*
- Mar 2015 – Apr 2018 **M.Sc. in Computer Engineering**, Politecnico di Torino.
Thesis title: *Heuristics and Evolutionary Algorithm for Android Malware Signature Optimization.*
- Sep 2010 – Mar 2015 **B.Sc. in Computer Engineering**, Politecnico di Torino.

Conferences Organization

Organization

- January 2026–July 2026 **Student Research Symposium; Track Chair**. International Computer Software and Applications Conference (COMPSAC) 2026, Madrid, Spain.
- January 2024–June 2026 **Special Session** on: Blockchain applications and Cybersecurity solutions for IoT Systems; **Organizer and Session Chair**. *SpliTech 2024, SpliTech 2025, SpliTech 2026*, Split and Bol, Croatia.
- January 2023–June 2023 **Special Session** on: Cybersecurity and IoT; **Organizer and Session Chair**. *SpliTech 2023*, Split and Bol, Croatia.

TPC Member

- February 2025–August 2026 **Workshop on Sustainable security and Awareness For nExt generation infRastructures (SAFER)**, held during the International Conference on Availability, Reliability and Security (ARES).
 - 20th edition at Ghent, Belgium;
 - 21st edition at Linköping, Sweden.

Conferences Organization (continued)

- January 2024–July 2026  IEEE International Workshop on eHealth systems and IoT technologies (**eHealth-IoT**). International Computer Software and Applications Conference (**COMPSAC**).
- eHealth-IoT @ COMPSAC 2024, Osaka, Japan;
 - eHealth-IoT @ COMPSAC 2025, Toronto, Canada;
 - eHealth-IoT @ COMPSAC 2026, Madrid, Spain.
- January 2024–July 2025  **Student Research Symposium**. International Computer Software and Applications Conference (**COMPSAC**).
- *COMPSAC 2024*, Osaka, Japan;
 - *COMPSAC 2025*, Toronto, Canada.

Sessions chaired

- February 2025  Session on: **Security and AI - part II**. ITASEC 2025, Bologna, Italy.
- April 2024  Seminar: <ESCAPE> **Generative AI: the new security services** . Politecnico di Torino, Turin, Italy.

Research Publications

Journal Articles

- 1 D. Canavese, L. Mannella, L. Regano, and C. Basile, “Security at the edge for resource-limited IoT devices,” *Sensors*, vol. 24, no. 2, Jan. 2024, ISSN: 1424-8220.  DOI: 10.3390/s24020590.
- 2 F. Corno and L. Mannella, “Security evaluation of arduino projects developed by hobbyist IoT programmers,” *Sensors*, vol. 23, no. 5, Mar. 2023, ISSN: 1424-8220.  DOI: 10.3390/s23052740.
- 3 F. Corno, L. De Russis, and L. Mannella, “Helping novice developers harness security issues in cloud-iot systems,” *Journal of Reliable Intelligent Environments*, vol. 8, no. 3, pp. 261–283, May 2022, ISSN: 2199-4676.  DOI: 10.1007/s40860-022-00175-4.

Conference Proceedings

- 1 G. Esposito, E. Magliano, N. Scarano, *et al.*, “AI-Based Classification of Adversarial Attacks vs. Hardware Fault Corruptions in the Split Computing Context,” in *2025 IEEE 31st International Symposium on On-Line Testing and Robust System Design (IOLTS)*, Jul. 2025, pp. 1–7.  DOI: 10.1109/IOLTS65288.2025.11116959.
- 2 N. Scarano, L. Mannella, A. Savino, and S. Di Carlo, “Assessing LLMs models’ knowledge of automotive cyberthreats benchmarking auto-ISAC framework,” in *Proceedings of the 2nd Cyber Security in CarS Workshop (CSCS ’25)*, ser. CSCS ’25, Taipei, Taiwan: Association for Computing Machinery (ACM), Oct. 2025.  DOI: 10.1145/3736130.3762690.
- 3 L. Mannella, D. Canavese, and L. Regano, “Detecting Cryptomining Traffic in IoT Networks,” in *2024 9th International Conference on Smart and Sustainable Technologies (SpliTech)*, Institute of Electrical and Electronics Engineers (IEEE), Split/Bol, Croatia, Jun. 2024, pp. 1–6.  DOI: 10.23919/SpliTech61897.2024.10612663.
- 4 S. Misto Kirdi, N. Scarano, F. Oberti, L. Mannella, S. Di Carlo, and A. Savino, “CARACAS: vehiCular ArchitecTuRe for detAiled Can Attacks Simulation,” in *IEEE ISCC 2024: 29th IEEE Symposium on Computers and Communications (ISCC)*, Institute of Electrical and Electronics Engineers (IEEE), Paris, France, Jun. 2024, pp. 1–6.  DOI: 10.1109/ISCC61673.2024.10733705.

- 5 L. Regano, D. Canavese, and L. Mannella, "A Privacy-Preserving Approach for Vulnerability Scanning Detection," in *Proceedings of the 8th Italian Conference on Cyber Security (ITASEC 2024)*, CEUR-WS, vol. 3731, Salerno, Italy, Apr. 2024, pp. 1–13.
- 6 N. Scarano, L. Mannella, A. Savino, and S. Di Carlo, "Can social media shape the security of next-generation connected vehicles?" In *IOLTS 2024: The 30th IEEE International Symposium on On-Line Testing and Robust System Design*, Institute of Electrical and Electronics Engineers (IEEE), Rennes, France, Jul. 2024. [DOI: 10.1109/IOLTS60994.2024.10616053](https://doi.org/10.1109/IOLTS60994.2024.10616053).
- 7 F. Corno and L. Mannella, "A gateway-based MUD architecture to enhance smart home security," in *2023 8th International Conference on Smart and Sustainable Technologies (SpliTech)*, Institute of Electrical and Electronics Engineers (IEEE), Split/Bol, Croatia, Jun. 2023, pp. 1–6. [DOI: 10.23919/SpliTech58164.2023.10193747](https://doi.org/10.23919/SpliTech58164.2023.10193747).
- 8 F. Corno and L. Mannella, "A threat model for extensible smart home gateways," in *2022 7th International Conference on Smart and Sustainable Technologies (SpliTech)*, IEEE, Split/Bol, Croatia, Jul. 2022, pp. 1–6. [DOI: 10.23919/SpliTech55088.2022.9854235](https://doi.org/10.23919/SpliTech55088.2022.9854235).
- 9 F. Corno, L. De Russis, and L. Mannella, "Perception of security issues in the development of Cloud-IoT systems by a novice programmer," in *Intelligent Environments 2021: Workshop Proceedings of the 17th International Conference on Intelligent Environments*, IOS Press, vol. 29, IOS Press, Jun. 2021, pp. 5–15. [DOI: 10.3233/AISE210074](https://doi.org/10.3233/AISE210074).
- 10 E. Giovannitti, L. Mannella, A. Marcelli, and G. Squillero, "Evolutionary antivirus signature optimization," in *2019 IEEE Congress on Evolutionary Computation (CEC)*, Jun. 2019, pp. 928–935. [DOI: 10.1109/CEC.2019.8790240](https://doi.org/10.1109/CEC.2019.8790240).

Thesis

- 1 L. Mannella, *Securing IoT Gateways in Smart Home Environments*, Ph.D. thesis, Politecnico di Torino, Turin, Italy, 2024. [URL: https://iris.polito.it/handle/11583/2993903](https://iris.polito.it/handle/11583/2993903).
- 2 L. Mannella, *Heuristics and Evolutionary Algorithms for Android Malware Signature Optimization*, Master thesis, Politecnico di Torino, Turin, Italy, 2018. [URL: https://webthesis.biblio.polito.it/7484/](https://webthesis.biblio.polito.it/7484/).

Skills

Languages	📖	English: Strong reading and writing competencies; good listening and speaking competencies.
Coding	📖	C, Python, Java, SQL.
Web Dev	📖	JavaScript, React, Express, PHP, HTML, CSS.
Misc.	📖	Academic research, teaching, training, \LaTeX typesetting and publishing.

Miscellaneous Experience

Awards and Achievements

- February 2025 📖 **Most Innovative Research Idea**, SERICS Research Pitch, SERICS Foundation and ITASEC conference, Bologna, Italy.
- March 2017 📖 **Inducted in IEEE-HKN**, Mu Nu Chapter of IEEE-HKN, Turin, Italy.
- November 2014 📖 **Regional Round Case Study Winner**, European BEST Engineering Competition (EBEC) 2015, Turin, Italy.

Miscellaneous Experience (continued)

Certification

- September 2018  **Professional Qualification as ICT Engineer.** Politecnico di Torino and Order of Engineers of Turin, Turin, Italy.
- March 2013  **IELTS, Score: 6.** Politecnico di Torino, Turin, Italy.

References

Available on Request.