Europass
Curriculum Vitae

Personal information

Surname(s) / First name(s)	**Oliveri, Alberto**
Address(es)	Via Trento 1/4, 16013, Campo Ligure (GE), Italy
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Email(s)	alberto.oliveri@unige.it
Nationality(-ies)	Italian
Date of birth	June 23, 1985
Gender	Male

Desired employment/ Occupational field

Electronic Engineer/Researcher

Work experience

Dates	October 2011 - November 2011
Occupation or position held	Occasional collaboration at the Università degli Studi di Genova
Main activities and responsibilities	The subject of the work was: *Development of Software Toolbox in Matlab*
Description	The work consisted on the development of a part of a software toolbox in Matlab environment. Aim of the toolbox is the automatic generation of VHDL code for the description of digital circuits able to compute piecewise affine control functions, starting from the definition of the system to control and of the constraints to fulfil.

Dates	March 2011 - May 2011
Occupation or position held	Lecturer at the Università degli Studi di Genova
Main activities and responsibilities	Teaching in the following course: *Teoria dei Circuiti (Circuit Theory)*
Description	The didactic activity consisted on ten practical lessons (20 hours) for the courses of Electronic, Telecommunication and Biomedical Engineering. The practical lessons had the aim to show (through the solutions of exercises) how the notions learned during the theoretical lessons can be pratically applied for the solution of electric circuits. The main techniques for the most significant circuit typologies have been explained. Moreover exam exercises have been solved to prepare students for the intermediate test.

Dates	February 2011 - May 2011
Occupation or position held	Lecturer at the Università degli Studi di Genova
Main activities and responsibilities	Teaching in the following course: *Metodi Matematici per l'Ingegneria (Mathematical Methods for Engineering)*
Description	The didactic activity consisted on six computer lessons (15 hours) for the courses of Biomedical Engineering. The computer lessons had the aim to teach the basics of Matlab language and then to use it for the solution of problems explained during the theoretical lessons. The lessons covered the following subjects: Matlab basics, interpolation with polynomials, numerical integration, solutions of Ordinary Differential Equations, Singular Value Decomposition, least squares solution of linear systems, solution of Partial Differential Equations.

Dates	July 2010 - September 2010
Occupation or position held	Occasional collaboration at the Università degli Studi di Genova

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Main activities and responsibilities	The subject of the work was: *Software development for the implementation of control systems based on piecewise-affine functions*
Description	The work consisted on the development of MATLAB functions and scripts for the realization of approximate control systems, by means of piecewise-affine functions. Some functions have also be written for the automatic generation of the VHDL code describing circuits for the digital implementation of such controllers.
Dates	March 2010 - May 2010
Occupation or position held	Lecturer at the Università degli Studi di Genova
Main activities and responsibilities	Teaching in the following course: *Teoria dei Circuiti (Circuit Theory)*
Description	The didactic activity consisted on ten practical lessons (20 hours) for the courses of Electronic and Telecommunication Engineering. The practical lessons had the aim to show (through the solutions of exercises) how the notions learned during the theoretical lessons can be pratically applied for the solution of electric circuits. The main techniques for the most significant circuit typologies have been explained. Moreover exam exercises have been solved to prepare students for the intermediate test.

Education and training

Dates	January 2010 - present
Occupation or position held	Ph.D. Student at the Università degli Studi di Genova, School of Electric Engineering, XXV cycle
Dates	21 June 2011 - 24 June 2011
Occupation or position held	I participated in the "4th Hycon2 PhD School on Control of Networked and Large-Scale Systems" (20 hours), held in Trento (Italy).
Dates	13 June 2011 - 19 June 2011
Occupation or position held	I participated in the summer school "Advanced Topics in Numerical and Computational Bifurcation Analysis" (35 hours), held in Lyngby (Denmark).
Dates	2010
Title or qualification awarded	I was appointed "cultore della materia" for the course "Teoria dei circuiti" as reported in the minutes of the "Seduta Riunita dei Consigli del Corso di Laurea e del Corso di Laurea Magistrale in Ingegneria Elettronica", 10/12/2010 and in the minutes of the "Consiglio del Corso di Studi in Bioingegneria", 30/11/2010 at the Università degli Studi di Genova
Dates	30 August 2010 - 29 September 2010
Occupation or position held	Visitor at the University of Bristol, Department of Mathematics. The aim of the visit was to work with professor Stephen Wiggins, in order to improve my background about fluid mechanics and non-linear dynamical systems and to learn some techniques for the development of one of my research themes.
Dates	September 2009
Title of qualification awarded	Graduate degree (Laurea Specialistica) in Electronic Engineering
Final Score	110/110 with honours
Name and type of organization providing education and training	Università degli Studi di Genova
Dates	September 2007
Title of qualification awarded	Undergraduate degree (Laurea) in Electronic Engineering
Final Score	110/110 with honours
Name and type of organization providing education and training	Università degli Studi di Genova
Dates	July 2004

Title of qualification awarded	Secondary school Diploma
Final Score	100/100
Name and type of organization providing education and training	Liceo Scientifico B. Pascal, Ovada

Personal skills and competences

Mother tongue(s) — **Italian**

Other language(s) — English, French

Self-assessment
European level[*]

	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	B2 Indep. user	B2 Indep. user	B1 Indep. user	B1 Indep. user	B2 Indep. user
French	A2 Basic user	B1 Indep. user	A2 Basic user	A2 Basic user	A2 Basic user

[*]*Common European Framework of Reference (CEF) level*

Organizational skills and competences

My personal experiences taught me how to face problems with an open-minded approach.

Technical skills and competences: Hardware

FPGA programming, Measurement Instruments (oscilloscope, waveform generator, multimeter, logic analyzer, etc.)

Technical skills and competences: Software

MatLab, Xilinx ISE, Xilinx EDK, Microsoft Visual Studio, ModelSim XE

Programming languages

MatLab, Simulink, VHDL, LaTeX, C/C++

Other computer skills and competences

Microsoft Office; Operative Systems (working knowledge): Windows, Ubuntu, Debian

Artistic skills and competences

Conservatory graduate in clarinet (7 years study) at Conservatorio N. Paganini of Genoa, with a grade of 10/10

Driving licence(s) — B

Additional information

Research Interests

– *Dinamical systems*: detection of transport barriers in nonlinear fluid-dynamical systems.

– *Piecewise-linear functions*: study of techniques that allow a circuital implementation of nonlinear functions using a collection of piecewise-linear functions.

– *Model Predictive Control:* implementation of circuits for the control of linear systems with constraints.

Publications

Journals

[1] A. Bemporad, A. Oliveri, T. Poggi, M. Storace, *Ultra-Fast Stabilizing Model Predictive Control via Canonical Piecewise Affine Approximations*, IEEE Transactions on Automatic Control, vol. 56(12), pg. 2883-2897, 2011.

[2]   A. Oliveri, A. Stocchino, M. Storace, *Barriers to transport induced by periodic oscillations in a physical model of the human vitreous chamber*, Physical Review E, vol. 83, pg. 036311, 2011.

Conferences

[3]   A. Oliveri, G.J.L. Naus, M. Storace, W.P.M.H. Heemels, *Low-complexity approximations of PWA functions: A case study on adaptive cruise control*, Proc. ECCTD2011, Linköping, Sweden, pg. 669-672, Aug 2011.

[4]   A. Bemporad, A. Oliveri, T. Poggi, M. Storace, *Synthesis of Stabilizing Model Predictive Controllers via Canonical Piecewise Affine Approximations*, Proc. CDC2010, Atlanta, USA, pg. 5296-5301, Dec 15-17, 2010.

[5]   A. Oliveri, A. Oliveri, T. Poggi, M. Storace, *Circuit implementation of piecewise-affine functions based on a binary search tree*, Proc. ECCTD09, Antalya, Turkey, pg. 145-148, Aug 2009.

Personal interests

- *Music*: Jazz, classic music. I play clarinet and saxophone in some wind ensambles and chamber groups.