

Gianluca Brilli Curriculum Vitae

PERSONAL DETAILS

Birth	April 24, 1991
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Nationality	Italian

SHORT DESCRIPTION

Gianluca received his bachelor degree in Computer Science and master degree in Computer Engineering from University of Modena and Reggio Emilia. His main interests are numerical optimization, parallel computing and electronics, currently he is working on neural networks profiling on embedded low power platforms like FPGAs and GPUs.

EDUCATION

Master's Degree in Computer Engineering

University of Modena and Reggio Emilia

Subjects: Advanced Algorithms, Parallel Programming, Real-time Embedded Systems, Digital Electronic Design, Systems and Control Theory, Multimedia Elaboration Systems. **Thesis:** Implementation and Validation of Convolutional Neural Networks on Embedded Automotive Platforms.

Advisor: prof. Marko Bertogna 107/110

Bachelor's Degree in Computer Science

University of Modena and Reggio Emilia

Subjects: Algorithms and Data Structures, C/C++/Java/Python Programming, Numerical Analysis, Numerical Optimization, Database, Operating Systems, Calculator Architecture, Network Architecture and Protocols

Thesis: Metodi del Gradiente a Memoria Limitata per l'Ottimizzazione su Architetture Parallele.

Advisor: prof. Luca Zanni

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Diploma qualified as "Perito Capotecnico in Elettronica e Telecomunicazioni" ITIS A. Volta Sassuolo

 ${\bf Subjects:} \ {\bf Electronics, \ Electrical \ engineering, \ Telecomunications, \ Control \ Theory}$

2016-2018

2012 - 2015

2005 - 2010

WORK EXPERIENCE

Internship in Real-Time Embedded Systems

Internship at High Performance Real-Time lab, belonging to Department of Physics, Informatics and Mathematics, in which I worked on implementation and validation of convolutional neural networks for objects detection and images classification on low power embedded platforms like FPGAs and GPUs. The most significant results were then summarized in two scientific articles [1] [2].

Internship in Numerical Optimization

Internship at Department of Physics, Informatics and Mathematics, in which I worked with my advisor prof. Luca Zanni, on parallelization of constrained optimization methods for image reconstruction like LMSD and BFGS on distributed memory architectures.

Progetti di Impresa srl

Work experience in which I worked as web programmer, in particular front-end developing for public administrations websites.

Microlog srl

Highschool stage in which I worked on electronic design and tesing of photoelectric systems for people counting.

SKILLS

Languages	Italian, English
Programming Languages	MATLAB, C/C++, Java, Python
Web	J2EE, Spring, Django, Jquery, AJAX
Embedded	Atmel and STM32 Microcontrollers, Xilinx FPGAs
Environments	Eclipse, ARM Keil, STMCube, Atmel Studio, Vivado, SDx
Parallel Program- ming	CUDA, OpenCL, OpenMP, MPI

PUBLICATIONS

[1] P. Burgio, G. Brilli, A. Marra, M. Bertogna, *Convolutional Neural Networks on embedded automotive platforms: a qualitative comparison*, preliminary version, Design, Automation and Test in Europe (DATE), workshop "W03: New Platforms for Future Cars (NPCar 2018)".

[2] P. Burgio, G. Brilli, A. Marra, M. Bertogna, *Convolutional Neural Networks on embedded automotive platforms: a qualitative comparison*, extended version, Advances in Parallel Programming Models and Frameworks for the Multi-/Many-core Era (APPMM 2018).

2017-2018

2011-2012

2014-2015

2010-2010

OTHERS

Organizing Committee member of the International Workshop on Smart Cities and Future Eco-Systems (SCAFES 2018).

HOBBIES

Electronics and do it yourself, Modeling, Videogames, Reading

Quanto dichiarato nel presente curriculum vitae corrisponde al vero ai sensi degli artt. 46 e 47 del D.P.R. 445/2000.

Sottoscrizione _____