

Europass Curriculum Vitae



Personal information

First name / Surname	Gianni Ferretti
Address(es)	30, Viale Trento e Trieste, 26100, Cremona, Italy
Telephone(s)	+39 02 2399 3682 (7745)
Fax(es)	+39 02 2399 3412 (7701)
E-mail	gianni.ferretti@polimi.it
Nationality	Italian
Date of birth	20/12/1962
Gender	Male

Biography

Gianni Ferretti was born in Cremona (Italy) in 1962. He received the 'Laurea' degree in Electronics Engineering in 1987 from Politecnico di Milano. From 1990 to 1998 he was Assistant Professor at the Department of Electronics and Computer Science of Politecnico di Milano and in 1994 he was a visiting researcher at the Laboratoire d'Automatique de Grenoble. From 1998 to 2005 he was Associate Professor at Politecnico di Milano where he is currently Full Professor in Systems and Control. He is Vice Rector for the Cremona campus of Politecnico di Milano and teaches Fundamentals of Automatic Control, Digital Controls and Simulation Techniques and Tools. His principal research interests are: control of servomechanisms, modelling and simulation of mechatronic systems, force/position control of robots, modelling and simulation of automotive systems, modelling and control of biogas power plants. He is coauthor of more than 100 papers, most of which published in international journals or presented in international conferences, and was involved in many research projects with industries and institutions.

Work experience

Dates	1/9/2005 – Today
Occupation or position held	Full Professor of Automatic Controls – Vice Rector of the Cremona Campus of Politecnico di Milano
Main activities and responsibilities	Research and Teaching
Name and address of employer	Politecnico di Milano – 32, Piazza L. Da Vinci, 20133, Milan, Italy
Type of business or sector	University
Dates	30/10/1998 – 31/8/2005
Occupation or position held	Associate Professor of Automatic Controls
Main activities and responsibilities	Research and Teaching
Name and address of employer	Politecnico di Milano – 32, Piazza L. Da Vinci, 20133, Milan, Italy
Type of business or sector	University
Dates	1/6/1990 – 30/10/1998
Occupation or position held	Assistant Professor of Automatic Controls
Main activities and responsibilities	Research and Teaching

Name and address of employer Politecnico di Milano – 32, Piazza L. Da Vinci, 20133, Milan, Italy
 Type of business or sector University

Dates 15/9/1994 – 15/12/1994

Occupation or position held Research Assistant

Main activities and responsibilities Research

Name and address of employer Laboratoire d'Automatique de Grenoble - Domaine Universitaire - BP46
 Saint Martin d'Hères - Cedex, 38402, France

Type of business or sector University

Education and training

Dates 5/11/1981 – 17/7/1987

Title of qualification awarded Laurea Degree in Electronics Engineering

Principal subjects/occupational skills covered Automation, Electronics, Computer Science

Name and type of organisation providing education and training Politecnico di Milano – 32, Piazza L. Da Vinci, 20133, Milan, Italy, University

Personal skills and competences

Mother tongue(s) Italian

Other language(s)

Self-assessment
 European level (*)

English

German

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Advanced	B2	Advanced	B2	Advanced	B2	Advanced	B2	Advanced
A2	Elementary	A2	Elementary	A2	Elementary	A2	Elementary	A2	Elementary

(*) [Common European Framework of Reference for Languages](#)

Organisational skills and competences Direction of a University Campus
 Organization of scientific events

Technical skills and competences Professional skills in the use and programming of computers and industrial robots, mainly acquired during research activities in the following fields:

- Modeling and control of anaerobic digestion processes for biogas production
- Object-oriented modeling of mechatronic systems
- Control of drives with elasticity, friction and torque disturbances
- Hybrid position/force control for industrial robots
- Modelling, control and simulation of thermohydraulic processes

Computer skills and competences Operating systems: Microsoft Windows
 Office applications: Microsoft Word - Excel – PowerPoint - OpenOffice
 Programming languages: C, Fortran
 Process simulation environments and languages: Modelica, Dymola, Simulink
 Advanced control analysis: Matlab, Scilab, vxMaxima

Additional information

Selected publications

- B. Scaglioni, L. Bascetta, M. Baur, G. Ferretti. Closed-form control oriented model of highly flexible manipulators. *Applied Mathematical Modelling*. Vol. 52, December 2017, pp. 174-185.
- L. Bascetta, G. Ferretti, B. Scaglioni. Closed form Newton–Euler dynamic model of flexible manipulators. *Robotica*. Vol. 35, No. 5, May 2017, pp. 1006–1030.
- A. V. Papadopoulos, L. Bascetta, G. Ferretti. Generation of human walking paths. *Autonomous Robots*. Vol. 40, No. 1, January 2016, pp. 59-75.
- A. Della Bona, G. Ferretti, E. Ficara, F. Malpei. LFT modelling and identification of anaerobic digestion. *Control Engineering Practice*. Vol. 36, March 2015, pp. 1-11.
- G. Ferretti, A. Leva, B. Scaglioni. Object-oriented modelling of general flexible multibody systems. *Mathematical and Computer Modelling of Dynamical Systems*. Vol. 20, No. 1, January 2014, pp. 1-22.
- L. Bascetta, G. Ferretti, G. Magnani, P. Rocco. Walk-through programming for robotic manipulators based on admittance control. *Robotica*. Vol. 31, No. 7, October 2013, pp. 1143-1153.
- F. Donida, G. Ferretti, S.M. Savaresi and M. Tanelli. Object-oriented modelling and simulation of a motorcycle. *Mathematical and Computer Modelling of Dynamical Systems*. Vol. 14, No. 2, April 2008, pp. 79–100.
- G. Ferretti, G. Magnani and P. Rocco. Single and multi-state integral friction models. *IEEE Transactions on Automatic Control*. Vol. 49, N° 12, December 2004, pp. 2292-2297.
- G. Ferretti, G. Magnani and P. Rocco. Virtual prototyping of mechatronic systems. *IFAC Journal Annual Reviews in Control*. Vol. 28, N° 2, 2004, pp. 193-206.
- G. Ferretti, G. Magnani and P. Rocco. Impedance control for elastic joints industrial manipulators. *IEEE Transactions on Robotics & Automation*. Vol. 20, N° 3, June 2004, pp. 488-498.
- G. Ferretti and L. Piroddi. Estimation of NOx emissions in thermal power plants using neural networks. *ASME Journal of Engineering for Gas Turbines and Power*. Vol. 123, N° 2, April 2001, pp. 465-471.
- G. Ferretti, S. Filippi, C. Maffezzoni, G. Magnani, and P. Rocco. Modular dynamic virtual-reality modeling of robotic systems. *IEEE Robotics & Automation Magazine*. Vol. 6, N° 4, December 1999, pp. 13-23.
- G. Ferretti and R. Girelli. Modelling and simulation of an agricultural tracked vehicle. *Journal of Terramechanics*. Vol. 36, N° 3, June 1999, pp. 139-158.
- G. Ferretti, G. Magnani, and P. Rocco. Force oscillations in contact motion of industrial robots: an experimental investigation. *IEEE/ASME Transactions on Mechatronics*. Vol. 4, N° 1, March 1999, pp. 86-91.
- G. Ferretti, G. Magnani, and P. Rocco. Modelling, identification and compensation of pulsating torque in permanent magnet AC motors. *IEEE Transactions on Industrial Electronics*. Vol. 45, N° 6, December 1998, pp. 912-920.
- G. Ferretti, G. Magnani, and A. Zavala Rio. Impact modelling and control in industrial manipulators. *IEEE Control Systems Magazine*. Vol. 18, N° 4, August 1998, pp. 65-71.
- G. Ferretti, G. Magnani, and P. Rocco. Towards the implementation of hybrid position/force control in industrial robots. *IEEE Transactions on Robotics & Automation*. Vol. 13, N° 6, December 1997, pp. 838-845.
- G. Ferretti, G. Magnani, and P. Rocco. Implicit force control for industrial robots in contact with stiff surfaces. *Automatica*. Vol. 33, N° 11, November 1997, pp. 2041-2047.

Personal web page

<http://ferretti.faculty.polimi.it/>