

Europass Curriculum Vitae



Personal information

Surname(s) / First name(s)

Address(es)

Telephone(s)

Email(s)

Nationality(-ies)

Date of birth

Gender

Barcelli Davide

Via M.K. Gandhi, 3 Loc. Pianella, Castelnuovo Berardenga (SI), 53019, Italia

0577 / 363142 Mobile: 392 / 2901133

davide.barcelli@gmail.com, barcelli@dii.unisi.it

Italy

May 10, 1984

Male

Work Experience

- Dates
- Employer

January 2010 - August 2010

Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, via Roma, 56, 53100, Siena

Università degli Studi di Siena, Robotics and Systems lab (SIRSLab)

Research project fellow

Research activity in human centered robotics

- Employer type/sector
- Business sector/type
- Main activities and responsibilities

- Dates
- Employer
- Employer type/sector
- Business sector/type
- Main activities and responsibilities

16 October 2012 - 30 June 2013)

Italian Ministry for Instruction, University and Research

Italian Public Education

High School Professor

As Informatics Teacher activities involve in-class and in-lab teaching and students valuation

- Dates
- Employer
- Employer type/sector
- Business sector/type
- Main activities and responsibilities

29 November 2011 - June 2012

Italian Ministry for Instruction, University and Research

Italian Public Education

High School Professor

As Informatics Laboratory Teacher activities involve in-lab teaching and students valuation

- Dates
- Employer
- Employer type/sector
- Business sector/type
- Main activities and responsibilities

September 2011 - August 2012

Institution Market Technology Lucca

Institution Market and Technology, Institute for Advanced Studies Lucca

Research project fellow

Research activity in hierarchical and decentralized control, involvement in deliverable writing, code development for European Project HYCON2¹.

- Dates
- Employer
- Employer type/sector
- Business sector/type

October 2010 - August 2011

Dipartimento Ingegneria Meccanica e Strutturale, Via Mesiano, 77, 38123, Trento

Università di Trento

Research project fellow

¹FP7 NoE HYCON2 - Highly-complex and networked control systems

- Main activities and responsibilities
 - Dates
 - Employer
 - Employer type/sector
 - Business sector/type
- Main activities and responsibilities
 - Dates
 - Employer
 - Employer type/sector
 - Business sector/type
- Main activities and responsibilities
 - Dates
 - Employer
 - Employer type/sector
 - Business sector/type
- Main activities and responsibilities

Research activity in hierarchical and decentralized control, involvement in deliverable writing, code development for WIDE toolbox in European Project WIDE².

January 2010 - August 2010

Dipartimento di Ingegneria dell'Informazione, via Roma, 56, 53100, Siena

Università degli Studi di Siena

Research project fellow

Research activity in hierarchical and decentralized control, involvement in deliverable writing, code development for WIDE toolbox in European Project WIDE¹

March 2009 - December 2009

Dipartimento di Ingegneria dell'Informazione, via Roma, 56, 53100, Siena

Università degli Studi di Siena

Research project fellow

Research activity in hierarchical and decentralized control, involvement in deliverable writing, code development for WIDE toolbox in European Project WIDE¹

from 2003 to 2011, about 90 days per year

Comando Provinciale Vigili del Fuoco di Siena, viale Cavour 162, 53100 Siena (Fire department of Siena)

Ministero dell'Interno Dipartimento dei Vigili del Fuoco del Soccorso Pubblico e della Difesa Civile

Volunteer Fireman

Public safety and civil defense

Education

- Name and address of education
 - Dates
 - Fields
 - Degree
 - Grade
- Name and address of education
 - Dates
 - Fields
- Name and address of education
 - Degree
 - Dates
 - Thesis title
 - Degree
 - Grade
- Name and address of education
 - Dates
 - Thesis title
 - Degree
 - Grade
- Name and address of education
 - Dates
 - Thesis title
 - Degree
 - Grade
- Name and address of education
 - Dates

September 2012 - July 2013

Università di Pisa

High school education

Abilitazione all a professione di docente (High school teacher license)

100/100

October 2009 - October 2012

Dipartimento di Ingegneria dell'informazione, Università degli studi di Siena

Functional analysis, non-linear distributed filtering, linear matrix inequalities, reconfigurable computers, decentralized and hierarchical model predictive control, convex optimization, non-linear optimization, numerical computation, constrained optimization algorithms, inverse problems

Information engineering Ph.D.

02/10/2006 - 29/09/2008

Università degli studi di Siena

Optimal decomposition and distributed model predictive control of Barcelona water distribution network

Master degree in Information Engineering, specialization Automation and Robotics

110 / 110 *cum laude* (average 29,4 / 30, with 10 laudes over 15 exams)

01/09/2003 - 02/10/2006

Università degli studi di Siena

Progetto e realizzazione di una linea di produzione pilota automatizzata con sensori wireless
Master degree in Information Engineering, specialization Automation and Industrial automation systems

104 / 110

15/09/1998 - 06/07/03

I.T.I.S. Tito Sarrocchi di Siena

²WIDE - 224168 - FP7-ICT-2007-2 Decentralized and Wireless Control of Large-Scale Systems.

- Degree
• Grade
Industrial diploma with specialization in Computer Science
100 / 100
- Dates
26/04/05 - 24/02/06
- Name and address of education institute
SEA-M s.r.l.
- Degree
Automation and robotics technician “Dirigente Responsabile del Servizio politiche del Lavoro n. 8097/3 del 18/12/03”
- Grade
98 / 100
- Dates
September/03 - May/03
- Name and address of education institute
University of Cambridge
- Degree
Preliminary English Test (PET)
- Grade
Pass
- Dates
03/09/02 - 31/10/02
- Name and address of education institute
Ministero dell’Interno Dipartimento dei Vigili del Fuoco del Soccorso Pubblico e della Difesa Civile Comando Provinciale Vigili del Fuoco di Siena
- Degree
Volunteer fireman “circolare M.I. 051844/bis del 23/05/01”
- Grade
Excellent
- Dates
April 2008 - August 2008
- Name and address of education institute
Università degli Studi di Siena
- Program name
Erasmus Placement
- Visited Institute
Universitat Politècnica de Catalunya & Grup Agbar (Barcelona water network owner company)
- Activity
Preliminary work for WIDE¹, described in Master thesis

Language skills

Mother tongue(s)

*Self-assessment
European level^(*)*

English

French

Spanish

Italian

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
A1	Basic user	A1	Basic user	A1	Basic user	A1	Basic user	A1	Basic user
A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A1	Basic user

^(*) Common European Framework of Reference (CEF) level

Computer skills

- Operating systems
 - Windows: 98, 98se, Millennium, 2000, XP, Vista, Seven, Eight;
 - Linux: Gentoo, Ubuntu;
 - Mac OSX: Tiger, Leopard, Snow Leopard, Lion, Mountain Lion.
- Programming languages
 - Objective C, C, C++, Java, Javascript, Pascal, Php, Matlab/Simulink, Visual Basic, L^AT_EX, Html, Bash, Linux QT, Sql
 - Microsoft Office*, OpenOffice*, iWork
 - * Macros
- Office suites
 - Parallels, VMware, VirtualBox
- Virtual machines
- Vehicle simulator
 - Carsim

References

- [1] A. Bemporad and D. Barcelli. Decentralized model predictive control. In A. Bemporad, W.P.M.H. Heemels, and M. Johansson, editors, *Networked Control Systems*. Eds. Springer-Verlag, 2010. <http://ist-wide.dii.unisi.it/school09>.
- [2] C. Ocampo-Martinez, D. Barcelli, V. Puig, and A. Bemporad. Hierarchical and decentralised model predictive control of drinking water networks: Application to barcelona case study. *IET Control Theory and Applications*, 2011.
- [3] Alessandro Alessio, Davide Barcelli, and Alberto Bemporad. Decentralized model predictive control of dynamically coupled linear systems. *Journal of Process Control*, 21(5):705 – 714, 2011. Special Issue on Hierarchical and Distributed Model Predictive Control.
- [4] Matteo Rubagotti, Davide Barcelli, and Alberto Bemporad. Approximate explicit mpc on simplicial partitions with guaranteed stability for constrained linear systems. In *Nonlinear Model Predictive Control*, volume 4, pages 119–125, 2012.
- [5] Alberto Oliveri, Davide Barcelli, Alberto Bemporad, Bart Genuit, Maurice Heemels, Tomaso Poggi, Matteo Rubagotti, and Marco Storace. Moby-dic: A matlab toolbox for circuit-oriented design of explicit mpc. In *4th IFAC Nonlinear Model Predictive Control Conference, IFAC, Noordwijkerhout, NL. August 23*, volume 27, 2012.
- [6] D. Barcelli, A. Bemporad, and G. Ripaccioli. Decentralized hierarchical multi-rate control of constrained linear systems. In *Proc. 18th IFAC World Congress*, pages 277 – 283, Milan, Italy, 2011.
- [7] D. Barcelli, C. Ocampo-Martinez, V. Puig, and A. Bemporad. Decentralized model predictive control of drinking water networks using an automatic subsystem decomposition approach. In *IFAC Symposium on Large-Scale Systems: Theory and Applications (LSS)*, 2010.
- [8] D. Barcelli, A. Bemporad, and G. Ripaccioli. Hierarchical multi-rate control design for constrained linear systems. In *Proc. 49th IEEE Conf. on Decision and Control*, Atlanta, GA, USA, 2010.
- [9] D. Barcelli, D. Bernardini, and A. Bemporad. Synthesis of networked switching linear decentralized controllers. In *Proc. 49th IEEE Conf. on Decision and Control*, pages 2480 – 2485, Atlanta, GA, USA, 2010.
- [10] C. Ocampo-Martinez, V. Fambrini, D. Barcelli, and V. Puig. Model predictive control of drinking water networks: A hierarchical and decentralized approach. In *American Control Conference (ACC), 2010*, pages 3951–3956. IEEE, 2010.
- [11] D. Barcelli and A. Bemporad. Decentralized model predictive control of dynamically-coupled linear systems: Tracking under packet loss. In *1st IFAC Workshop on Estimation and Control of Networked Systems*, pages 204–209, Venice, Italy, 2009.
- [12] D. Barcelli. Decentralized and hierarchical model predictive control of networked systems. *Ph.D. Thesis University of Siena*, 2012.
- [13] D. Barcelli. Decomposizione ottima e controllo predittivo distribuito della rete idrica di barcellona. *Master Thesis University of Siena*, 2008.