



Antonella Ferrara's Curriculum Vitae

University of Pavia

April 2018

Antonella Ferrara, Ph.D.

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Short Bio:

Antonella Ferrara was born in Genova, Italy, in 1963. As a student at the Faculty of Engineering of the University of Genova, she got the "IEEE North Italy Section Electrical Engineering Student Award" in 1986. She received the Laurea Degree in Electronic Engineering (cum Laude) in 1987 and the Ph.D. in Computer Science and Electronics in 1992 from the University of Genova. She was Assistant Professor in the Department of Communication, Computer and System Sciences of the University of Genova (1992-1998). In November 1998 she became Associate Professor of Automatic Control at the University of Pavia. Since January 2005 she is Full Professor of Automatic Control, first in the Department of Computer Engineering and Systems Science of the University of Pavia (2005-2011), and then in the newborn Department of Electrical, Computer and Biomedical Engineering (ECBE) of the same university.

At the University of Pavia, she is Reference Person for International Mobility of Computer Engineering and Computer Science students. She teaches "Process Control and Robotics" and "Advanced Automation and Control" (both in English) in the Master Degree Programs in Computer Engineering and Industrial Automation Engineering. She also teaches "Control of Vehicle Dynamics" (in English) in the Post-Bachelor Program on Design and Development of Vehicle Dynamics. She is frequently invited to give lectures in International Schools for Ph.D. students. She was Visiting Professor at Graz University of Technology, and Invited Lecturer at Harvard University, University of Minnesota, University of California at Los Angeles (UCLA), University of Stuttgart, Technical University of Delft, INRIA Grenoble, King Abdullah University of Science and Technology (KAUST), Jeddah, and Hanyang University, Seoul.

Her research activities are mainly in the area of advanced automatic control of complex systems, with application to mechanical systems, automotive control, robotics, power systems control, process control, and vehicular traffic control.

She was and still is a coordinator and member of several research units in national and European research projects. In particular, she was the UNIPV coordinator in the PRIN project "Control of Advanced Transmission, Suspension, Steering and Braking Systems for the Management of Vehicle Dynamics" (2006-2007), and in the European Project PROTECTOR (Preventive safety for un-protected road user) ended in 2003. At present, she is coordinator of the Italian research team in the European Projects ITEAM (Interdisciplinary Training Network in Multi-Actuated Ground Vehicles, Marie Skłodowska-Curie Action) started on January 1st, 2016.

She was scientific leader of several research projects funded or co-funded by companies.

She has authored or co-authored more than 360 scientific papers, with more than 100 international journal papers, 3 scientific books. Moreover, she contributed, with invited chapters, to 23 edited books. From 2000 to 2004 she was *Associate Editor* of the *IEEE Transactions on Control Systems Technology*. From 2007 to 2012 she was *Associate Editor* of the *IEEE Transactions on Automatic Control*. Since January 2014, she has been *Associate Editor* of the *IEEE Control Systems Magazine*. Since 2017, she has been *Subject Editor* of the *International Journal of Robust and Nonlinear Control*. Since 2018 she has been *Associated Editor* of *Automatica*. She was and currently is member of the International Program Committee of several international conferences and events. She was *Program Vice-Chair* of the European Control Conference ECC14 held in Strasbourg, France, and *Program Vice-Chair* of the 22nd IEEE Mediterranean Conference on Control & Automation Med14 held in Palermo, Italy. She is *Editor* of the IFAC Symposium on Control in Transportation Systems CTS 2018 to be held in Savona, Italy, *Publication Chair* for IEEE Conference on Decision and Control 2019 to be held in Nice, France, and *Editor* of the European Control Conference ECC19 to be held in Naples, Italy.

She is *Senior Member* of the *IEEE Control Systems Society*, member of the *IEEE Technical Committee on Variable Structure and Sliding Mode Control*, member of the *IEEE Technical Committee on Automotive Control* and member of the *IFAC Technical Committee on Transportation Systems*. She was "appointed member" of the Board of Governors of the IEEE Control Systems Society for year 2012. She was Chair of the Women in Control Committee of the IEEE Control Systems Society (July 2013-December 2016) and, at present, she is member of the Advisory Board of that committee. She is "elected member" of the Board of Governors of the IEEE Control Systems Society for the the triennium 2016-2018. Since July 2015 she has been serving as Member of the European Control Association (EUCA) Council.

Starting from June 2018 she will be Series Editor of the book series "Advances in Industrial Control" published by Springer.

Since 2017 she is also member of the "Consiglio Scientifico del Working Group Trasporti" of the CNR Foresight Project, and member of IEEE Control System Society Outreach Task Force.

Teaching at the University of Pavia:

- At present:
 - Process Control and Robotics (in English, 12 CFU, 92 hours).
 - Process Control (in English, 6 CFU, 46 hours).
 - Robot Control (in English, 6 CFU, 46 hours).
 - Advanced Automation and Control (part on Nonlinear Control, in English, 30 hours)
 - Control of Vehicle Dynamics (Post-Bachelor Program on Design and Development of Vehicle Dynamics, in English, 10 hours)
- In the past: Automatic Control, Fundamentals of Automatic Control, Automatica, Industrial Automation (in Italian).

Teaching in other Institutions:

- Summer School on Sliding Mode Control: Theory and Applications, organized by TU Graz, Graz, Austria. 4-8/09/2017.
- Course on Robotics at TU Graz, Austria, September-October 2016
- Course on Elements of Sliding Mode Control, Institute for Mathematics and its Applications (IMA), University of Minnesota, Minneapolis, MN, September 2015.
- Spring School on Sliding Mode Control: Theory and Applications, organized by INRIA, Aussois, France. 08-12/06/2015.
- Robotics (25 hours) at IUSS (Istituto Universitario di Studi Superiori), Pavia, October-December 2015.
- Ph.D. School on Sliding Mode Control, Politecnico di Milano, Italy, January 2018.
- Ph.D. School on Sliding Mode Control, Politecnico di Milano, Italy, January 2016.
- Ph.D. School on Sliding Mode Control, Politecnico di Milano, Italy, January 2014.

Ph.D and Postdoc Supervision:

- Member of the University of Pavia PhD School Scientific Board since 2007.
- Supervisor of the Ph.D students: Claudio Vecchio, Matteo Rubagotti, Luca Capisani, Alberto Nai Oleari, Gian Paolo Incremona, Michele Cucuzzella, Enrico Regolin, Gianmario Rinaldi, Massimo Zambelli, Bianca Sangiovanni, Giulia Piacentini.
- Supervisor of the Postdoc student: Luca Capisani, Gian Paolo Incremona
- Co-Supervisor of the Ph.D student at INRIA, Grenoble, France: Wenjie Lu
- Co-Supervisor of the Ph.D visiting students: Alfredo Nunez, Antonio Estrada, Alejandra Ferreira, Qudrat Khan, Sebastian Trip, Manuel Acosta, Weitao Chen, Michael Hartmann.
- Co-Supervisor of the Postdoc visiting student: Domenico Bianchi

Visits as Invited Professor in other Institutions:

- Visit to KAUST (King Abdullah University of Science and Technology), Jeddah, Saudi Arabia, Febbraio 2017 (Guest Lecturer)
- Visit to the Technical University of Graz, Austria, September 18-October 15 2016 (Visiting Professor, Course on Robot Control)
- Visit Harvard, Cambridge, MA, 4-24 July 2016 (Guest Lecturer)
- Visit to the Institute of Pure and Applied Mathematics (IPAM), University of California, Los Angeles (UCLA), October 2015 (Guest Lecturer)
- Visit to the Institute for Mathematics and its Applications (IMA), University of Minnesota, Minneapolis, MN, one month, September 2015 (Visiting Professor)
- Visit to the Institute for Systems Theory and Automatic Control, University of Stuttgart, Stuttgart, Germany. June 2013 (Guest Lecturer)
- Visit to the Technical University of Delft, NL, October 2011 (Guest Lecturer)
- Several visits to INRIA, Grenoble, to develop common research since 2010, all financially supported by INRIA.

Plenary Lectures, Guest Lectures and Key Note Addresses:

She was invited to give:

- **Plenary Lecture** “Modern Sliding Mode Control with Application to Automotive Systems”, ICCAS 2017, South Korea, October, 2017
- **Plenary Lecture** “Sliding Modes Observation and Control in Automotive Design”, at the 11th IEEE Workshop on Variable Structure Systems, Nanjing, China, June 1-4, 2016
- **Semi-plenary Lecture** “Second Order Sliding Modes to Control and Supervise Industrial Robot Manipulators”, at the 11th IEEE Workshop on Variable Structure Systems, Mexico City, June 26-28, 2010
- **Invited Lecture** “Modern Control Concepts in Freeway Traffic Systems”, INdAM Workshop on Transport Modeling and Management, Roma, March 2017.
- **Invited Lecture** “New trends in vehicle dynamics control: the ITEAM EU project perspective” in the Workshop on Open Problems and Challenges in Automotive Control organized by the IEEE Tech. Com. on Automotive Control at the 55th Conference on Decision and Control, Las Vegas, USA, December 12-14, 2016
- **Key Note Address** in the HYCON2 Workshop “Control of large-scale distributed and cooperating systems: Recent achievements within the Network of Excellence HYCON2”, at ECC2014, Strasbourg, France, June 2014.
- **Key Note Address** at the Open Day of the HYCON2 Traffic Show Case, Grenoble. France, May 2013.

She was invited to give Guest Lectures in many international institutions. During the last years, for instance, she has been invited to give Guest Lectures at:

- KAUST (King Abdullah University of Science and Technology), Saudi Arabia, February 2017.
- Harvard University, Cambridge, MA, July 2016.
- University of California, Los Angeles (UCLA) UCLA, October 2015 (she was an invited speaker in the Workshop on Traffic Control organized by the Institute of Pure and Applied Mathematics (IPAM)).
- Technical University of Graz, Austria, November 2015

- University of Minnesota, Minneapolis, MN, USA, at the University of California, September 2015.
- University of Stuttgart, Germany, June 2013.
- Technical University of Delft, NL, Ottobre 2011.

Leadership in Projects:

Antonella Ferrara is Scientific Leader and Local Coordinator of the UNIPV team in:

- the European Project **ITEAM** (2016-2019).

Antonella Ferrara was Scientific Leader and Local Coordinator of the UNIPV team in:

- the International Europe-Mexico Project **FONCICYT** (2009-2011).
- the National Project **PRIN05** "Control of Advanced Transmission, Suspension, Steering and Braking Systems for the Management of Vehicle Dynamics" (2006-2007).
- The European Project **IST-1999-10107 PROTECTOR** (Preventive safety for un-protected road user) January 2000-March 2003.

Antonella Ferrara was member of the Pavia Research Unit in

- European Network of Excellence HYCON2, Highly-complex and networked control systems, (2010-2014).
- National Projects PRIN (2001-2007).
- National Projects ASI on Robotics for Aerospace applications (1998-1999).
- National Project MURST "Identification and Control of Industrial Systems" (1998-2000).
- National Project on Transportation Systems (Progetto Finalizzato Trasporti, Sottoprogetto 3 "Sistemi Telematici di Supporto") supported by CNR (1995-1998).
- European Project AMADEUS (II), "Advanced manipulator for deep underwater systems", under the Program MAST, "Marine Sciences and Technology", (1996-1998).
- European Project AMADEUS (I), "Advanced manipulator for deep underwater systems", under the Program MAST, "Marine Sciences and Technology", (1993-1995).
- National Project MURST "Identification of models, systems control, signal processing" (1994-1996).
- National Project on Transportation Systems (Progetto Finalizzato Trasporti, Sottoprogetto 3 "Sistemi Telematici di Supporto") supported by CNR (1992-1994).

Editorial Activity:

- **Associate Editor** of *Automatica* (since 2018)
- **Subject Editor** of the *International Journal of Robust and Nonlinear Control* (since March 2017)
- **Associate Editor** of the *IEEE Control Systems Magazine* (2014-present).
- **Associate Editor** of the *IEEE Transactions on Automatic Control* (2007-2012).
- **Associate Editor** of the *IEEE Transactions on Control Systems Technology* (2001-2004).
- **Guest Editor** with S. Sacone and S. Siri (Università di Genova) of the Special Issue "Freeway Traffic Modelling and Control", *International Journal of Robust and Nonlinear Control*, 2016.

- **Guest Editor** with G. Bartolini (Università di Cagliari) and S. Spurgeon (Leicester University) of the Special Issue “New trends in Sliding Mode Control” *International Journal of Robust and Nonlinear Control*, vol. 7, 1997.
- **Guest Editor** with V. I. Utkin (Ohio State University) of the Special Issue “Sliding Mode Control”, *Control Theory and Advanced Technology*, vol 10, December 1994.

Moreover, starting from June 2018 she will be Series Editor of the book series “Advances in Industrial Control” published by Springer.

Participation in International Program Committees:

Antonella Ferrara was

- Program Vice Chair (specifically, Vice-chair for tutorial sessions) of the European Control Conference, ECC2014, Strasbourg, France, in 8-11 July 2014.
- Program Vice Chair of the 22nd Mediterranean Conference on Control & Automation, Palermo, Italy, June 24-27 2014.

Moreover, she is

- *Publication Chair* of IEEE CDC 2019 to be held in Nice, France, December 2019.
- *Editor* of the European Control Conference ECC 2019 to be held in Naples, Italy, June 2018.
- *Editor* of the IFAC Symposium on Control in Transportation Systems CTS 2018 to be held in Savona, Italy, June 2018 and *Member of the National Organization Committee*.
- *Technical Program Co-Chair* of the IEEE IES International Conference on Mechatronics (ICM) 2019, Ilmenau, German, March 18-20, 2019.
- *Associate Editor* (Contributed Papers) for 2018 IEEE Conference on Control Technology and Applications (CCTA2018) to be held in The Scandic Hotel Copenhagen, Copenhagen, Denmark, August 21-24, 2018.
- *Member of the International Program Committee* of the 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz University of Technology, July, 9-11, 2018.

In addition, she was member of the

- International Program Committee of the 2017 IEEE Conference on Control Technology and Applications, (CCTA 2017), Kohala Coast, Hawaii, USA.
- International Program Committee of the 2015 International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC 2017), Yokohama, Japan, October 16-19, 2017
- International Program Committee of the “14th International Conference on Informatics in Control, Automation and Robotics” - ICINCO 2017
- International Program Committee of the 2017 IEEE International Conference on Vehicular Electronics and Safety (IEEE ICVES’17) Vienna, Austria, June 27-29, 2017.
- International Program Committee of the IEEE International Smart Cities Conference 2016 (ISC2), September 12-15, 2016, Trento, Italy.
- International Program Committee and Track Chair of the 2016 International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC 2016), Rio de Janeiro, November 1-4, 2016.
- International Program Committee (IPC) 14th IFAC Symposium on Control in Transportation Systems (CTS 2016), Istanbul, Turkey, 18-20 May 2016.

- International Program Committee (IPC) International Conference on Advances in Intelligent Control and Automation (ICAICA 2016), Doddaballapur, Bengaluru, Karnataka, India , March 10-12, 2016.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'16, Nanjing, Jiangsu, China, 2016.
- International Program Committee (IPC) ICVES2015 (2015 IEEE International Conference on Vehicular Electronics and Safety), Yokohama, JAPAN, November 5-7, 2015.
- International Program Committee and Track Chair of the 2015 International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC 2015), Grand Canaria, Canary Islands, September 15-18, 2015.
- International Program Committee of the 2014 International IEEE Conference on Intelligent Transportation Systems (IEEE ITSC 2014), Qingdao, China, October 8-11, 2014.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'14, IRCCyN, Ecole Centrale de Nantes, France, 2014.
- International Program Committee of the 16th International IEEE Annual Conference on Intelligent Transportation Systems ITSC 2013, The Hague, The Netherlands, October 2013.
- International Program Committee of the 3rd IFAC International Conference on Intelligent Control and Automation Science (ICONS 2013), Chengdu, China, 2-4 September 2013.
- International Program Committee (Associate Editor at Large) of the 52nd IEEE Conference on Decision and Control, Florence, Italy, December 2013.
- International Program Committee of the First International Conference on Control, Decision and Information Technologies (CoDIT'13), Hammamet, Tunisia for April 11-13, 2013.
- International Program Committee of the IEEE International Conference on Vehicular Electronics and Safety (ICVES'12), Istanbul, July 24-27, 2012.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'12, Mumbai, India, 2012.
- International Program Committee of the 14th International IEEE Annual Conference on Intelligent Transportation Systems ITSC 2011, Washington DC, USA, October 2011.
- International Program Committee of the International Workshop on Intelligent Transportation Systems and Applications ITSA 2011, <http://www.ftrai.org/itsa2011>), to be held with the FutureTech 2011, (<http://www.ftrai.org/futuretech2011>) at Crete, Greece, June 28-30, 2011.
- International Program Committee of the IEEE DSDE International Conference on Computer Control and Automation, 1st-3rd, May 2011 Jeju Island, South Korea.
- International Program Committee of the Intelligent Vehicles Symposium IV'10 June 21-24, 2010, University of California, San Diego, CA, USA.
- International Program Committee of the 13th International IEEE Conference on Intelligent Transportation Systems 2010 ITSC 2010, Madeira Island, Portugal, on September 19 – 22, 2010.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'10, Mexico City, Mexico, 2010.
- International Program Committee of the 48th IEEE Conference on Decision and Control , Shanghai 2009, December 16 – 18, 2009.
- International Program Committee of the IEEE Conference on Intelligent Transportation Systems ITSC-2009, October 3-7, 2009, St. Louis, MO, USA.
- International Program Committee of the 21st Chinese Control and Decision Conference (2009 CCDC) sponsored by IEEE Control Systems Society and IEEE Industrial Electronics Society, Guilin, China, 17-19 June 2009

- International Program Committee of the IEEE Conference on Intelligent Transportation Systems ITSC 2008, Beijing, China, Oct 12-15, 2008.
- International Program Committee of the 20th Chinese Control and Decision Conference (2008 CCDC) sponsored by IEEE Control Systems Society and IEEE Industrial Electronics Society, Yantai, Shandong Province of China, 2-4 Luglio 2008
- International Program Committee of the IEEE Intelligent Vehicles Symposium, Eindhoven University of Technology, Eindhoven, The Netherlands, June 4-6, 2008.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'08, Antalya, Turkey Giugno 8-10, 2008.
- International Program Committee of the ICNPAA 2008 - Seventh International Conference on "Mathematical Problems in Engineering, Aerospace and Sciences," University of Genoa, Genoa, Italy , Giugno 25-27, 2008.
- International Program Committee of the IEEE Conference on Intelligent Transportation Systems ITSC 2007, Seattle, Washington, USA, 30 Settembre-3 Ottobre 2007.
- International Program Committee of the IEEE Intelligent Vehicles Symposium IV'07, Istanbul, Turkey, Giugno 13-15, 2007.
- International Program Committee of the IEEE Conference on Intelligent Transportation Systems – “ITSC '06”, Toronto, Canada, Settembre 17-20, 2006.
- International Program Committee of the 11th IFAC International Conference on Transportation Systems, Delft, The Netherlands, Agosto 29-31, 2006.
- International Program Committee of the IFAC International Conference on Analysis and Design of Hybrid Systems ADHS06, Alghero, Italy, Giugno 7-9, 2006.
- International Program Committee of the IEEE International Workshop on Variable Structure Systems VSS'06, Alghero, Italy, Giugno 5-7, 2006.
- International Program Committee of the 8th International IEEE Conference on Intelligent Transportation Systems – “ITSC '05”, Vienna, Austria, Settembre 13-16, 2005.
- International Program Committee of the Conference “ISATA 2000”, Dublino, Ireland, Ottobre 2000.

Other Appointments:

- **Member of EUCA Council** (since July 2015)
- **Chair of the EUCA Conference Editorial Board (CEB)** (since March 2018)
- **Elected Member of the Board of Governors** of the IEEE Control Systems Society (2016-2018)
- **Member of IEEE CSS Outreach Task Force** (since 2017)
- **Chair of the Women in Control Standing Committee** of the IEEE Control Systems Society (2013-2016).
- **Member of the Advisory Board of the Women in Control Standing Committee** of the IEEE Control Systems Society (2013-present).
- **Member** of the “Consiglio Scientifico del Working Group Trasporti” of the CNR Foresight Project.
- **Appointed Member of the Board of Governors** of the IEEE Control Systems Society (2012)
- **Member of the committee to assign the IEEE CDC Best Student Paper Award** (2015)

- **Organizer of the Second Workshop for Women in Control:**
"After Graduation: Women in Control Around the Globe Take Leadership Roles"
A Workshop Dedicated to Honor Maria Elena Valcher, 2015 IEEE CSS President
Co-Organizers: Linda Bushnell and Bozenna Pasik-Duncan, Members of the Advisory Board for CSS Women in Control, US **Sponsors:** IEEE CSS, CSS MAB, CDC2015, IEEE CSS Standing Committee on Women in Control, and by IEEE WIE **Wednesday, Dec 16, 2015 10:00-12:10**. This workshop was included as a Special Session in the CDC 2015 Program.
- **Organizer of the Special session at ACC 2016 in Boston: "Empowering Your Potential"**
Co-Organizers: Prof. Bozenna Pasik-Duncan, Kansas State University; Prof. Linda Bushnell, University of Washington; Prof. Sandra Hirsche, Technische Universitat Munchen
Presenter: Dr. Karen Panetta, Tufts University
Time: 12:00 pm – 12:30 pm (lunch); 12:30 pm – 1:30 pm (lecture), Wednesday, July 6, 2016.

Member of Ph.D. Evaluation Committees at:

KTH Stockholm,

TU Graz (3 times)

INRIA Grenoble

University of Genova (3 times)

Politecnico di Milano (2 times)

Politecnico di Torino (2 times)

She was also **Reviewer** of several PhD Thesis and member of the corresponding evaluation committees.

Professor Promotion Committee at:

KTH Stockholm

Research Activity, main topics:

1. Sliding mode control and sliding mode observers.
2. Robotics (mobile robotics, industrial robotics).
3. Control of vehicles dynamics (cars and motorcycles)
4. Modeling, identification, observation and control of traffic systems.
5. Fault Detection, Isolation and identification in mechanical systems.
6. Control and observation in power systems even of micro-grid type.

Major Scientific Achievements:

- Antonella Ferrara contributed to the development of the concept of second order sliding modes proposing the so-called ***Second Order Sliding Mode Suboptimal Algorithm*** (1997, 1998), which, together with the Twisting and the Super-twisting algorithms (by Arie Levant), is one of the more widely used and recognized sliding mode control algorithms.

- Together with her student Francesco Dinuzzo, she has authored the formulation of a novel family of Higher Order Sliding Mode Control Algorithms which guarantee optimal control properties (2009), inaugurating the new research path called ***Optimality based Higher Order Sliding Mode Control***.
- Together with her scholar Mara Tanelli (Politecnico di Milano, Italy), she has authored another new family of sliding mode control algorithms, named ***Switched Suboptimal Sliding Mode Control Algorithms*** (2013), which produce performance comparable with those of conventional sliding mode laws with a reduced control effort, making them even more appropriate for application to mechanical systems.
- She has also demonstrated the **possibility of applying sliding mode techniques to robotics**, proposing, together with her Ph.D. students, efficient algorithms with chattering alleviation.
- Her **automotive applications of sliding mode control** to traction and brake control, stability systems, and torque-vectoring control of fully electric vehicles are also appreciated and widely used in practice in several European projects. Four Master Theses on automotive control she has supervised have been awarded with the ATA (Associazione Tecnica dell'Automobile) Award. She has edited and co-authored the book: *Sliding Mode Control of Vehicle Dynamics*, IET Digital Library, 2017.
- She has also demonstrated the **possibility of applying sliding mode techniques to micro-grids and power networks**, proposing, together with her Ph.D. students, efficient algorithms with distributed observation capabilities. Experimental tests made in collaboration with RSE S.p.A. (Ricerca sul Sistema Energetico) have confirmed the validity of the strategies even in field implementations.

Citations and H-Index:

- According to **Scopus**: number of citations 4214 (on the basis of 258 documents), H-Index: 30 (150 co-authors)
- According to **Google Scholar**: number of citations 6194, H-Index: 35, Most cited paper: 1002 citations
- According to **ResearchGate**: number of citations 4801 (on the basis of 298 documents), Reads: 10409, RG Score: 38,06 (higher than 95% of Research Gate members), H-index: 33.

Awards:

- “*Outstanding Reviewer for Automatica*”, 2006.
- “*IEEE Electrical Engineering Student Award*” North Italy Section, 1996.

Awards assigned to papers she co-authored:

“*IEEE CSS Italy Chapter Best Young Author Paper Award*” to Mara Tanelli for paper M. Tanelli, A. Ferrara. “Enhancing Robustness and Performance via Switched Second Order Sliding Mode

Control”, IEEE TRANSACTIONS ON AUTOMATIC CONTROL (ISSN: 0018-9286), Vol. 58, n. 4, pp. 962-974, April 2013.

Awards assigned to Thesis she supervised:

- ETIC 2015/2016 Award: promoted by AICA (Associazione italiana per l’Informatica e il Calcolo Automatico) and Rotary International (Student: G.P. Incremona; Supervisor: Prof. A. Ferrara).
- *ATA 2003/2004 Award* for Mater Thesis on Automotive Control (Student: J. Paderno; Supervisor: Prof. A. Ferrara).
- *ATA 2003/2004 Award* for Mater Thesis on Automotive Control (Student: A. Ghiro; Supervisor: Prof. A. Ferrara)
- *ATA 2000/2001 Award* for Mater Thesis on Automotive Control (Student: A. Colombo Supervisor: Prof. A. Ferrara)
- *ATA 2000/2001 Award* for Mater Thesis on Automotive Control (Student: A. Rovida; Supervisor: Prof. A. Ferrara)

ATA - Associazione Tecnica dell'Automobile created in 1948 is part of FISITA (Fédération Internationale des Sociétés d'Ingénieurs des Techniques de l'Automobile) and of EAEC (European Automobile Engineers Co-operation).

Scientific International and National Cooperations (testified by publications in co-authorship) with:

International:

INRIA Grenoble, France

INRIA, Sophia Antipolis-Méditerranée, France

University of Exeter, UK

University of Surrey, UK

University of Leicester, UK

University of Seville, Spain

Tech. University of Ilmenau, Germany

Eindhoven University of Technology

University of Groningen

TU Delft Technical University of Technology, Delft, The Netherlands

ETH, Zurich, Swiss

KTH Stockholm, Sweden

Tu Graz, Graz, Austria

Ohio State University, Columbus, Ohio, USA.

Nazarbayev University, Astana, Republic of Kazakhstan

UNAM Universidad Nacional Autónoma de México, Mexico City

Instituto Politécnico Nacional, Mexico City

Autonomous University of Nuevo Leon, Mexico

Clemson University, Clemson, South Carolina, USA

Heriot-Watt University, Edinburgh, UK

University of Sheffield, Sheffield, UK

Current cooperations with publications still to be submitted:

KTH, Stockholm, Sweden

MIT, Boston, USA

National:

Politecnico di Milano

Politecnico di Torino

Università degli Studi di Genova

Università degli Studi di Cagliari

Università degli Studi dell'Aquila

Istituto di Studi sui Sistemi Intelligenti per l'Automazione CNR, Genova, Italy.

Seconda Università degli Studi di Napoli

Scientific Collaborations with Companies:

Antonella Ferrara is and was scientific leader in research projects with several companies:

RSE S.p.A. (Ricerca sul Sistema Energetico), Fedegari, Centro Ricerche FIAT, Ferrari F1, Ansaldo, Whirlpool, Logic, Riso Scotti, Iritecna, Autostrade S.p.A., among others.

Publications by Antonella Ferrara

BOOKS

- [B.1] A. Ferrara (Ed.), "Sliding Mode Control of Vehicle Dynamics", IET Digital Library, 2017.
- [B.2] A. Ferrara, S. Simona, S. Siri, "Freeway Traffic Modelling and Control", Springer, 2018.
- [B.3] A. Ferrara, G.P. Incremona, M. Cucuzzella, "Advanced and Optimization Based Sliding Mode Control", SIAM, to appear by the end of 2018.

PAPERS IN INTERNATIONAL JOURNALS

- [R.1] Bartolini G., Ferrara A. *A new adaptive pole assignment control scheme*. **Journal of Systems Engineering** (Springer-Verlag, London, U.K.), volume 2, pp. 134-142, 1992.
- [R.2] Bartolini G., Ferrara A. *Adaptive control of SISO plants with unmodelled dynamics*. **International Journal of Adaptive Control and Signal Processing** (Wiley & Sons, Chichester, U.K.), volume 6, pp. 237-246, 1992.
- [R.3] Bartolini G., Ferrara A. *Sliding-mode control of uncertain nonminimum-phase linear SISO systems*. **IMA Journal of Mathematical Control & Information** (Oxford University Press, U.K.), volume 9, pp. 345-360, 1992.
- [R.4] Bartolini G., Ferrara A. *Variable structure approach to the pole assignment control of non-minimum phase systems*. **International Journal of Control** (Taylor & Francis, London, U.K.), volume 57, pp. 1063-1078, 1993.
- [R.5] Bartolini G., Ferrara A. *Discontinuous pole assignment control of uncertain systems using only input/output measurements*. **International Journal of Adaptive Control and Signal Processing** (Wiley & Sons, Chichester, U.K.), volume 8, pp. 321-335, 1994.
- [R.6] Ferrara A. *Direct/indirect control of uncertain LTI SISO plants via sliding modes*. **Control Theory and Advanced Technology** (Mita Press, Tokyo), volume 10, pp. 621-633, 1994.
- [R.7] Utkin V. I., Ferrara A. (Guest Editors) *Editorial of the "Special Issue on Sliding mode control"*. **Control Theory and Advanced Technology** (Mita Press, Tokyo), volume 10, pp. 575- 578, 1994.
- [R.8] Bartolini G., Ferrara A., Stotsky A. A. *Stability and exponential stability of an adaptive control scheme for plants of any relative degree*. **IEEE Transaction on Automatic Control** (IEEE, Piscataway, NJ), volume 40, pp. 100-104, 1995.
- [R.9] Bartolini G., Ferrara A., Utkin V. I. *Adaptive sliding mode control in discrete-time systems*. **Automatica** (Elsevier Sciences Ltd, U.K.), volume 31, pp. 769-773, 1995.
- [R.10] Di Febbraro A., Ferrara A. *A new two-level model for multiclass freeway traffic*. (Regular) **IEEE Transaction on Vehicular Technology** (IEEE, Piscataway, NJ), volume 45, pp. 189-200, 1996.

- [R.11] Bartolini G., Ferrara A. *A new VS/adaptive controller for plants of any relative degree*. **International Journal of Adaptive Control and Signal Processing**, volume 10, pp. 451-463, 1996.
- [R.12] Bartolini G., Ferrara A. *Multi-input sliding mode control of a class of uncertain nonlinear systems*. **IEEE Transaction on Automatic Control**, volume 41, pp. 1662-1666, 1996.
- [R.13] Di Febbraro A., Ferrara A., Sacone S. *Modelling freeway systems: a new traffic fundamental diagram*. **Mathematical Modelling of Systems**, volume 3, pp. 201-218, 1997.
- [R.14] Bartolini G., Ferrara A., Savkin A. V. *Reduced order adaptive control based on the concept of robust strictly positive realness*. **IMA Journal of Mathematical Control & Information**, volume 15, pag. 363-378, 1998.
- [R.15] Bartolini G., Ferrara A., Usai E. *Application of a sub optimal discontinuous control algorithm for uncertain second order systems*. **International Journal of Robust and Nonlinear Control**, volume 7, pp. 299-319, 1997.
- [R.16] Bartolini G., Ferrara A., Utkin V. I., Zolezzi T. *A control vector simplex approach to variable structure control of nonlinear systems*. **International Journal of Robust and Nonlinear Control**, volume 7, pp. 321-335, 1997.
- [R.17] Bartolini G., Ferrara A., Spurgeon S. (Guest Editors) *Editorial of the "Special Issue on new trends in sliding mode control"*, **International Journal of Robust and Nonlinear Control**, volume 7, 1997.
- [R.18] Bartolini G., Ferrara A., Usai E. *Output tracking control of uncertain non linear second order systems*. **Automatica**, volume 33, pp. 2203-2212, 1997.
- [R.19] Bartolini G., Caputo W., Cecchi M., Ferrara A., Fridman L. *Vibration damping in an elastic robotic structure via sliding modes*. **Journal of Robotic Systems**, volume 14, pp. 675-696, 1997.
- [R.20] Lane D.M., Davies J.B.C., Robinson G., O'Brien D.J., Pickett M., Jones D., Scott E., Casalino G., Bartolini G., Cannata G., Ferrara A., Angelletti D., Coccoli M., Verruggio G., Bono R., Virgili P., Canals M., Pallas R., Gracia E., Smith C. *AMADEUS: Advanced Manipulation for deep underwater sampling*, **IEEE Robotics & Automation Magazine**, volume 4, pp. 34-45, 1997.
- [R.21] Bartolini G., Ferrara A., Usai E. *Chattering avoidance by second order sliding mode control*. **IEEE Transaction on Automatic Control**, volume 43, pp. 241-246, 1998.
- [R.22] Bartolini G., Coccoli M., Ferrara A. *Vibration damping and second order sliding modes in the control of a single finger of the AMADEUS gripper*. **International Journal of Systems Science**, volume 29, 1998.
- [R.23] Alessandri A., Di Febbraro A., Ferrara A., Punta E. *Optimal control of freeways via speed signalling and ramp metering*, **Control Engineering Practice**, 6, pp.771-780, 1998.
- [R.24] Ferrara A., Giacomini L. *On multi-input backstepping design with second order sliding modes for a class of uncertain nonlinear systems*, **International Journal of Control**, vol. 71, no. 5, pp. 767-788, 1998.

- [R.25] Bartolini G., Ferrara A., Pisano A., Usai E. *Adaptive reduction of the control effort in chattering free sliding mode control of uncertain nonlinear systems*, **Journal of Applied Mathematics and Computer Science**, volume 8, pp. 51-71, 1998.
- [R.26] Bartolini G., Ferrara A. *On the parameter convergence properties of a combined VS/adaptive control scheme during sliding motion*. **IEEE Transaction on Automatic Control**, vol. 44, no. 1, pp. 70-76, 1999.
- [R.27] Bartolini G., Ferrara A., Stotsky A. A. *Robustness and performance of an indirect adaptive control scheme in presence of bounded disturbances*. **IEEE Transaction on Automatic Control**, vol. 44, no. 4, pp. 789-793, 1999.
- [R.28] Alessandri A., Di Febbraro A., Ferrara A., Punta E. *Nonlinear optimization for freeway control using speed signalling*. (Regular) **IEEE Transaction on Vehicular Technology**, Vol. 48, n. 6, pp. 2042-2052, 1999.
- [R.29] Bartolini G., Ferrara A., Punta E., Usai E. *Chattering elimination in the hybrid control of constrained manipulators via first/second order sliding mode control*. **Dynamics & Control**, Vol. 9, pp. 99-124, 1999.
- [R.30] Bartolini G., Ferrara A., Giacomini L. *A Robust control design for a class of uncertain nonlinear systems featuring a second order sliding mode*, **International Journal of Control**, vol.72, No.4, pp. 321-331, 1999.
- [R.31] Ferrara A., Giacomini L. *Application of a second order VSC to nonlinear systems in multi-input parametric-pure-feedback forms*, **Kibernetika**, vol. 36, No. 1, pp. 63-75, 2000.
- [R.32] Ferrara A., Giacomini L. *Control of a class of mechanical systems with uncertainties via a constructive adaptive/second order VSC approach*, (Regular) **ASME Journal of Dynamic Systems, Measurement and Control**, vol. 122, No. 1, pp. 33-39, 2000.
- [R.33] Bartolini G., Ferrara A., Giacomini L., Usai E. *Properties of a combined adaptive/second order sliding mode control algorithm for some classes of uncertain nonlinear systems*, **IEEE Transaction on Automatic Control**, Volume 45 (7), pp. 1334-1341, 2000.
- [R.34] Bartolini G., Ferrara A., Usai E., V.I. Utkin *On multi-input chattering-free second order sliding mode control*, **IEEE Transaction on Automatic Control**, Volume 45 (9), pp. 1711-1717, 2000.
- [R.35] Ferrara A., Giacomini L. *First and second order sliding mode control for a class of single-input nonlinear systems with non-matched uncertainties*, **IMA Journal of Mathematical Control and Information**, Volume 18, (2), pp. 253-268, 2001.
- [R.36] Bartolini G., Ferrara A., Punta E. *Multi-input Second-order Sliding-mode Hybrid Control of Constrained Manipulators*, **Dynamics & Control**, Volume10 (3), pp. 277-296, 2000.
- [R.37] Ferrara A., Giacomini L. *On modular backstepping design with second order sliding modes*, **Automatica**, Volume 37 (1), pp. 129-135, 2001.
- [R.38] Scarratt J. C., Zinober A. S. I., Mills R. E., Rios-Bolivar M., Ferrara A., Giacomini L., *Dynamical adaptive first and second-order sliding backstepping control of nonlinear nontriangular uncertain systems*, (Regular) **ASME Journal of Dynamic Systems, Measurement and Control**, vol. 122, No. 4, pp. 746-752, 2000.
- [R.39] Bartolini G, Ferrara A, Pisano A, Usai E., *On the convergence properties of a 2-sliding control algorithm for non linear uncertain systems*, **International Journal of Control**, vol.74, No.7, pp. 718-731, 2001.

- [R.40] Ferrara A, Giacomini L., *Output feedback second order sliding mode control for a class of nonlinear systems with non matched uncertainties*, (Regular) **ASME Journal of Dynamic Systems, Measurement and Control**, vol. 123, No. 3, pp. 317-323, 2001.
- [R.41] Ferrara A., Magnani L., Scattolini R., *A switching scheme for mixed PZT-based/jet thrusters control of a large flexible structure*, **ASME Journal of Dynamic Systems, Measurement and Control**, vol. 123, No. 4, pp. 722-727, 2001.
- [R.42] Ferrara A., Magnani L., Scattolini R., *A globally stabilizing hybrid variable structure control strategy*, **IEEE Transaction on Automatic Control**, Vol. 47, no. 8, pp. 1334-1337, 2002.
- [R.43] Ferrara A., Utkin V. I. *Sliding mode optimization in dynamic LTI systems*. (Regular) **Journal of Optimization Theory and Applications**, vol. 115, no. 3, December 2002.
- [R.44] De Lotto R., Ferrara A., *A transportation network model as a tool to solve urban planning location problems*, **Mathematical and Computer Modelling of Dynamical Systems**, Volume 8, Issue 3, pp. 313-332, 2002.
- [R.45] Ferrara A., Giacomini L., *Control of mechanical systems with flexibility via a multi-input VS/backstepping designs*, **International Journal of Systems Science**, Volume 33, Number 8, pp. 655 - 668, 2002.
- [R.46] Bartolini G., Ferrara A., Giacomini L., *A switching controller for systems with hard uncertainties*, (Regular) **IEEE Transactions on Circuit and systems, Part I**, Regular Papers, Volume: 50 ,Issue: 8, Pages:984 – 990, Aug. 2003.
- [R.47] Ferrara A., Pisu P., *Minimum sensor second order sliding longitudinal control of passenger vehicles*, (Regular) **IEEE Transactions on Intelligent Transportation Systems**, Volume: 5 , Issue: 1, Pages: 20 – 32, March 2004.
- [R.48] Ferrara A., *A variable structure convex programming based control approach for a class of uncertain linear systems*, **Systems and Control Letters**, Volume 54, Pages 529-538, Giugno 2005.
- [R.49] Ferrara A., Paderno J., *Application of switching control for automatic pre-crash collision avoidance in cars*, **Nonlinear Dynamics**, Volume 46, Pages 307-321, Giugno 2006.
- [R.50] De Nicolao G., Ferrara A., Giacomini L., (Regular) *On board sensor-based collision risk assessment to improve pedestrians' safety*, **IEEE Transaction on Vehicular Technology**, Volume 56, [Issue 5](#), Part 1, Sept. 2007 Pages 2405 - 2413 (doi: 10.1109/TVT.2007.899209).
- [R.51] Ferrara A., Vecchio C., *Collision avoidance strategies and coordinated control of passenger vehicles*, **Nonlinear Dynamics**. Vol. 49, No. 4, Sept 2007, pages 443-577.
- [R.52] Ferrara A., Magnani L., *Motion Control of Rigid Robot Manipulators via First and Second Order Sliding Modes*, **Journal of Intelligent and Robotic Systems**, Vol. 48, Pages 23-36, 2007.
- [R.53] Ferrara A., Giacomini L., Vecchio C. *Control of nonholonomic systems with uncertainties via second order sliding modes*, **International Journal of Robust and Nonlinear Control, Published Online**: 16 Aprile 2007 (doi: 10.1002/rnc.1202), Volume 18, Issue 4-5, Pages 515-528, 2008.
- [R.54] Aurora C., Ferrara A., *A Sliding Mode Observer for Sensorless Induction Motor Speed Regulation with Uncertain Load Torque*, **International Journal of Systems Science**, Volume 38, Issue 11, 913 - 929, 2007 (doi:10.1080/00207720701620043).
- [R.55] Ferrara A., Scattolini R., *Gain Reduction in Switched Sliding Mode Control*, **IMA Journal of Mathematical Control and Information**, Volume 25, Issue 1, 23-36, 2008 (doi: 10.1093/imamci/dnm004).

- [R.56] Ferrara A., Vecchio C., Second order sliding mode control of a platoon of vehicles, **Int. Journal of Modelling, Identification and Control**, Volume 3, No 3, 2008.
- [R.57] Biancardi A., De Lotto R., Ferrara A., Urban services localization and optimal traffic distribution: a users oriented system, **ASCE Journal of Urban Planning and Development**, Vol. 134, No. 1, Pages 53-57, 2008.
- [R.58] Ferrara A., Lombardi C., Interaction Control of Robotic Manipulators Via Second Order Sliding Modes, **International Journal of Adaptive Control and Signal Processing**, Vol. 21, Pages 708-730, No. 8-9, 2007.
- [R.59] Ferrara A., Discussion on “An Adaptive Variable Structure Control Law for Sensorless Induction Motors”, **European Journal of Control**, Vol. 13/4, Pages 393-397 (doi:10.3166/ejc.13.393-397), 2007.
- [R.60] Capisani L., Ferrara A., Magnani L., Design and experimental validation of a second order sliding mode motion controller for robot manipulators, **International Journal of Control**, Volume 82 Issue 2, pp. 365-377, 2008 (DOI: 10.1080/00207170802112591).
- [R.61] Ferrara A., Rubagotti M., Second order sliding mode control of a mobile robot based on a harmonic potential field, **IET Control Theory & Applications**, Volume 2, Numero 9, pp. 807- 818, 2008.
- [R.62] Canale M., Fagiano L., Ferrara A., Vecchio C., Vehicle Yaw Control via Second Order Sliding Mode Technique, **IEEE Transactions on Industrial Electronics**, Volume 55, numero 11, pp. 3908-3916, 2008.
- [R.63] Canale M., Fagiano L., Ferrara A., Vecchio C., Comparing Internal Model Control and Sliding Mode Approaches for Vehicle Yaw Control, **IEEE Transactions on Intelligent Transportation Systems**, (Regular), Volume 10, numero 1, pp. 31 - 41, 2009.
- [R.64] Ferrara A., Rubagotti M., A Sub-Optimal Second Order Sliding Mode Controller for Systems with Saturating Actuators, **IEEE Transactions on Automatic Control**, Volume 54, numero 5, pp. 1082-1087, 2009.
- [R.65] Brambilla D., L. M. Capisani, Ferrara A., and Pisu P., Fault Detection for Robot Manipulators via Second Order Sliding Modes, **IEEE Transactions on Industrial Electronics**, (Regular), Volume 55, numero 11, pp. 3954 – 3963, 2008.
- [R.66] Ferrara A., Vecchio C., Second order sliding mode control of vehicles with distributed collision avoidance capabilities, **Mechatronics**, Volume 19, numero 4, pp. 471-477, June 2009.
- [R.67] Dinuzzo F., Ferrara A., Higher Order Sliding Mode controllers with optimal reaching, **IEEE Transactions on Automatic Control**, (Regular), Volume 54, numero 9, pp. 2126 – 2136, Sept. 2009.
- [R.68] Ferrara A., Tanelli M., Vecchio C., Traction Control for Ride-by-Wire Sport Motorcycles: a Second Order Sliding Mode Approach, **IEEE Transactions on Industrial Electronics**, (Regular), Volume 56, numero 9, pp. 3347-3356, September 2009. (Digital Object Identifier: [10.1109/TIE.2009.2018430](https://doi.org/10.1109/TIE.2009.2018430))
- [R.69] Dinuzzo F., Ferrara A., Finite-time output stabilization with second order sliding modes, **Automatica**, 45(9):2169-2171, 2009.
- [R.70] Calanca A., Capisani L., Ferrara A., Magnani L., MIMO closed-loop identification of an industrial robot, **IEEE Transactions on Control Systems Technology**, Volume: 19, NO. 5, September 2011, Page(s): 1214-1224. **Digital Object Identifier:** [10.1109/TCST.2010.2077294](https://doi.org/10.1109/TCST.2010.2077294).
- [R.71] Capisani L., Facchinetti T., Ferrara A., Real-time networked control of an industrial robot manipulator via discrete-time second order sliding modes, **International Journal of Control**, Vol. 83, No. 8, pp. 1595-1611, Aug., 2010.

- [R.72] Amodeo M., Ferrara A., Terzaghi R., Vecchio C., Wheel Slip Control via Second Order Sliding Modes Generation, **IEEE Transactions on Intelligent Transportation Systems**, (Regular), Volume: 11 , NR. 1, 2010 , Page(s): 122 – 131, Digital Object Identifier: [10.1109/TITS.2009.2035438](https://doi.org/10.1109/TITS.2009.2035438).
- [R.73] Rubagotti M., Raimondo D.M., Ferrara A., Magni L., Robust Model Predictive Control with Integral Sliding Mode in Continuous-time Sampled-data Nonlinear Systems, **IEEE Transactions on Automatic Control**, (Regular), Vol. 56, Issue 3, 556-570, 2011.
- [R.74] Rubagotti M., Castaños F., Ferrara A., Fridman L. M., Integral Sliding Mode Control for Nonlinear Systems with Matched and Unmatched Perturbations, **IEEE Transactions on Automatic Control**, Vol. 56, No. 11, 2699-2704, November 2011.
- [R.75] Capisani L., Ferrara A., Trajectory Planning and Second Order Sliding Mode Motion/Interaction Control for Robot Manipulators in Unknown Environments, **IEEE Transactions on Industrial Electronics**, (Regular), Year: 2012, Volume: 59, Issue: 8, Pages: 3189 - 3198, DOI: [10.1109/TIE.2011.2160510](https://doi.org/10.1109/TIE.2011.2160510)
- [R.76] Rubagotti M., Carminati M., Clemente G., Grasseti R., Ferrara A., Modeling and Control of an Airbrake Electro-Hydraulic Smart Actuator, **Asian Journal of Control**, Volume 14, Issue 5, pages 1159–1170, September 2012 (DOI: [10.1002/asjc.411](https://doi.org/10.1002/asjc.411)).
- [R.77] Rubagotti M., Della Vedova M., Ferrara A., Time-optimal sliding mode control of a mobile robot in a dynamic environment, **IET Control Theory & Applications**, Volume: 5 , NR. 16, 2011 , Page(s): 1916- 1924, ISSN: 1751-8644, **Digital Object Identifier:** [10.1049/iet-cta.2010.0678](https://doi.org/10.1049/iet-cta.2010.0678)
- [R.78] Capisani L., Ferreira de Loza A., Ferrara A., Fridman L., Manipulators Fault Diagnosis via Higher Order Sliding Mode Observers, **IEEE Transactions on Industrial Electronics**, (Regular), Vol. 59, No. 10, 3979 - 3986, 2012 (**Digital Object Identifier:** [10.1109/TIE.2012.2189534](https://doi.org/10.1109/TIE.2012.2189534))
- [R.79] Michael Basin, Pablo Rodriguez-Ramirez, Antonella Ferrara, Dario Calderon-Alvarez, Sliding mode optimal control for linear systems, **Journal of the Franklin Institute** 05/2012; 349(4):1350–1363, 2012.
- [R.80] Tanelli M., Ferrara A., Wheel Slip Control of Road Vehicles via Switched Second Order Sliding Modes, **International Journal of Vehicle Design**, Vol 62, N0, 2/3/4, pp. 231- 253 , 2013 (<http://dx.doi.org/10.1504/IJVD.2013.052704>)
- [R.81] Tanelli M., Ferrara A., Switched Second-Order Sliding Mode Control with Partial Information: Theory and Application, **Asian Journal of Control**, Volume 15, Issue 1, pages 20–30, January 2013 (DOI: [10.1002/asjc.540](https://doi.org/10.1002/asjc.540)).
- [R.82] Capisani L., Facchinetti T., Ferrara A., Martinelli A., Obstacle Modelling Oriented to Safe Motion Planning and Control for Planar Rigid Robot Manipulators, **Journal of Intelligent and Robotic Systems**, Volume 71, Issue 2, pp. 159–178, August 2013 (**Digital Object Identifier:** [10.1007/s10846-012-9775-5](https://doi.org/10.1007/s10846-012-9775-5)).
- [R.83] Tanelli M., Ferrara A., Enhancing Robustness and Performance via Switched Second Order Sliding Mode Control, **IEEE Transactions on Automatic Control**, (Regular), Vol. 58, No. 4, 962-974, April 2013 ([10.1109/TAC.2012.2225553](https://doi.org/10.1109/TAC.2012.2225553))
- [R.84] G. Motta, A. Ferrara, D. Sacco, L. You, G. Cugola, “Integrated Mobility: A Research in Progress”, **Journal of Software Engineering and Applications**, 2013, 6, Pages 97-101.
- [R.85] Gian Paolo Incremona, Gianluca De Felici, Antonella Ferrara and Ezio Bassi, A Supervisory Sliding Mode Control Approach for Cooperative Robotic Systems of Systems, **IEEE Systems Journal**, vol. 9, no. 1, pp. 263-272, March 2015 ([10.1109/JSYST.2013.2286509](https://doi.org/10.1109/JSYST.2013.2286509))
- [R.86] Qudrat Khan, Aamer Iqbal Bhatti and Antonella Ferrara, Dynamic Sliding Mode Control Design based on an Integral Manifold for Nonlinear Uncertain Systems, **Journal of Nonlinear Dynamics**, Volume 2014 (2014), Article ID 489364, 10 pages, <http://dx.doi.org/10.1155/2014/489364>

- [R.87] Antonella Ferrara, Alberto Nai Oleari, Simona Sacone and Silvia Siri, Freeway Networks as Systems of Systems: A Distributed Model Predictive Control Scheme, **IEEE Systems Journal**, Vol. 9, nr. 1, pp. 312- 323, March 2015, doi. [10.1109/SYSoSE.2012.6384191](https://doi.org/10.1109/SYSoSE.2012.6384191)
- [R.88] Goggia, T.; Sorniotti, A; De Novellis, L.; Ferrara, A; Gruber, P.; Theunissen, J.; Steenbeke, D.; Knauder, B.; Zehetner, J., "Integral Sliding Mode for the Torque-Vectoring Control of Fully Electric Vehicles: Theoretical Design and Experimental Assessment," **IEEE Transactions on Vehicular Technology**, Volume 64, Issue 5, Pages 1701-1715, May 2015, DOI: 10.1109/TVT.2014.23394
- [R.89] Raimondo, D. M., Rubagotti, M., Jones, C. N., Magni, L., Ferrara, A., Morari, M., "Multirate sliding mode disturbance compensation for model predictive control", **International Journal of Robust and Nonlinear Control**, Volume 25, Number 16, November 2015, pp. 2984-3003(20), (<http://dx.doi.org/10.1002/rnc.3244>).
- [R.90] A. Ferrara and G. P. Incremona, "Design of an Integral Suboptimal Second-Order Sliding Mode Controller for the Robust Motion Control of Robot Manipulators", **IEEE Transactions on Control Systems Technology**, Volume 23, Issue 6, Pages 2316-2325, Nov. 2015, DOI: [10.1109/TCST.2015.2420624](https://doi.org/10.1109/TCST.2015.2420624).
- [R.91] Antonella Ferrara, Simona Sacone and Silvia Siri, "Event-triggered model predictive schemes for freeway traffic control", **Transportation Research Part C: Emerging Technologies**, Volume 58, Part C, September 2015, Pages 554–567, DOI: 10.1016/j.trc.2015.01.020.
- [R.92] Goggia, T., Sorniotti, A., Ferrara, A., De Novellis, L., Pennycott, A., Gruber, P., "Integral Sliding Mode for the Yaw Moment Control of Four-Wheel-Drive Fully Electric Vehicles with In-Wheel Motors", **International Journal of Powertrains**, Volume 4, Issue 4, 2015.
- [R.93] Antonella Ferrara, Simona Sacone and Silvia Siri, "Design of networked freeway traffic controllers based on event-triggered control concepts", **International Journal of Robust and Nonlinear Control**, Volume 26, Issue 6, April 2016, Pages 1162–1183, DOI: 10.1002/rnc.3386.
- [R.94] Cucuzzella, M., Incremona, G.P. Ferrara, A., "Design of Robust Higher Order Sliding Mode Control for Microgrids", **IEEE Journal on Emerging and Selected Topics in Circuits and Systems**, Volume 5, Issue 3, Pages 393-401, Sept. 2015, DOI: 10.1109/JETCAS.2015.2450411.
- [R.95] Pisano A., Tanelli M., Ferrara A. "Switched/time-based adaptation for second-order sliding mode control", **Automatica**, Volume 64, Issue C, Pages 126-132, February 2016.
- [R.96] Incremona, G.P. Ferrara, "Adaptive Model-Based Event-Triggered Sliding Mode Control", **International Journal of Adaptive Control and Signal Processing**, Volume 30, Issue 8-10, August-October 2016, Pages 1298–1316. DOI: 10.1002/acs.2665.
- [R.97] Incremona, G.P., Cucuzzella, M., Ferrara A., "Adaptive Suboptimal Second Order Sliding Mode Control for Microgrids", **International Journal of Control**, Volume 89, Issue 9, Pages 1849-1867, 2016, DOI: 10.1080/00207179.2016.1138241.
- [R.98] Antonella Ferrara, Simona Sacone and Silvia Siri, Editorial of the Special Issue on "Recent Trends in Traffic Modelling and Control", **International Journal of Robust and Nonlinear Control**, Volume 26, Issue 6, April 2016, Pages 1159–116, DOI: 10.1002/rnc.3533.
- [R.99] Gian Paolo Incremona; Matteo Rubagotti; Antonella Ferrara, "Sliding Mode Control of Constrained Nonlinear Systems", **IEEE Transactions on Automatic Control**, Volume: 62, Issue 6, Pages 2965-2972, June 2017, [10.1109/TAC.2016.2605043](https://doi.org/10.1109/TAC.2016.2605043).
- [R.100] G. P. Incremona, A. Ferrara, and L. Magni, "Asynchronous networked MPC with ISM for uncertain nonlinear systems", **IEEE Transactions on Automatic Control**, Volume: 62, Issue 9 Pages 4305-4317, Sept. 2017. DOI: 10.1109/TAC.2017.2653760.

- [R.101] G. P. Incremona, A. Ferrara and L. Magni, "MPC for Robot Manipulators with Integral Sliding Modes Generation", **IEEE/ASME Transactions on Mechatronics**, Volume: 22, Issue 3, Pages 1299-1307, June 2017, DOI: [10.1109/TMECH.2017.2674701](https://doi.org/10.1109/TMECH.2017.2674701)
- [R.102] M. Cucuzzella, G. P. Incremona, A. Ferrara, "Decentralized Sliding Mode Control of Islanded AC Microgrids with Arbitrary Topology", **IEEE Transactions on Industrial Electronics**, Volume: 64, Issue 8, Pages 6706-6713, Aug. 2017. DOI: [10.1109/TIE.2017.2694346](https://doi.org/10.1109/TIE.2017.2694346)
- [R.103] G. P. Incremona, M. Cucuzzella and A. Ferrara, "Second Order Sliding Mode Control for Nonlinear Affine Systems with Quantized Uncertainty", **Automatica**, Volume 86 , Pages 46-52, December 2017.
- [R.104] G. Rinaldi, M. Cucuzzella, A. Ferrara, "Third Order Sliding Mode Observer-Based Approach for Distributed Optimal Load Frequency Control", **IEEE Control Systems Letters (L-CSS)**, Volume 1, Issue 2, Pages 215-220, Oct. 2017.
- [R.105] P. P. Menon, C. Edwards, C. Mellucci, A. Ferrara A., "Second Order Sliding Mode Observers for Fault Reconstruction in Power Networks", **IET Control Theory and Applications**, Available online: 07 August 2017, DOI:[10.1049/iet-cta.2017.0249](https://doi.org/10.1049/iet-cta.2017.0249).
- [R.106] M. Cucuzzella and A. Ferrara, "Practical Second Order Sliding Modes in Single-Loop Networked Control of Nonlinear Systems", **Automatica**, Volume 89, March 2018, Pages 235-240. DOI: [10.1016/j.automatica.2017.11.034](https://doi.org/10.1016/j.automatica.2017.11.034).
- [R.107] M. Cucuzzella, R. Lazzari, S. Trip, S. Rosti, C. Sandroni, A. Ferrara,, "Sliding mode voltage control of boost converters in DC microgrids", **Control Engineering Practice**, Volume 73, April 2018 , Pages 161-170. DOI: [10.1016/j.conengprac.2018.01.009](https://doi.org/10.1016/j.conengprac.2018.01.009).
- [R.108] A. Ferrara, G. P. Incremona, E. Regolin, "Optimization Based Adaptive Sliding Mode Control with Application to Vehicle Dynamics Control", **Journal of Robust and Nonlinear Control**, to appear.
- [R.109] Rinaldi G., Cucuzzella M., Ferrara A., "Sliding Mode Observers for a Network of Thermal and Hydroelectric Power Plants", **Automatica**, provisionally accepted.

CHAPTERS IN BOOKS

- [L.1] Casalino G., Di Febbraro A., Ferrara A., Minciardi R., Nicoletti D. *Underground railroad modelling and control: discrete-event approach*. In: "Concise Encyclopedia of Traffic and Transportation Systems" (M. Papageorgiou Ed.), Pergamon Press, Oxford, pp. 585-588, 1991.
- [L.2] Casalino G., Ferrara A., Minciardi R. *Development and theoretical analysis of direct variational adaptive control schemes*. In: "New Trends in Systems Theory" (G. Conte, A.M. Perdon, B. Wyman Eds.), Birkhauser, Boston, pp. 186-193, 1991.
- [L.3] Bartolini G., Ferrara A. *A simplified direct approach to the problem of adaptive pole assignment*. In: "New Trends in Systems Theory" (G. Conte, A.M. Perdon, B. Wyman Eds.), Birkhauser, Boston, pp. 89-96, 1991.
- [L.4] Bartolini G., Ferrara A. *Model-following VSC using an input-output approach*. In: "Variable Structure and Lyapunov Control" (A. S. I. Zinober Ed.), Springer-Verlag, London, pp. 289-312, 1994.
- [L.5] Bartolini G., Ferrara A. *Multivariable fuzzy sliding mode control by using a simplex of control vectors*. In: "Fuzzy Reasoning in Information, Decision and Control Systems" (S. G. Tzafestas, A. N. Venetsanopoulos Eds.), Kluwer Academic Publishers, The Netherlands, pp. 307-328, 1994.

- [L.6] Casalino G., Ferrara A., Minciardi R., Parisini T. *Implicit model techniques and their application to LQ adaptive control*. In: "Digital Design and Control Systems Techniques and Applications" (C. T. Leondes Ed.), Academic Press, California, 1996.
- [L.7] Bartolini G., Ferrara A., Zolezzi T. *Nonlinear tracking via discontinuous feedback under uncertainty*. In: "Robust Control Via Variable Structure and Lyapunov Techniques" (F. Garofalo, L. Glielmo Eds.), Springer-Verlag, London, 1996.
- [L.8] Bartolini G., Ferrara A., Usai E., V.I. Utkin, "Second order chattering-free sliding mode for some classes of multi-input uncertain nonlinear systems", In: "Theory and Practice of Control and Systems", (A. Tornambè, G. Conte, A. M. Perdon Eds.), World Scientific Publishing,, London, pp. 337-342, 1998.
- [L.9] Ferrara A., Giacomini L., "Application of a second order VSC to nonlinear systems in multi-input parametric-pure-feedback form", In: "Theory and Practice of Control and Systems", (A. Tornambè, G. Conte, A. M. Perdon Eds.), World Scientific Publishing,, London, pp. 367-372, 1998.
- [L.10] Bartolini G., Ferrara A., Levant A., Usai E.. "On second order sliding mode controllers", In: "Variable Structure Systems, Sliding Mode and Nonlinear Control", (K. D. Young and U. Ozguner Eds.), Lecture Notes in Control and Information Series, LNCIS 247, ISBN I-85233-197-6, Springer-Verlag, London, pp. 329-350, 1999.
- [L.11] Ferrara A., Vecchio C., "Controlling A Platoon Of Vehicles With Distributed Collision Avoidance Capabilities", in "INFORMATION CONTROL PROBLEMS IN MANUFACTURING 2006" (Edited by A. Dolgui, G. Morel, C. Pereira), ISBN: 978-0-08-044654-7, ISBN10: 0-08-044654-X, Elsevier Ltd, Oxford, UK, pp. 215-220, 2006.
- [L.12] Calanca A., L. M. Capisani, A. Ferrara, and L. Magnani, "An Inverse Dynamics-Based Discrete-Time Sliding Mode Controller for Robot Manipulators", Robot Motion and Control 2007, Krzysztof Kozlowski ed., (LNCiS) Lecture Notes in Control and Information Sciences n. 360, chapter 12, pp 137-146, Springer Verlag London Limited, ISBN: 978-1-84628-973-6, 2007
- [L.13] Ferrara A., Magnani L., "Sliding Mode Motion Control Strategies for Rigid Robot Manipulators", in "Model-Based Reasoning in Science, Technology, and Medicine", Magnani L. and L. Ping (Eds.), Studies in Computational Intelligence, Vol. 64, Springer Verlag, Berlin, pp. 399-412, 2007.
- [L.14] Ferrara A., Giacomini L., Vecchio C., "Stabilization of Nonholonomic Uncertain Systems via Adaptive Second Order Sliding Mode Control", In Modern Sliding Mode Control Theory (Edited by G. Bartolini, L. Fridman, A. Pisano and E. Usai), Lecture Notes in Control and Information Sciences, Springer Verlag, Heidelberg, Volume 375, doi 10.1007/978-3-540-79016-7, ISSN 0170-8643, ISBN 978-3-540-79015-0, pp. 223-245, 2008.
- [L.15] Bassi E., Benzi F., Capisani L. M., Cuppone D., Ferrara A., "Characterization of the Dynamical Model of a Force Sensor for Robot Manipulators", Robot Motion and Control 2009, Krzysztof Kozlowski ed., (LNCiS) Lecture Notes in Control and Information Sciences n. 396, chapter 22, pp 243-253, Springer Verlag Berlin Heidelberg, 2009.
- [L.16] Ferrara A., Capisani L. M., Second order sliding modes to control and supervise industrial robot manipulators. In "Sliding Modes after the first Decade of the 21st Century", Edited by L. Fridman, J. Moreno and R. Iriarte (LNCiS) Lecture Notes in Control and Information Sciences n. 412, chapter 20, pp. 541- 567, Springer-Verlag Berlin Heidelberg, 2011.
- [L.17] A. Ferrara and G. P. Incremona, Networked Model-Based Event-Triggered Sliding Mode Control. In "Recent Trends in Sliding Mode Control", eds: L. Fridman, J. P. Barbot, F. Plestan, IET, (4.3): 317-337, 2016.

- [L.18] A. Ferrara and G. P. Incremona, Sliding Modes Control in Vehicle Longitudinal Dynamics Control. In: "Advances in Variable Structure Systems and Sliding Mode Control - Theory and Applications", eds: S. Li , X. Yu, L. Fridman, Z. Man, Series: Studies in Systems, Decision and Control, Springer, 2017.
- [L.19] E. Regolin, G.P. Incremona and A. Ferrara, Longitudinal Vehicle Dynamics Control via Sliding Modes Generation. In A. Ferrara, ed., "Sliding Mode Control of Vehicle Dynamics", IET, 2017.
- [L.20] E. Regolin, D. Savitzky, V. Ivanov, K. Augsborg and A. Ferrara, Lateral Vehicle Dynamics Control via Sliding Modes Generation. In A. Ferrara, ed., "Sliding Mode Control of Vehicle Dynamics", IET, 2017.
- [L.21] M. Tanelli, M. Corno and A. Ferrara, Sliding Mode Control of Traction and Braking in Two-wheeled vehicles. In A. Ferrara, ed., "Sliding Mode Control of Vehicle Dynamics", IET, 2017.
- [L.22] J. Davila, L. Fridman and A. Ferrara, Introduction to Sliding Mode Control. In A. Ferrara, ed., "Sliding Mode Control of Vehicle Dynamics", IET, 2017.
- [L.23] A. Ferrara, M. Cucuzzella, "Event-Triggered Sliding Mode Control Strategies for a Class of Nonlinear Uncertain Systems", in Control Theory: New Perspectives and Applications, in Honor of Alexander S. Poznyak, Julio B Clempner and Wen Yu, Editors, Springer, 2017.

PAPERS IN PROCEEDINGS

- [C.1] Casalino G., Ferrara A., Minciardi R. *On stability analysis of equilibrium points of variational adaptive control schemes*. Proc."IFAC Symposium on Adaptive Systems in Control and Signal Processing", Glasgow, Scotland, 1989.
- [C.2] Di Febbraro A., Ferrara A. *Performance analysis of underground railway networks through continuous-time and discrete-event simulation*. Proc."SCS 3rd European Simulation Congress ESC'89", Edinburgh, Scotland, 1989.
- [C.3] Casalino G., Di Febbraro A., Ferrara A., Minciardi R., Nicoletti D. *Discrete-event simulation and control strategies for underground railways*. Proc."IFAC-IFIP-IFORS Symposium on Control, Computers and Communications in Transportation CCCT'89", Paris, France, 1989.
- [C.4] Bartolini G., Ferrara A. *Design of a stable discrete adaptive pole assignment control scheme*. Proc."IEEE International Conference on Systems Engineering", Pittsburgh, Pennsylvania, 1990.
- [C.5] Ferrara A., Minciardi R. *Resource constrained scheduling via Simulated Annealing: a discrete-event simulation approach*. Proc."SCS European Simulation Symposium ESS'90", Ghent, Belgium, 1990.
- [C.6] Bartolini G., Ferrara A. *Extension to nonminimum phase systems of adaptive pole assignment control by means of robustness techniques*. Proc."29th IEEE Conference on Decision and Control CDC'90", Honolulu, Hawaii, 1990.
- [C.7] Bartolini G., Ferrara A. *A direct adaptive pole assignment control scheme for non necessarily stably invertible discrete time plants*. Proc."IFAC International Symposium on Intelligent Tuning and Adaptive Control ITAC '91", Singapore, 1991.
- [C.8] Ferrara A., Minciardi R., Paolucci M. *Earliness/tardiness optimization in resource constrained scheduling models via simulated annealing techniques*. Proc."SCS European Simulation Multiconference ESM'91", Copenhagen, Denmark, 1991.
- [C.9] Bartolini G., Ferrara A. *Adaptive tracking by means of a reduced-order structure*. Proc."First European Control Conference ECC '91", Grenoble, France, 1991.

- [C.10] Casalino G., Ferrara A., Minciardi R., Parisini T. *Semi-Infinite horizon LQ optimal synthesis based on a single implicit prediction model identification*. Proc. "9th IFAC/IFORS Symposium on Identification and System Parameter Estimation", Budapest, Hungary, 1991.
- [C.11] Bartolini G., Ferrara A. *A reduced-order adaptive control scheme for plants with inaccessible states*. Proc."IEEE International Conference on Systems Engineering", Dayton, Ohio, 1991.
- [C.12] Bartolini G., Ferrara A. *On reduced-order model reference adaptive control*. Proc."IFAC International Symposium on Design Methods of Control Systems", Zurigo, Switzerland, 1991.
- [C.13] Bartolini G., Ferrara A., Garziano G., Morelli C. *Thickness, width and temperature control in rolling mills: a simulative approach*. Proc."SCS European Simulation Multiconference ESM'92", York, United Kingdom, 1992.
- [C.14] Bartolini G., Ferrara A., Utkin V. I. *Adaptive sliding mode control in discrete-time systems*. Proc."Fourth IFAC International Symposium on Adaptive Systems in Control and Signal Processing", Grenoble, France, 1992.
- [C.15] Bartolini G., Ferrara A. *Adaptive control of nonminimum phase plants via a variable structure approach*. Proc."IMA International Conference on Control: Modelling, Computation, Information", Manchester, United Kingdom, 1992.
- [C.16] Bartolini G., Ferrara A. *A simplified discontinuous control scheme for uncertain linear systems: an input/output approach*. Proc."IEEE International Workshop on Variable Structure and Lyapunov Control of Uncertain Dynamical Systems", Sheffield, United Kingdom, 1992.
- [C.17] Bartolini G., Ferrara A. *Pole assignment control of nonminimum phase systems: a combined adaptive control - variable structure approach*. Proc."IEEE International Conference on Systems Engineering", Kobe, Japan, 1992.
- [C.18] Bartolini G., Ferrara A. *Discontinuous and adaptive control of non necessarily minimum phase linear systems*. Proc."IEEE International Conference on Industrial Electronics, Control and Instrumentation IECON'92", San Diego, California, 1992.
- [C.19] Bartolini G., Ferrara A., Utkin V. I. *Design of discrete-time adaptive sliding mode control*. Proc."31st IEEE Conference on Decision and Control CDC", Tucson, Arizona, pp. 2387-2391, 1992.
- [C.20] Bartolini G., Ferrara A., *Discrete-time adaptive control of linear plants with uncertain time delay*. Proc."31st IEEE Conference on Decision and Control CDC'92", Tucson, Arizona, 1992.
- [C.21] Bartolini G., Ferrara A., Stotsky A. A. *Stability and exponential stability of a simplified adaptive control scheme*. Proc."Second European Control Conference ECC '93", Groningen, The Netherlands, 1993.
- [C.22] Bartolini G., Ferrara A. *Design of discrete-time adaptive control in presence of uncertain time delay*. Proc."12th IFAC World Congress", Vol. 1, Sydney, Australia, 1993.
- [C.23] Bartolini G., Ferrara A., Utkin V. I. *On robust adaptive control of MIMO linear plants using discrete-time sliding modes*. (Invited) Proc."12th IFAC World Congress", Vol. 10, Sydney, Australia, 1993.
- [C.24] Di Febbraro A., Ferrara A., Sacone S. *Modeling and simulation of freeway systems*, Proc."SCS European Simulation Symposium ESS'93", Delft, The Netherlands, 1993.
- [C.25] Ferrara A., Punta E. *Fuzzy multivariable sliding mode control of the postural stability of a planar byped*. Proc."BIAS 1993", Milano, Italy, 1993.
- [C.26] Bartolini G., Ferrara A. *Discontinuous control of uncertain nonminimum phase plants*. Proc."32nd IEEE Conference on Decision and Control CDC'93", San Antonio, Texas, 1993.

- [C.27] Ferrara A. *Discontinuous/adaptive pole assignment control of LTI uncertain plants*. (Invited) Proc."32nd IEEE Conference on Decision and Control CDC'93", San Antonio, Texas, 1993.
- [C.28] Ferrara A. *Fuzzy sliding mode control of the step of a biped robot*, Proc."SCS European Simulation Multiconference ESM'94", Barcellona, Spain, 1994.
- [C.29] Bartolini G. , Ferrara A. , Savkin A. V. *Robust reduced order adaptive control of plants with unmodelled dynamics*. Proc."First Asian Control Conference ASCC'94", Tokyo, Japan, 1994.
- [C.30] Di Febbraro A., Ferrara A., Recagno V. *An hybrid model for multiclass freeway traffic*. Proc."7th IFAC/IFORS Symposium on Transportation Systems: Theory and Application of Advanced Technology", Tianjin, China, 1994.
- [C.31] Ortega R. , Bartolini G., Ferrara A. *On zero relocation in adaptive control of plants with structured uncertainties*. Proc."IEEE International Conference on Industrial Electronics, Control and Instrumentation IECON'94", Bologna, Italy, 1994.
- [C.32] Bartolini G., Ferrara A. *A combined VSS/MRAC approach to the control of uncertain nonminimum phase LTI plants*. Proc."IEEE Workshop on Robust Control via Variable Structure & Lyapunov Techniques", Benevento, Italy, 1994.
- [C.33] Bartolini G., Ferrara A. *A multivariable adaptive sliding mode approach to control the stability of a biped robot during a step*. Proc."IFAC Symposium on Robot Control SY.RO.CO.'94", Capri, Italy, 1994.
- [C.34] Volta E., Di Febbraro A., Ferrara A., Sacone S. *Behaviour analysis of multiclass highway systems*, Proc."First World Congress on Applications of Transport Telematics and Intelligent Vehicle-Highway Systems", Parigi, France, 1994.
- [C.35] Bartolini G., Ferrara A., Stotsky A. A. *Exponential stability of a simplified adaptive control scheme in presence of bounded disturbances*, Proc."33rd IEEE Conference on Decision and Control CDC'94", Lake Buena Vista, Florida, 1994.
- [C.36] Bartolini G., Ferrara A. *Model-following control of uncertain nonminimum phase LTI plants via sliding modes*, Proc."33rd IEEE Conference on Decision and Control CDC'94", Lake Buena Vista, Florida, 1994.
- [C.37] Bartolini G., Cannata G., Casalino G. Ferrara A. *A hierarchical control architecture for the control of underwater robots*. Proc."IFAC Workshop on Control Applications in Marine Systems CAMS'95", Trondheim, Norway, 1995.
- [C.38] Alessandri A., Di Febbraro A., Ferrara A. *A two-level approach for the control of freeways*. Proc."Applications of Advanced Technologies in Transportation Conference AATT", Capri, Italy, 1995.
- [C.36] Di Febbraro A., Ferrara A., Alessandri A. *A discrete event model for monitoring and controlling freeways*, Proc."SCS European Simulation Multiconference ESM'95", Praga, Czech Republic, 1995.
- [C.40] Bartolini G., Ferrara A., Savkin A. V. *On the use of the concept of robust strictly positive realness in reduced order adaptive control*, Proc."IFAC Symposium On Adaptive Systems in Control and Signal Processing ACASP'95", Budapest, Hungary , 1995.
- [C.41] Ferrara A., Gambarotta L., Caputo W., Cecchi M. *Vibration damping in elastic robotic structures via sliding modes*, Proc."IEEE International Conference on Intelligent Control and Instrumentation SICICI'95", Singapore, 1995.
- [C.42] Di Febbraro A., Ferrara A. *Modelling multiclass traffic in freeway systems*, Proc."IFAC/IFORS/IMACS Symposium on Large Scale Systems LSS'95", London, U.K., 1995.

- [C.43] Ferrara A. *On the use of the equivalent control concept in a VS/adaptive control scheme*. (Invited) Proc."European Control Conference ECC'95", Roma, Italy, 1995.
- [C.44] Bartolini G., Casalino G., Ferrara A., Cannata G., Veruggio G. M., Lane D. M., Sneddon J., O'Brien D. J., Davies J. B. C., Robinson G. C. *AMADEUS: advanced manipulator for deep underwater systems*. "Second MAST Days and EUROMAR Market", Sorrento, Italy, 1995.
- [C.45] Bartolini G., Ferrara A. *On multi-input sliding mode control of uncertain nonlinear systems*. Proc."IEEE 34th Conference on Decision and Control CDC'95", New Orleans, Louisiana, 1995.
- [C. 46] Alessandri A., Di Febbraro A., Ferrara A., Punta E. *An augmented state extended Kalman filter for traffic flow estimation*. Proc."World Automation Congress WAC'96", Montpellier, France, 1996.
- [C. 47] Di Febbraro A., Ferrara A., Sacone S. *On hybrid modelling of freeway networks*. Proc."World Automation Congress WAC'96", Montpellier, France, 1996 .
- [C. 48] Bartolini G., Ferrara A., Usai E. *Hybrid force position control of constrained manipulators by means of unchattering VSC*. Proc."World Automation Congress WAC'96", Montpellier, France, 1996.
- [C. 49] Bartolini G., Ferrara A., Usai E. *Sub-optimal sliding mode control of uncertain second order dynamical systems*. Proc."World Congress IFAC'96", San Francisco, California, 1996.
- [C. 50] Bartolini G., Caputo W., Cecchi M., Ferrara A., Fridman L. *Vibration damping in flexible fingers of an underwater robot hand via sliding modes*. Proc."World Congress IFAC'96", San Francisco, California, 1996.
- [C. 51] Bartolini G., Ferrara A., Stotsky A. A. *Bounded disturbances estimation and rejection in a direct/indirect adaptive control scheme*. (Invited) Proc."World Congress IFAC'96", San Francisco, California, 1996.
- [C. 52] Bartolini G., Ferrara A., Usai E. *Stabilization of uncertain second order systems with incomplete state measure via second order sliding modes*. (Invited) Proc."IEEE-SMC IMACS Multiconference on Computational Engineering in Systems Applications CESA'96", Lille, France, 1996.
- [C. 53] Di Febbraro A., Ferrara A., Sacone S. *Modelling and analysis of highway networks*. Proc."4th Meeting of the EURO Working Group on Transportation", Newcastle, UK, 1996.
- [C. 54] Bartolini G., Ferrara A., Usai E. *Finite time VSC for a class of uncertain systems*, Proc."IEEE/IFAC Workshop Variable Structure Systems VSS '96", Tokyo, Japan, 1996.
- [C. 55] Bartolini G., Ferrara A., Giacomini L., Usai E. *A combined backstepping/second order sliding mode approach to control a class of nonlinear systems*, Proc."IEEE/IFAC Workshop Variable Structure Systems VSS '96", Tokyo, Japan, 1996.
- [C. 56] Alessandri A., Di Febbraro A., Ferrara A., Punta E., Sacone S. *Freeway corridor control for the optimization of the traffic flow*, Proc. "IFAC Conference on Control of Industrial Systems", Belfort, France, 1997.
- [C. 57] Bartolini G., Ferrara A., Giacomini L., *Simplified adaptive control scheme based on a combined backstepping/second order sliding mode algorithm*. Proc."ACC'97 American Control Conference", Albuquerque, New Mexico, 1997.
- [C. 58] Di Febbraro A., Ferrara A., Sacone S. *Modelling and analysis of highway networks*. Proc."8th IFAC Symposium on Transportation Systems", Chania, Greece, 1997.
- [C.59] Bartolini G., Ferrara A., Usai E., Punta E. *Application of a second order sliding mode control to constrained manipulators*, Proc."ECC97 European Control Conference", Bruxelles, Belgium, 1997.
- [C.60] Alessandri A., Di Febbraro A., Ferrara A., Punta E. *Optimal control of freeways via speed signalling*, Proc."ECC97 European Control Conference", Bruxelles, Belgium, 1997.

- [C.61] Alessandri A., Di Febraro A., Ferrara A., Punta E. *Simulation analysis to design control strategies for freeway systems*, Proc."15th IMACS World Congress 1997 on Scientific Computation, Modelling and Applied Mathematics", Berlino, Germany, 1997.
- [C.62] Di Febraro A., Ferrara A., Sacone S. *Application of hybrid techniques to the modelling of interurban road networks*. Proc."ITSC '97 IEEE Conference on Intelligent Transportation Systems", Boston, Massachusetts, 1997.
- [C.63] Bartolini G., Ferrara A., Giacomini L., *A backstepping second order variable structure control design for a class of uncertain nonlinear systems*. Proc."IEEE 36th Conference on Decision and Control CDC'97", San Diego, California, 1997.
- [C.64] Bartolini G., Ferrara A., Usai E., Punta E. *A combined first and second order sliding mode approach for hybrid control of constrained manipulators*, Proc."IEEE 36th Conference on Decision and Control CDC'97", San Diego, California, 1997.
- [C.65] Bartolini G., Ferrara A., Giacomini L., *Stabilization of a class of uncertain nonlinear systems via second order sliding mode control*. Proc. "World Automation Congress WAC'98", Anchorage, Alaska, 1998.
- [C.66] Bartolini G., Ferrara A., Usai E., *Real-time output derivatives estimation by means of higher order sliding modes*. (Invited) Proc. "IEEE-SMC IMACS Multiconference on Computational Engineering in Systems Applications CESA'98", Nabeul-Hammamet , Tunisia, 1998.
- [C.67] Bartolini G., Ferrara A., Giacomini L., *A combined backstepping/variable structure control technique for multi-input systems*. "4th SIAM Conference on Control and its Applications", Jacksonville, Florida, 1998.
- [C.68] Bartolini G., Ferrara A., Giacomini L., *Modular backstepping design of an estimation-based sliding mode controller for uncertain nonlinear plants*. (Invited) Proc."American Control Conference ACC'98", Philadelphia, Pennsylvania , 1998.
- [C.69] Ferrara A., Giacomini L., *Application of a second order VSC to nonlinear systems in multi-input parametric-pure-feedback forms*, Proc."6th IEEE Conference on Control and Systems MED'98", Alghero, Italy, 1998.
- [C.70] Bartolini G., Ferrara A., Usai E , V.I. Utkin, *Second order chattering-free sliding mode for some classes of multi-input uncertain nonlinear systems*, Proc."6th IEEE Conference on Control and Systems MED'98", Alghero, Italy, 1998.
- [C.71] Ferrara A., Giacomini L., *Application of a Constructive Adaptive/Second Order VSC Approach to a Class of Mechanical Systems with Uncertainties*, Proc. "IEEE CCA 98", Trieste, Italy, 1998.
- [C.72] Bartolini G., Ferrara A., E. Usai, *On boundary layer dimension reduction in sliding mode control of SISO uncertain nonlinear systems*, Proc. "IEEE CCA 98", Trieste, Italy, 98.
- [C.73] Ferrara A., Giacomini L., *Application of a multi-input backstepping design with second order sliding mode s to control mechanical systems with flexibility* Proc."IEEE 37th Conference on Decision and Control CDC'98", Tampa, Florida, 1998.
- [C.74] Ferrara A., Giacomini L., *Second order sliding mode control for a class of multi-input nonlinear systems with non matched uncertainties*. Proc. "5th IEEE/IFAC Workshop Variable Structure Systems VSS 98", Longboat Key, Florida, 1998.
- [C.75] Bartolini G., A. Ferrara, A. Levant, E. Usai, *On second order sliding mode controllers*, Proceedings of the "5th IEEE/IFAC International Workshop on Variable Structure Systems-VSS'98", pp.209-216, Longboat Key, Florida, 1998

- [C.76] A.S.I. Zinober, J.C. Scarratt, A. Ferrara, L. Giacomini, e M. Rios-Bolivar, Dynamical adaptive first and second order sliding mode control of nonlinear non-triangular uncertain systems, Proc. "7th Mediterranean conference on Control and Automation", Haifa, Israel, 1999.
- [C.77] G. Bartolini, A. Ferrara e L. Giacomini, Comparison of hybrid and continuous sliding mode based control algorithms, Proc. "14th IFAC World Congress", Beijing, China, 1999.
- [C.78] M. Rios-Bolívar A. Ferrara, L. Giacomini, J.C. Scarratt e A.S.I. Zinober, A combined dab/smc algorithm for the control of nontriangular nonlinear uncertain systems, Proc. "European Control Conference 1999", Karlsruhe, Germany, 1999.
- [C.79] G. Bartolini, A. Ferrara e L. Giacomini, A hybrid sliding mode control for systems with hard uncertainties, Proc. "IEEE 38th Conference on Decision and Control CDC'99", Phoenix, Arizona, 1999.
- [C.80] Bartolini G., Ferrara A., E. Usai, On multi-input second order sliding mode control of nonlinear systems with uncertainties, (invited) Proc. "IEEE 38th Conference on Decision and Control CDC'99", Phoenix, Arizona, 1999.
- [C.81] De Lotto R., Ferrara A., Formulation and analysis of an analog static model for urban planning, Proc. "3rd IMACS MATHMOD", Vienna, 2000.
- [C.82] Bartolini G., Ferrara A., Pisu P., Longitudinal control design of passenger vehicles with second order sliding modes. Proc. "American Control Conference ACC 2000", Chicago, Illinois, USA, 2000.
- [C.83] Pisu P., Ferrara A., An observer-based second order sliding mode vehicle control strategy. Proc. "IEEE Intelligent Vehicles Symposium 2000", Dearborn, MI, 2000
- [C.84] Biancardi A., De Lotto R., Ferrara A., A multi-modal transportation simulation tool to solve urban location problems, Proc. "12th SCS European Simulation Symposium", 2000.
- [C.85] Aurora C., Bassi E., Ferrara A., Sliding mode control of current-fed induction motors with unknown rotor resistance, Proc. "Bias International Conference", Milano, 2000.
- [C.86] Aurora C., Ferrara A., Giacomini L., A car integrated system for moving obstacles avoidance, Proc. "IV2001 IEEE Intelligent Vehicles Symposium", Tokyo, 2001.
- [C.87] Ferrara A., Giacomini L., A multi-input VS/backstepping design for nonholonomic systems. Proc. "American Control Conference ACC01", Arlington, VA, USA, 2001.
- [C.88] Bartolini G., Ferrara A., Giacomini L., Sliding mode control for systems with unknown control direction. Proc. "IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP2001)", Cernobbio, Italy, pp. 303-308, 2001.
- [C.89] Ferrara A., Magnani L., Scattolini R., Control of a large flexible space structure: a hybrid sliding mode approach. Proc. "IEEE 40th Conference on Decision and Control CDC01", Orlando, Florida, 2001.
- [C.90] Aurora C., Ferrara A., Levant A., Speed regulation of induction motors: a sliding mode observer-differentiator based control scheme. Accettato per la presentazione all'"IEEE 40th Conference on Decision and Control CDC01", Orlando, Florida, 2001.
- [C.91] De Nicolao G., Ferrara A., Giacomini L., A Collision Risk Assessment Approach as a Basis for the On-board Warning Generation in Cars. Proc. "IV'2002 IEEE Intelligent Vehicle Symposium", Versailles, France, 2002.
- [C.92] Ferrara A., Magnani L., Scattolini R., Gain reduction in hybrid sliding mode control of second order systems. Proc. "15th IFAC World Congress", Barcellona, Spain, 2002.

- [C.93] Ferrara A., Risk assessment in ADAS, 1st Workshop on Pedestrian Protection and Pre-crash Sensing, Aachen, Germany, 2003
- [C.94] Ferrara A., Scattolini R., Robustness versus unmatched uncertainties of a hybrid variable structure control strategy. Proc. "European Control Conference ECC'03", Cambridge, U.K., 2003.
- [C.95] Ferrara A., I. Vadim, Utkin., Constrained Optimization Via Sliding Modes in Dynamic Linear Systems, Proc. "IEEE 42nd Conference on Decision and Control CDC03", Maui, Hawaii, 2003
- [C.96] Ferrara A., Giacomini L., Generation of collision avoidance manouvres in pre-crash driver assistance systems. To be presented at the "First IFAC Symposium on Advances in Automotive Control", Salerno, Italy, 2004.
- [C.97] Ferrara A., Magnani L., Hybrid Variable Structure Path Tracking Control of Articulated Vehicles. To be presented at the. "American Control Conference ACC04", Boston, Massachusetts, USA, 2004.
- [C.98] Aurora C., Ferrara A., Speed Regulation of Induction Motors: An Adaptive Sensorless Sliding Mode Control Scheme. To be presented at the. "American Control Conference ACC04", Boston, Massachusetts, USA, 2004.
- [C.99] Ferrara A., Automatic Pre-Crash Collision Avoidance in Cars. To be presented at the. "IEEE Intelligent vehicle Symposium", Parma, Italy, 2004.
- [C.100] Ferrara A., Scattolini R. Image-based control of a robot manipulator for aerospace applications. Proc. "6th International Conference on Dynamics and Control of Systems and Structures in Space 2004", Riomaggiore, Italy, 2004.
- [C.101] Ferrara A., Magnani L., Hybrid variable structure path tracking control of articulated vehicles, Proc. IEEE SCS "International Conference on Advances in Vehicle Control and Safety, Genova, Italy, 2004
- [C.102] Ferrara A., Giacomini L., Multi-input second-order sliding mode control of nonholonomic systems, Proc. "16th IFAC World Congress" IFAC05, Praga, Repubblica Ceca, Luglio 2005.
- [C.103] Ferrara A., Scattolini R., Gain Reduction in Switched Sliding Mode Control, Proc. "16th IFAC World Congress" IFAC05, Praga, Repubblica Ceca, Luglio 2005.
- [C.104] Ferrara A., Aurora C., Sensorless Speed and Flux Regulation of Induction Motors a Sliding Mode Approach, Proc. "16th IFAC World Congress" IFAC05, Praga, Repubblica Ceca, Luglio 2005.
- [C.105] Ferrara A., Scaled Experimental Study of an Automatic Collision Avoidance System for Passenger Cars, Proc. "16th IFAC World Congress" IFAC05, Praga, Repubblica Ceca, Luglio 2005.
- [C.106] Di Palma F., Ferrara A., Scattolini R., Some Results on the Stability of Multi-Controlled Systems, Proc. "IEEE Mediterranean Conference MEDC05", Cypro, Giugno 2005.
- [C.107] Ferrara A., Vecchio C., Controlling A Platoon Of Vehicles With Distributed Collision Avoidance Capabilities, Proc. "12th IFAC Symposium on Information Control Problems in Manufacturing INCOM06", Special session on Intelligent Mobile and Transport Devices, St. Etienne, France, Maggio 2006.
- [C.108] Ferrara A., Giacomini L., Vecchio C., Control of Nonholonomic Systems with Uncertainties Via Second Order Sliding Modes, Proc. "American Control Conference ACC06", Minneapolis, Minnesota, USA, Giugno 2006.
- [C.109] Ferrara A., Vecchio C., Sliding Mode Control For Automatic Driving of A Platoon Of Vehicles , Proc. "9-th International IEEE Workshop on Variable Structure Systems VSS06", Alghero, Italy, Giugno 2006.

- [C.110] Ferrara A., Magnani L., Motion Control of Rigid Robot Manipulators via First and Second Order Sliding Modes, Proc. "2006 International Symposium on Model-Based Reasoning in Engineering and Robotic Systems", Guangzhou, China, Luglio 2006.
- [C.111] Ferrara A., Vecchio C., Controlling a platoon of vehicles via a second order sliding mode approach, Proc. "11th IFAC Symposium on Control in Transportation Systems CTS06" Delft, The Netherlands, Agosto 2006.
- [C.112] Ferrara A., Vecchio C., Cruise Control With Collision Avoidance For Cars Via Sliding Modes, Proc. IEEE International Conference on Control Applications (CCA), Invited Session on ADVANCES IN CONTROL OF AUTOMOTIVE SYSTEMS, Monaco, Germania, Ottobre 2006.
- [C.113] Ferrara A., Rubagotti M., Sliding Mode Control of a Mobile Robot for Dynamic Obstacle Avoidance Based on a Time-Varying Harmonic Potential Field, Workshop on Planning, Perception and Navigation for Intelligent Vehicles, at the 2007 IEEE International Conference on Robotics and Automation ICRA 2007, Roma, Aprile 2007.
- [C.114] Calanca A., Capisani L. M., Ferrara A., Magnani L., An Inverse Dynamics-Based Discrete-Time Sliding Mode Controller for Robot manipulators, Proc. IEEE/IFAC Sixth International Workshop on Robot Motion and Control RoMoCo'07, Bukowy Dworek, Poland, Giugno 2007.
- [C.115] Amodeo M., Ferrara A., Terzaghi R., Vecchio C., Slip Control For Vehicles platooning Via Second Order Sliding Modes, Proc. 2007 IEEE Intelligent Vehicles Symposium, Istanbul, Turkey, Giugno 2007.
- [C.116] Ferrara A., Ferrari Treccate G., Vecchio C., Sliding mode control for coordination in multi-agent systems with directed communication graphs, Proc. European Control Conference 2007, Kos, Greece, Luglio 2007.
- [C.117] Aurora C., Ferrara A., Foscolo M., A Globally Stable Adaptive Second Order Sliding Mode Control Scheme for Sensorless Current-fed Induction Motors, Proc. European Control Conference 2007, Kos, Greece, Luglio 2007.
- [C.118] Ferrara A., Rubagotti M., Gradient Tracking Based Second Order Sliding Mode Control of a Wheeled Vehicle, Proc. European Control Conference 2007, Kos, Greece, Luglio 2007.
- [C.119] Aurora C., Ferrara A., Design and Experimental Test of a Speed/Flux Sliding Mode Observer for Sensorless Induction Motors, Proc. 2007 American Control Conference (2007 ACC), New York, NY, Luglio 2007.
- [C.120] Ferrara A., Vecchio C., Low Vibration Vehicle Traction Control to Solve Fastest Acceleration/Deceleration Problems Via Second Order Sliding Modes, Proc. 2007 American Control Conference (2007 ACC), New York, NY, Luglio 2007.
- [C.121] Capisani L. M., Ferrara A., Magnani L., MIMO Identification with Optimal Experiment Design for Rigid Robot Manipulators, Proc. IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM2007, Zurigo, Svizzera, Settembre 2007.
- [C.122] Capisani L. M., Facchinetti T., Ferrara A., Second order sliding mode real-time network control of a robotic manipulator, Proc. 12th IEEE Conference on Emerging Technologies and Factory Automation, Patras – Greece, Settembre 2007.
- [C.123] Ferrara A., Vecchio C., Wheel Slip Control via Second Order Sliding Modes, 46th IEEE Conference on Decision and Control CDC'07, New Orleans, Louisiana, USA, Dicembre 2007.
- [C.124] Capisani L., Ferrara A., Magnani L., Second Order Sliding Mode Motion Control of Rigid Robot Manipulators, 46th IEEE Conference on Decision and Control CDC'07, New Orleans, Louisiana, USA, Dicembre 2007.

- [C.125] Ferrara A., Rubagotti M., A sub-optimal second order sliding mode controller for systems with saturating actuators, Proc. American Control Conference ACC08, Seattle, Washington, USA, Giugno 2008.
- [C.126] Canale M., Fagiano L., Ferrara A., Vecchio C., A comparison between IMC and Sliding Mode approaches to vehicle yaw control, Proc. American Control Conference ACC08, Seattle, Washington, USA, Giugno 2008.
- [C.127] Ferrara, A., Librino, R., Massola, A., Miglietta, M., Vecchio, C., Sliding mode control for urban vehicles platooning, Proc. IEEE Intelligent Vehicles Symposium, Eindhoven, The Netherlands., June 2008.
- [C.128] Ferrara A., Giacomini L., Vecchio C., Adaptive second order sliding mode control of uncertain nonholonomic systems, Proc. 10th IEEE International Workshop on Variable Structure Systems VSS08, Antalya, Turkey, June 2008.
- [C.129] Brambilla, D.; Capisani, L.M.; Ferrara, A.; Pisu, P., Actuators and sensors fault detection for robot manipulators via second order sliding mode observers, Proc. 10th IEEE International Workshop on Variable Structure Systems VSS08, Antalya, Turkey, June 2008.
- [C.129] Capisani, L.M.; Facchinetti, T.; Ferrara, A.; Martinelli, A., Environment modelling for the robust motion planning and control of planar rigid robot manipulators, Proc. ETFA 2008. IEEE International Conference on Emerging Technologies and Factory Automation, Hamburg, Germany, September 2008.
- [C.130] Capisani L., Ferrara A., Pisu P., Second Order Sliding Mode Observers for Fault Detection of Robot Manipulators, Proc. 47th IEEE Conference on Decision and Control, December 9-11, 2008, Cancun, Mexico
- [C.131] Basin M, Calderón Alvarez D., Ferrara A., Sliding Mode Regulator As Solution to Optimal Control Problem, Proc. 47th IEEE Conference on Decision and Control, December 9-11, 2008, Cancun, Mexico.
- [C.132] Bassi E., Benzi F., Capisani L. M., Cupone D., Ferrara A., “Characterization of the Dynamical Model of a Force Sensor for Robot Manipulators”, Proc. Robot Motion and Control 2009, Czerniejewo, Poland, June 1-3, 2009.
- [C.133] Ferrara A., Rubagotti M., A Sub-Optimal Second Order Sliding Mode Controller for Current-Fed Induction Motors, Proc. American Control Conference ACC09, St. Louis, Missouri, USA, Giugno 2009.
- [C.134] Vecchio C., Tanelli M., Corno M., Ferrara A., Savaresi S. M., Second Order Sliding Mode for Traction Control in Ride-By-Wire Sport Motorcycles, Proc. American Control Conference ACC09, St. Louis, Missouri, USA, Giugno 2009.
- [C.135] Basin M, Calderón Alvarez D., Ferrara A., Dinuzzo F., Sliding Mode Optimal Regulator for a Bolza-Meyer Criterion with Non-Quadratic Integral Term, Proc. American Control Conference ACC09, St. Louis, Missouri, USA, Giugno 2009.
- [C.136] M. Rubagotti, D.M. Raimondo, A. Ferrara and L. Magni. Robust model predictive control of continuous-time sampled-data nonlinear systems with integral sliding mode. Proc. European Control Conference, Budapest, Hungary, 23-26 August 2009.
- [C.137] A. Ferrara and M. Rubagotti. A Dynamic Obstacle Avoidance Strategy for a Mobile Robot Based on Sliding Mode Control. Proc. IEEE Conference on Control Applications CCA, St. Petersburg, Russia, 8-10 July 2009.

- [C.138] Ferrara A., Vecchio C., Adaptive sliding mode control of uncertain nonholonomic systems with unknown control direction, Proc. IEEE Conference on Control Applications CCA, St. Petersburg, Russia, 8-10 July 2009.
- [C.139] Della Vedova M., Facchinetti T., Ferrara A., Martinelli A., Visual Interaction for Real-Time Navigation of Autonomous Mobile Robots, IEEE 2009 International Conference on CyberWorlds, Bradford, U.K. Settembre 2009.
- [C.140] Della Vedova M., Facchinetti T., Ferrara A., Martinelli A., Real-time platooning of mobile robots: design and implementation, 14th IEEE International Conference on Emergent Technologies and Factory Automation, ETFA 2009, Mallorca, Spain, Settembre 2009.
- [C.141] Bassi E., Benzi F., Capisani L., Cuppone D., Ferrara A., Hybrid Position/Force Sliding Mode Control of a Class of Robotic Manipulators, Proc. 48th IEEE Conference on Decision and Control and 28th Chinese Control Conference, December 2009, Shanghai, P.R. China.
- [C.142] Capisani L., Ferrara A., Pisu P., Vision-Based Sliding Mode Observers for Fault Detection, Isolation and Identification in Robot Manipulators, Proc. American Control Conference ACC10, Baltimore, MD on June 30-July 02, 2010.
- [C.143] Rubagotti M., Ferrara A., Second order sliding mode control of a perturbed double integrator with state constraints, Proc. American Control Conference ACC10, Baltimore, MD on June 30-July 02, 2010.
- [C.144] Tanelli, M.; Ferrara, A.; Vecchio, C., Switched second order sliding mode for wheel slip control of road vehicles, Proc. 11th International IEEE Workshop on Variable Structure Systems (VSS), Mexico City, Mexico, 2010
- [C.145] Rubagotti, M.; Estrada, A.; Castaños, F.; Ferrara, A.; Fridman, L., Optimal disturbance rejection via integral sliding mode control for uncertain systems in regular form, Proc. 11th International IEEE Workshop on Variable Structure Systems (VSS), Mexico City, Mexico, 2010
- [C.146] Ferrara A., Capisani L. M., Second order sliding modes to control and supervise industrial robot manipulators. Semiplenary at 11th International IEEE Workshop on Variable Structure Systems (VSS), Mexico City, Mexico, 2010
- [C.147] Ballan F., Capisani L. M., Facchinetti T., Ferrara A., Martinelli A., Configuration Space Analysis Oriented to Robust Control and Obstacle Avoidance of Manipulators, Proc. IEEE International Symposium on Industrial Electronics, (ISIE 2010), Bari, Italy. July 4-7, 2010.
- [C.148] Capisani L. M., Ferrara A., Ferreira de Loza A., Fridman L. M., Higher Order Sliding Mode Observers for Actuator Faults Diagnosis in Robot Manipulators, Proc. IEEE International Symposium on Industrial Electronics, (ISIE 2010), Bari, Italy. July 4-7, 2010.
- [C.149] Rubagotti M., Raimondo D. M., Jones C. N., Magni L., Ferrara A., Morari M., A Nonlinear Model Predictive Control Scheme with Multirate Integral Sliding Mode, Proc. 8th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2010), September 2010.
- [C.150] Tanelli M., Ferrara A., Switched Second Order Sliding Mode Control, Proc. 49th IEEE Conference on Decision and Control, (CDC 2010), Atlanta, Georgia, USA. December 15-17, 2010
- [C.151] Capisani L. M., Ferrara A., Garonzi A., Robust Interaction Control via First and Second Order Sliding Modes of Planar Robotic Manipulators, Proc. 49th IEEE Conference on Decision and Control, (CDC 2010), Atlanta, Georgia, USA. December 15-17, 2010

- [C.152] Tanelli M., Ferrara A., Active braking control for two-wheeled vehicles via switched second order sliding modes, Proc. American Control Conference ACC11, San Francisco, CA, June 29-July 01, 2011.
- [C.153] Bullo D., Ferrara A., Rubagotti M., Sliding mode observers for sensorless control of current-fed induction motors, Proc. American Control Conference ACC11, San Francisco, CA, June 29-July 01, 2011.
- [C.154] Tanelli, Mara; Ferrara, Antonella, Enhanced Switched Second Order SM Control for Active Braking in Two-Wheeled Vehicles, Proc. 18th IFAC World , Milan, Italy, from August the 28th to September the 2nd 2011.
- [C.155] Antonio Bocconi, Luca Capisani, Francesco Del Bello, Jurij Paderno, Antonella Ferrara, Daniele De Vito, Temperature estimation of cooking vessel content via EKF and sliding mode observers in induction cooking systems, Proc. 18th IFAC World , Milan, Italy, from August the 28th to September the 2nd 2011.
- [C.156] Capisani, Luca; Ferrara, Antonella; Pisano, Alessandro, Second-Order Sliding Mode Control with Adaptive Control Authority for the Tracking Control of Robotic Manipulators, Proc. 18th IFAC World, Milan, Italy, from August the 28th to September the 2nd 2011.
- [C.157] Tanelli M., Ferrara A., Switched Second Order Sliding Mode Control with Partial Information, Proc. 50th IEEE Conference on Decision and Control, (CDC 2011), Orlando, Florida, USA. December 12-15, 2011
- [C.158] Della Vedova M. L., Rubagotti M., Facchinetti T., Ferrara A., Platooning Control of Autonomous Nonholonomic Mobile Robots in a Human-Robot Coexisting Environment, Proc. American Control Conference ACC12, Montreal Canada, June 2012.
- [C.159] Rinaldi M., Capisani L., Ferrara A., Nuñez A., Hajiahmadi M., De Schutter B., Distributed Identification of the Cell Transmission Traffic Model: A Case Study, Proc. American Control Conference ACC12, Montreal Canada, June 2012.
- [C.160] Ferrara A., Nai Oleari A., Sacone S., Siri S., Freeway Networks as Systems of Systems: An Event-Triggered Distributed Control Scheme, IEEE 7th International Conference on System of Systems Engineering SOSE 2012, Genova, July 2012.
- [C.161] Tanelli M., Ferrara A., Giani P., Combined Vehicle Velocity and Tire-road Friction Estimation via Sliding Mode Observers, Proc. IEEE Multi-conference on Systems and Control – CCA 2012, Dubrovnik, Croatia, October 3-5, 2012.
- [C.162] Tanelli M., Punta E., Ferrara A., A switched second-order sliding mode control algorithm for non-affine systems with saturations, Proc. 51st IEEE Conference on Decision and Control, (CDC 2012), Maui, Hawaii, USA. December 10-13, 2012.
- [C.163] Pisano A., Tanelli M., Ferrara A., Time-based switched sliding mode control for yaw rate regulation in two-wheeled vehicles, Proc. 51st IEEE Conference on Decision and Control, (CDC 2012), Maui, Hawaii, USA. December 10-13, 2012.
- [C.164] Ferrara A., Nai Oleari A., Sacone S., Siri S., An Event-Triggered Model Predictive Control scheme for Freeway Systems, Proc. 51st IEEE Conference on Decision and Control, (CDC 2012), Maui, Hawaii, USA. December 10-13, 2012.

- [C.165] G. Motta, A. Ferrara, D. Sacco, L. You, G. Cugola, "Integrated Mobility: a research in progress", 3rd International Conference on Computer and Management CAMAN 2013, Wuhan, China, March 2013
- [C.166] Bianchi, Ferrara A. and Di Benedetto M.D., Adaptive Networked Model Predictive Control of Freeway Traffic Systems, Proceedings of the American Control Conference (ACC13), Washington, DC, USA, June 17-19, 2013.
- [C.167] Bianchi D., Ferrara A. and Di Benedetto M.D., Networked Model Predictive Traffic Control with Time Varying Optimization Horizon: The Grenoble South Ring Case Study. In Proc. European Control Conference ECC13, Zurich, Swiss, July 2013.
- [C.168] Ferrara A., Nai Oleari A., Sacone S., Siri S., Case-Study Based Performance Assessment of an Event-Triggered MPC Scheme for Freeway Systems. In Proc. European Control Conference ECC13, Zurich, Swiss, July 2013.
- [C.169] A. Ferrara, S. Sacone, S. Siri, "Event-based control of freeway systems", in Proc. IEEE International Conference on Systems, Man, and Cybernetics SMC 2013, Manchester, UK, 13-16 October 2013.
- [C.170] Calanca A., Capisani L., Fiorini P. and Ferrara A., Improving Continuous Approximation of Sliding Mode Control, Proc. 16th IEEE International Conference on Advanced Robotics, ICAR 2013, Montevideo, Uruguay, November 25-29th, 2013.
- [C.171] Pisano A., Tanelli M., Ferrara A., Combined switched/time-based adaptation in second order sliding mode control, Proc. 52nd IEEE Conference on Decision and Control, (CDC 2013), Firenze, Italy, December 10-13, 2013.
- [C. 172] Ferrara A., Incremona G.P., Robust Motion Control of a Robot Manipulator via Integral Suboptimal Second Order Sliding Modes, Proc. 52nd IEEE Conference on Decision and Control, (CDC 2013), Firenze, Italy, December 10-13, 2013.
- [C. 173] Ferrara A., Incremona G.P., Magni L., A Robust MPC/ISM Hierarchical Multi-Loop Control Scheme for Robot Manipulators, Proc. 52nd IEEE Conference on Decision and Control, (CDC 2013), Firenze, Italy, December 10-13, 2013.
- [C. 174] A. Ferrara, S. Sacone, S. Siri, Supervisory Model Predictive Control for Freeway Traffic Systems, Proc. 52nd IEEE Conference on Decision and Control, (CDC 2013), Firenze, Italy, December 10-13, 2013.
- [C. 175] T. Goggia, A. Sorniotti, L. De Novellis, A. Ferrara, Torque-Vectoring Control in Fully Electric Vehicles via Integral Sliding Modes, Proc. IEEE American Control Conference, (ACC 2014), Portland, Oregon, USA, June 4-6, 2014.
- [C. 176] A. Ferrara, S. Sacone, S. Siri, Distributed Model Predictive Control for MLD systems: application to freeway ramp metering, Proc. IEEE American Control Conference, (ACC 2014), Portland, Oregon, USA, June 4-6, 2014.
- [C. 177] A. Ferrara, S. Sacone, S. Siri, "Simulation-based assessment of natural robustness of freeway traffic systems controlled via MPC", Proc. 22nd Mediterranean Conference on Control & Automation MED 2014, Palermo, Italy, June 2014
- [C. 178] A. Ferrara, G. P. Incremona and V. Stocchetti, Switched Sliding Mode Control Strategy for Networked Systems, Proc. Mediterranean Control Conf. 2014, Palermo, Italy, June 2014.
- [C. 179] A. Ferrara, S. Sacone, S. Siri, "Event-triggered strategies for the networked control of freeway traffic systems", Proc. European Control Conference ECC 2014, Strasbourg, France, June 24-27 2014.

- [C. 180] A. Ferrara, G. P. Incremona and L. Magni, Model Based Event Triggered Robust MPC/ISM, Proc. European Control Conf. 2014, Strasbourg, France, June 2014.
- [C. 181] A. Ferrara, S. Sacone, S. Siri, Time-varying triggering conditions for the robust control of freeway systems, accepted for presentation at the 53rd IEEE Conference on Decision and Control, Los Angeles, CA, USA, December 15-17, 2014.
- [C. 182] M. Polesel, B. Shyrokau, M. Tanelli, D. Savitski, V. Ivanov, A. Ferrara, Hierarchical Control of Overactuated Vehicles Via Sliding Mode Techniques (I), Proc. 53th IEEE Conf. Decision Control, Los Angeles, CA, USA, December 2014.
- [C. 183] A. Ferrara, G. P. Incremona and V. Stocchetti, Networked Sliding Mode Control with Chattering Alleviation, Proc. 53th IEEE Conf. Decision Control, Los Angeles, CA, USA, December 2014.
- [C. 184] A. Ferrara, G. P. Incremona and M. Rubagotti, Third Order Sliding Mode Control with Box State Constraints, in Proc. 53th IEEE Conf. Decision Control, Los Angeles, CA, USA, Dec. 2014.
- [C. 185] M. Cucuzzella, G. P. Incremona and A. Ferrara, "Master-Slave Second Order Sliding Mode Control for Microgrids" in Proc. American Control Conf. , Chicago, IL, USA, July 2015.
- [C. 186] Mellucci, C.; Menon, P.P.; Edwards, C.; Ferrara, A., "Load alteration fault detection and reconstruction in power networks modelled in semi-explicit differential algebraic equation form," in Proc. American Control Conference (ACC), 2015, pp.5836-5841, 1-3 July 2015.
- [C.187] M. Cucuzzella, G. P. Incremona, A. Ferrara, "Third Order Sliding Mode Voltage Control in Microgrids", Proc. European Control Conf. (ECC), Linz, Austria, Jul. 2015.
- [C.188] A. Nai Oleari, J. R. D. Frej, E. F. Camacho, A. Ferrara, A Model Predictive Control Scheme for Freeway Traffic Systems Based on the Classification and Regression Trees Methodology, Proc. European Control Conf. (ECC), Linz, Austria, Jul. 2015.
- [C.189] Antonella Ferrara, Simona Sacone, Silvia Siri, Model-Based Event-Triggered Control For Freeway Traffic Systems, Proc. First International Conference on Event-Based Control, Communication, and Signal Processing, June 17-19, 2015, Krakow, Poland.
- [C.190] G. P. Incremona, A. Ferrara and L. Magni, Hierarchical Model Predictive/Sliding Mode Control of Nonlinear Constrained Uncertain Systems", in Proc. 5th IFAC Conf. Nonlin. Model Predictive Control , Seville, Sept. 2015.
- [C.191] A. Ferrara, S. Sacone, S. Siri, "A switched ramp-metering controller for freeway traffic systems", ADHS' 15, 5th IFAC Conference on Analysis and Design of Hybrid Systems, Atlanta, GA, USA, October 14-16, 2015.
- [C.192] C. Vivas, S. Siri, A. Ferrara, S. Sacone, G. Cavanna, F.R. Rubio, "Distributed consensus-based switched observers for freeway traffic density estimation", Proc. 54th IEEE Conference on Decision and Control, Osaka, Japan, December 15-18, 2015.
- [C.193] G. P. Incremona, A. Saccon, A. Ferrara, H. Nijmeijer, "Trajectory Tracking of Mechanical Systems with Unilateral Constraints: Experimental Results of a Recently Introduced Hybrid PD Feedback Controller", Proc. 54th IEEE Conference on Decision and Control, Osaka, Japan, December 15-18, 2015.

- [C.194] M. Cucuzzella, G. P. Incremona, A. Ferrara, "Event-Triggered Sliding Mode Control Algorithms for Uncertain Systems: Experimental Assessment", in Proc. American Control Conf. (ACC), Boston, MA, USA, July 2016.
- [C.195] G. P. Incremona, M. Tanelli, M. Rubagotti, A. Ferrara, "Switched Third-Order Sliding Mode Control", 2016 American Control Conference (ACC), Boston, MA, July 2016.
- [C.196] M. Tanelli, S. C. Strada, M. Corno and A. Ferrara, "Sliding mode control for LPV systems," 2016 American Control Conference (ACC), Boston, MA, 2016, pp. 3686-3691.
- [C.197] R. Tafner, M. Horn and A. Ferrara, "Experimental evaluation of nonlinear unknown input observers applied to an EPS system," 2016 American Control Conference (ACC), Boston, MA, 2016, pp. 2409-2414.
- [C.198] M. Cucuzzella, A. Ferrara, "Event-Triggered Second Order Sliding Mode Control of Nonlinear Uncertain Systems", in Proc. European Control Conf. (ECC), Aalborg, Denmark, June 2016.
- [C.199] M. Cucuzzella, G. P. Incremona, M. Guastalli, A. Ferrara, "Sliding Mode Control for Maximum Power Point Tracking of Photovoltaic Inverters in Microgrids", 2016 IEEE 55th Conference on Decision and Control (CDC), Las Vegas, NV, 2016, Dec. 2016.
- [C.200] A. Ferrara, S. Sacone, S. Siri, C. Vivas and F. R. Rubio, "Switched observer-based ramp metering controllers for freeway systems," 2016 IEEE 55th Conference on Decision and Control (CDC), Las Vegas, NV, 2016, pp. 6777-6782.
- [C.201] C. Canudas-de-Wit and A. Ferrara, "A Variable-Length cell road traffic model: Application to ring road speed limit optimization," 2016 IEEE 55th Conference on Decision and Control (CDC), Las Vegas, NV, 2016, pp. 6745-6752.
- [C.202] M. Cucuzzella, S. Trip, C. De Persis, A. Ferrara, "Distributed second order sliding modes for Optimal Load Frequency Control", in Proc. American Control Conf. (ACC), Seattle, WA, USA, May 2017.
- [C.203] M. Cucuzzella, S. Rosti, A. Cavallo, A. Ferrara, "Decentralized Sliding Mode voltage control in DC microgrids", in Proc. American Control Conf. (ACC), Seattle, WA, USA, May 2017.
- [C.204] G.P. Incremona, E. Regolin, A. Mosca and A. Ferrara, "Sliding Mode Control Algorithms for Wheel Slip Control of Road Vehicles", Proceedings of the 2017 American Control Conference (ACC 2017), May 24-26, Seattle, WA, USA.
- [C.205] Gianmario Rinaldi, Prathyush P. Menon, Christopher Edwards, Antonella Ferrara, Distributed Observers for State Estimation in Power Grids, Proceedings of the 2017 American Control Conference (ACC 2017), May 24-26, Seattle, WA, USA.
- [C.206] Alberto Brandi, Antonella Ferrara, Simona Sacone*, Silvia Siri, Carlos Vivas, Francisco R. Rubio, Model predictive control with state estimation for freeway systems, Proceedings of the 2017 American Control Conference (ACC 2017), May 24-26, Seattle, WA, USA.
- [C.207] G.P. Incremona, S. Strada. M. Tanelli, Switched Integral Suboptimal Second-Order Sliding Mode Control, Proceedings of the 2017 American Control Conference (ACC 2017), May 24-26, Seattle, WA, USA.

- [C.208] E. Regolin and A. Ferrara, "SVM Classification and Kalman Filter Based Estimation of the Tire-Road Friction Curve", Proceedings of The 20th World Congress of the International Federation of Automatic Control (IFAC 2017), 9-14 July, Toulouse, France.
- [C.209] S. Trip, M. Cucuzzella, A. Ferrara, C. De Persis, "An energy function based design of second order sliding modes for automatic generation control", iProceedings of The 20th World Congress of the International Federation of Automatic Control (IFAC 2017), Toulouse, France, July 2017.
- [C.210] G.P. Incremona, M. Cucuzzella, L. Magni, and A. Ferrara, "MPC with sliding mode control for the energy management system of microgrids," Proceedings of The 20th World Congress of the International Federation of Automatic Control (IFAC 2017), Toulouse, France, July 2017.
- [C.211] A. Ferrara, C. Pasquale, S. Sacone, S. Siri, Congestion and Emissions Reduction in Freeway Traffic Networks via Supervisory Event-triggered Control, Proceedings of The 20th World Congress of the International Federation of Automatic Control (IFAC 2017), Toulouse, France, July 2017.
- [C.212] E. Regolin, M. Zambelli, and A. Ferrara, "Wheel forces estimation via adaptive sub-optimal second order sliding mode observers," in 2017 XXVI International Conference on Information, Communication and Automation Technologies (ICAT), Sarajevo, Bosnia and Herzegovina, 2017.
- [C.213] J. Ludwiger, M. Steinberger, M. Rotulo, M. Horn, A. Luppi, G. Kubin, A. Ferrara, "Towards Networked Sliding Mode Control", Proc. 56th IEEE Conference on Decision and Control CDC 2017, Melbourne, Australia, December 2017.
- [C.214] G. Rinaldi, M. Cucuzzella, A. Ferrara, "Third Order Sliding Mode Observer-Based Approach for Distributed Optimal Load Frequency Control", Proc. 56th IEEE Conference on Decision and Control CDC 2017, Melbourne, Australia, December 2017.
- [C.215] G.P. Incremona, M. Cucuzzella, L. Magni, and A. Ferrara, "Model Predictive Control and Sliding Mode Control for Current Sharing in Microgrids", Proc. 56th IEEE Conference on Decision and Control CDC 2017, Melbourne, Australia, December 2017.
- [C.216] G. Rinaldi, A. Ferrara, "Higher Order Sliding Mode Observers and Nonlinear Algebraic Estimators for State Tracking in Power Networks, Proc. 56th IEEE Conference on Decision and Control CDC 2017, Melbourne, Australia, December 2017.
- [C.217] S. Ullo, M. Gallo, G. Palmieri, P. Amenta, M. Russo, G. Romano, M. Ferrucci, A. Ferrara, M. De Angelis, "Application of Wireless Sensor Networks to Environmental Monitoring for Sustainable Mobility", Proc. 2018 IEEE International Conference on Environmental Engineering, Milan, Italy, March 2018.
- [C.218] G. Piacentini, P. Goatin, A. Ferrara, "Traffic control via moving bottleneck of coordinated vehicles", Proc. 15th IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 2018.
- [C.219] C. Pasquale, S. Sacone, S. Siri, A. Ferrara, "A multi-class decentralised event-triggered control framework for congestion and emission reduction in freeway networks", Proc. 15th IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 2018.

- [C.220] M. Cucuzzella, R. Lazzari, S. Trip, C. Sandroni, A. Ferrara, “Voltage regulation of boost converters in DC microgrids by second order sliding mode control”, Proc. 2018 European Control Conference ECC 2018, Limassol, Cyprus, June 2018.
- [C.221] B. Sangiovanni, A. Rendiniello, G.P. Incremona, A. Ferrara, M. Piastra, “Deep Reinforcement Learning for Collision Avoidance of Robotic Manipulators”, Proc. 2018 European Control Conference ECC 2018, Limassol, Cyprus, June 2018.
- [C.222] M. Gallo, S. Ullo, P. Amenta, G. Palmieri, A. Ferrara, M. Ferrucci, M. Russo, M. De Angelis, “A Flexible Mobility System based on CHIP Architectures: the NETCHIP Research Project”, Proc. 2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Palermo, Italy, June 2018.
- [C.223] S. Trip, M. Cucuzzella, C. De Persis, X. Cheng, A. Ferrara, “Sliding Modes for Voltage Regulation and Current Sharing in DC Microgrids, Proc. 2018 American Control Conference (ACC 2018), Milwaukee, WI, USA, June 2018.
- [C.224] G. Rinaldi, A. Ferrara, “Relative Degree Identification for Sliding Mode Controllers Design”, Proc. 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz, Austria, July 2018.
- [C.225] G. Rinaldi, P.M. Prathyush, A. Ferrara, C. Edwards, “A Super-Twisting-Like Sliding Mode Observer for Frequency Reconstruction in Power Systems: Discussion and Real Data Based Assessment”, Proc. 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz, Austria, July 2018.
- [C.226] A. Ferrara, G.P. Incremona, B. Sangiovanni, “A ISM Based Switched Structure Control Scheme for Robot Manipulators”, Proc. 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz, Austria, July 2018.
- [C.227] G. Rinaldi, A. Ferrara, “Decentralized Integral Sliding Mode Approach for Frequency Control and Unknown Demand Reconstruction in Power Systems”, Proc. 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz, Austria, July 2018.
- [C.228] M. Zambelli, A. Ferrara, “Linearization-Based Integral Sliding Mode Control for a Class of Constrained Nonlinear Systems”, Proc. 15th International Workshop on Variable Structure Systems and Sliding Mode Control, Graz, Austria, July 2018.

PH.D. THESIS

- [TD] Ferrara A. *Sintesi e analisi di schemi semplificati per il controllo adattativo di sistemi a stato non accessibile*. (Design and Analysis of simplified schemes for the adaptive control of systems with non accessible state) Supervisor: Prof. G. Bartolini, July 1992 (in Italian).

OTHERS

- [O.1] Contribution as an author to Position Paper EU FP8 on Control (several authors).

- [O.2] Contribution to IFAC Task Force: Systems & Control Research Agenda, Annual Reviews in Control, 2017.
- [O.3] G. P. Incremona, A. Saccon, H. Nijmeijer, M. Steinbuch, A. Ferrara, "Trajectory Tracking of 1-DOF Mechanical System with Unilateral Constraints Controlled Via a Recently Introduced Hybrid PD Feedback Controller," in Department of Mechanical Engineering, Eindhoven University of Technology, DC:2015.043, Eindhoven, The Netherlands, May 2015.
- [O.4] Ferrara A., Column on the CSS Women in Control Activity Luncheon at the 2015 CDC, IEEE Control Systems Magazine, Publication Year: 2016, June Issue.
- [O.5] Antonella Ferrara's Interview (People in Control), IEEE Control Systems Magazine, Publication Year: 2016, October Issue.