Niccolò Borgioli

Curriculum Vitae

Education

2020 – present	**PhD Student in Emerging Technologies - Embedded Systems**, Scuola Superiore Sant'Anna. Working on I/O virtualization in hetherogeneous platforms; AI for security on embedded platforms.
2017 – 2020	**Masters of Science in Embedded Computing System (English)**, *University of Pisa*, Scuola Superiore Sant'Anna, *110/110 summa cum laude*. Master Degree Thesis: Predicting the COVID-19 cases using deep learning. Thesis Advisors: Prof. Lazzerini Beatrice, Dr. Pistolesi Francesco
2014 – 2017	**Bachelor Degree in Computer Engineering (Italian)**, *University of Genova*, *105/110*. Bachelor Degree Thesis: MyEmergency. Thesis Advisor: Prof. Merlo Alessio
2014 – 2017	**ISICT Student**, *ISICT, Genoa*, During these years I followed several courses that completed my engineering preparation giving me also economical, management, legal and multi disciplinar knowledge.
2004 – 2010	**High School Degree**, *Liceo Scientifico E. Fermi, Massa*, P.N.I.

Working Experience

2015 – present	**Basketball referee**, F.I.P. Toscana..
2017 – 2018	**Computer System Designer and Analyst**, *JoinMeApp*, Genova, Italy. As consultant I designed and realized a Java web-tool to manage complex data in a SQL database.
2016 – 2017	**CEO and Co-Founder**, LetIn, Genova, Italy. I was co-founder of a startup which provided access control for events using NFC technology. Main customers were TEDx Genova 2016 and GoaBoa Festival Genova 2016.

Participation in Projects

2020 – present **"SPHERE**. The SPHERE project aims at providing an integrated operating system framework to abstract the hardware complexity of cutting-edge multi-core platforms and simplify the management of heterogeneous computational resources.". Project funded by the MIUR in the context of the PRIN Program.
Contribution: I authored two publications and a submitted publication related to the project.

2016 – 2017 **"Engine failure detection for ships** Realization of an engine power estimator for ships starting from meteorological, instrumental and empirical measures. The estimated power is compared with the real one to detect breakdowns that compromises the motors performances.". Project organized by DITEN Department UniGe.
Contribution: I developed linear estimators and multi layer perceptrons to perform power estimation.

Professional Service as Reviewer

Reviewer for journals: IEEE Transactions on Industrial Informatics and IEEE Access

Secondary reviewer for conferences: RTAS2021

Publications (complete list)

Journal Papers

2021 Alessandro Biondi, Daniel Casini, Giorgiomaria Cicero, **Niccolò Borgioli**, Giorgio Buttazzo, et al., "SPHERE: A Multi-SoC Architecture for Next-generation Cyber-Physical Systems Based on Heterogeneous Platforms", IEEE Access, Vol. 9, pp. 75446-75459, May 2021.

Workshop Papers

2021 **Niccolò Borgioli**, Matteo Zini, Daniel Casini, Giorgiomaria Cicero, Alessandro Biondi, and Giorgio Carlo Buttazzo, Real-time I/O virtualization with memory contention control, Italian Workshop on Embedded Systems 2021 (IWES 2021), Rome, Italy, December 9-10, 2021.

2019 Cosimo Antonio Prete, **Niccolò Borgioli**, Mario Cimino, Gbriele Antonio De Vitis, Pierfrancesco Foglia, Enrico Giannico, Emiliano Ricciardi, and Nataljia Zlatkova, "A car pioneering application scenario", Italian Workshop on Embedded Systems 2019 (IWES 2018), Naples, Italy, September 30 - October 1, 2019.

Submitted Publications

Conference Papers

2021 **Niccolò Borgioli**, Matteo Zini, Daniel Casini, Giorgiomaria Cicero, Alessandro Biondi, and Giorgio Carlo Buttazzo, "An I/O Virtualization Framework with I/O-Related Memory Contention Control for Real-Time Systems", In Proceedings of the 28th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2022), May 4-6, 2022.

Other Experiences

Feb 2019 **UNAVOX Cyber Exercise** Cyber Defense exercise jointly with the cyber team of Italian Army. In this occasion I part of the blue team. In particular my task was defending the IoT infrastructure.

Certificates

2020 Licensed as a professional engineer by the Italian Engineering Society (ingegnere abilitato dall'ordine degli ingegneri).

2017 FIRST (B2.2 CEFR), Cambridge University London.

Languages

Italian Mothertongue

English Advanced   *C1-level*

Tutto quanto dichiarato corrisponde a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 del D.P.R. 445/2000/ Everything declared corresponds to the truth pursuant to the rules on substitute declarations pursuant to art. 46 of the Presidential Decree 445/2000;

December 1, 2021