

Luigi Iannelli

Curriculum Vitæ et Studiorum

Updated October 20, 2020

Personal data Associate Professor of Automatic Control at the University of Sannio in Benevento, Italy
Languages: Italian, native; English, fluent.
IEEE (Institute of Electrical and Electronic Engineers) Senior Member.
IEEE Control Systems Society Member.
IEEE Circuits and Systems Society Member.

Education February 12, 2003
Ph.D. degree in Information Engineering (curriculum in Automatic Control) at the University of Napoli Federico II (Italy). Thesis title: “Dithering for smoothing relay feedback systems: an averaging approach”; advisors: Prof. Franco Garofalo and Prof. Francesco Vasca.
June 30, 1999
“Laurea” degree in Computer Engineering obtained from the University of Sannio in Benevento (Italy) with full marks (“summa cum laude”). Thesis title: “A new technique for the dynamic compensation of SAR converters nonlinearities”; advisors: Prof. Pasquale Daponte and Prof. Pasquale Arpaia.

Academic appointments

May 2016 —
Associate Professor at the University of Sannio in Benevento, Italy, Department of Engineering.
December 2004 — May 2016
Assistant Professor (Ricercatore Universitario) at the University of Sannio in Benevento, Italy, Department of Engineering.
July 2003 — December 2004
PostDoc position at the Department of Computer and Systems Engineering, University of Napoli Federico II.
March — May 2003
Course responsible of the “Automatic Control Project Course” at the Royal Institute of Technology (KTH), Stockholm, Sweden.
January — July 2002
Visiting student at the Royal Institute of Technology (KTH), Stockholm, Sweden.

Professional and scientific appointments

October 2018
Full Professorship qualification (call 2016) obtained from the Italian Ministry of University and Research.

January 2014

Associate Professorship qualification (call 2012) obtained from the Italian Ministry of University and Research.

March 2012

IEEE Senior Membership obtained from Institute of Electrical and Electronics Engineers.

January 2005

Co-founder of the company Mosaico Monitoraggio Integrato s.r.l., a small enterprise working in the field of industrial automation.

February 2000

Qualification as Italian professional engineer obtained from the University of Napoli Federico II, Italy.

Research areas

Autonomous systems; distributed control and optimization over networks; nonsmooth systems; piecewise quadratic stability; smart grids; power electronics; automotive control.

Scientific and editorial activity

Editorial Board

Associate Editor of the IEEE Control Systems Society Conference Editorial Board.
June 2014 — today

Editor of edited books

F. Vasca, L. Iannelli, “Dynamics and Control of Switched Electronic Systems”, Springer-Verlag, May 2012.

Editorial Advisory Board

F. Flammini, “Railway Safety, Reliability, and Security: Technologies and Systems Engineering”, Information Science Reference, May 2012 (from November 2010 till May 2012).

Scientific Council

Member of the Scientific Council of the Honors Center of Italian Universities (H2CU) (from October 2016 till today).

PhD defense committee member

Member of the committee for the final doctoral exam (XXIX cycle), Univeristà di Cassino e Lazio Meridionale, 2017.

Member of the committee for the doctoral thesis of Niliana Andreina Carrero Candelas, Universitat Politècnica de Catalunya, Barcelona, July 2014.

Expert Reviewer for Funding Agencies

Reviewer for the Italian Ministry for Education, University and Research (MIUR), (reviewing activities in 2013, 2014, 2016).

International journals reviewer

- Automatica (2005 — today)
- IEEE Transactions on Automatic Control (2005, 2006, 2009 — today)
- IEEE Transactions on Circuits and Systems, Part I (2005, 2009, 2013 — today)
- IEEE Transactions on Circuits and Systems, Part II (2004, 2006, 2007, 2009)
- IEEE Transactions on Control Systems Technology (2008 — 2010, 2012 — today)
- ASME Journal of Dynamic Systems, Measurement and Control (2009)

- IEEE/ASME Transactions on Mechatronics (2009)
- Control Engineering Practice (2006, 2013 — today)

International conferences reviewer

- IEEE Conference on Decision and Control
- American Control Conference
- Mediterranean Conference on Control and Automation
- IEEE Conference on Control Applications

Conferences services

Program Committees

- Member of the Program Committee of the Annual National Meeting of the SIDRA (Italian Society of Automatic Control), AUTOMATICA.IT 2020, University of Cagliari, September 9–11, 2020.
- Publications co-chair of the European Control Conference, June 2019.
- Member of the Program Committee of the IEEE First International Conference on Control, Measurement and Instrumentation, January 8–10, 2016.
- Member of the Program Committee of the IEEE International Conference on Mechatronics, March 6–8, 2015.
- Member of the Program Committee of the IEEE Conference on Automation Science and Engineering, August 23–26, 2008.

Organizing Committee

- Member of the Organizing Committee of the Informal Workshop on Automotive Clutch Control, University of Sannio in Benevento, May 2006.

Local Organizing Committee

- Member of the Local Organizing Committee of the Annual National Meeting of the SIDRA (Italian Society of Automatic Control), AUTOMATICA.IT 2012, University of Sannio in Benevento, September 12–14, 2012.
- Member of the Local Organizing Committee of the International Workshop on the Future of Control in Transportation Systems, University of Sannio in Benevento, May 27–29, 2010.

Associate editor

- Associate editor of IEEE Conference on Decision and Control, 2015, 2016, 2017, 2018, 2019, 2020.
- Associate editor of IEEE American Control Conference, 2015, 2016, 2017, 2018, 2019, 2020.

Teaching activity (several courses since A.Y. 1999/2000)

Undergraduate Course “**Automatic Control**”, (6 ECTS credits) third year of the Laurea degree in Medical Engineering, Department of Medicine and Health Sciences, University of Molise, Italy.

Graduate Course “**Discrete Systems**”, (9 ECTS credits) first year of the Master (*Laurea Magistrale*) degree in Computer Engineering, Department of Engineering, University of Sannio in Benevento, Italy.

Undergraduate Course “**Automatic Control**”, (6 ECTS credits) second year of the Laurea degree in Computer and Electronics Engineering, Department of Engineering, University of Sannio in Benevento, Italy.

Undergraduate Course “**Modelling and Simulation**”, (4 ECTS credits) third year of the Laurea degree in Computer Engineering, Faculty of Engineering, University of Sannio in Benevento, Italy.

Graduate Course “**Nonlinear Dynamics**”, (4 ECTS credits) first year of the Master degree in Automation Engineering, Faculty of Engineering, University of Sannio in Benevento, Italy.

Graduate Course “**Process Control**”, (6 ECTS credits) first year of the Master degree in Automation Engineering, Faculty of Engineering, University of Sannio in Benevento, Italy.

Undergraduate Course “**Automatic Control**”, (3 ECTS credits) second year of the Laurea degree in Energetic Engineering, Faculty of Engineering, University of Sannio in Benevento, Italy.

Undergraduate course “**Automatic Control Project Course**” (12 ECTS credits) at the Royal Institute of Technology (KTH), Stockholm, Sweden, academic year 2002/2003.

Undergraduate course “**Control Engineering**” (4 ECTS credits) third year of the Laurea degree in Computer Engineering, Faculty of University of Sannio in Benevento.

University service

November 2019 —

Deputy Head of the Department of Engineering, University of Sannio in Benevento, Italy.

November 2019 — January 2020

President of the examining committee for the qualification as Italian professional engineer, 2nd session 2019, University of Sannio in Benevento, Italy.

January 2018 — October 2019

Rector’s delegate for communication between central and departmental student’s careers offices, University of Sannio in Benevento, Italy.

December 2013 —

Member of the board for the Doctorate in “Information Technologies for Engineering”, University of Sannio in Benevento, Italy.

November 2017

Adjunct (expert) member of the examining committee for the admission at the Doctorate course in “Information Technologies for Engineering”, University of Sannio in Benevento, Italy.

October 2016 — November 2016

Member of the examining committee for the admission at the Doctorate course in “Information Technologies for Engineering”, University of Sannio in Benevento, Italy.

June 2016 — July 2016

Member of the electoral commission for the students representatives elections in the governing bodies at the University of Sannio in Benevento, Italy.

February 2013 — February 2014

Member of the committee for the new department rules, Department of Engineering, University of Sannio in Benevento, Italy.

November 2008 — December 2009

Member of the examining committee for the qualification as Italian professional engineer, 2nd session 2008 and 1st and 2nd session 2009, University of Sannio in Benevento, Italy.

2008 — 2013

Elected representative of assistant professors at the Engineering Faculty Board,
University of Sannio in Benevento, Italy.

Most relevant (10) publications and corresponding research topics

Dynamic games [IJ3]

Stability of piecewise-linear systems [IJ4]

Linear complementarity systems [IB1, IJ1, IJ5, IJ6]

Averaging techniques for nonlinear and discontinuous systems [IB1, IJ7, IJ8]

Nonlinear dynamics in power electronics converters, DC/DC type [IB1, IJ10]

Automotive transmissions [IJ2, IJ9]

Publications **Books**

- [IB1] F. Vasca and L. Iannelli, eds. *Dynamics and Control of Switched Electronic Systems*. Advances in Industrial Control. Springer, Apr. 2012. ISBN: 978-1-4471-2884-7. DOI: 10.1007/978-1-4471-2885-4.

Referred journals

- [IJ1] L. Iannelli, R. Iervolino, and F. Vasca. “Linear Complementarity Systems and Cone-Copositive Lyapunov Stability”. In: *IEEE Control Systems Letters* 3.4 (Oct. 2019), pp. 799–804. DOI: 10.1109/LCSYS.2019.2918979. URL: <http://dx.doi.org/10.1109/LCSYS.2019.2918979>.
- [IJ2] A. Della Gatta, L. Iannelli, M. Pisaturo, A. Senatore, and F. Vasca. “A survey on modeling and engagement control for automotive dry clutch”. In: *Mechatronics* 55 (Nov. 2018), pp. 63–75. ISSN: 0957-4158. DOI: 10.1016/j.mechatronics.2018.08.002. URL: <https://linkinghub.elsevier.com/retrieve/pii/S0957415818301296>.
- [IJ3] H. Kebriaei and L. Iannelli. “Discrete-Time Robust Hierarchical Linear-Quadratic Dynamic Games”. In: *IEEE Transactions on Automatic Control* 63.3 (Mar. 2018), pp. 902–909. DOI: 10.1109/TAC.2017.2719158. URL: <http://ieeexplore.ieee.org/document/7956147/>.
- [IJ4] R. Iervolino, F. Vasca, and L. Iannelli. “Cone-Copositive Piecewise Quadratic Lyapunov Functions for Conewise Linear Systems”. In: *IEEE Transactions on Automatic Control* 60.11 (Nov. 2015). Impact Factor: 2.777, pp. 3077–3082. ISSN: 0018-9286. DOI: 10.1109/TAC.2015.2409933. URL: <http://dx.doi.org/10.1109/TAC.2015.2409933>.
- [IJ5] M.K. Camlibel, L. Iannelli, and F. Vasca. “Passivity and complementarity”. In: *Mathematical Programming* 145.1-2 (June 2014). Impact Factor: 1.803, pp. 531–563. ISSN: 1436-4646. DOI: 10.1007/s10107-013-0678-4. URL: <http://dx.doi.org/10.1007/s10107-013-0678-4>.

- [IJ6] F. Vasca, **L. Iannelli**, M.K. Çamlıbel, and R. Frasca. “A New Perspective for Modeling Power Electronics Converters: Complementarity Framework”. In: *IEEE Transactions on Power Electronics* 24.2 (Feb. 2009). Impact Factor: 2.929, pp. 456–468. ISSN: 0885-8993. DOI: 10.1109/TPEL.2008.2007420. URL: <http://dx.doi.org/10.1109/TPEL.2008.2007420>.
- [IJ7] **L. Iannelli**, K.H. Johansson, U. Jönsson, and F. Vasca. “Subtleties in the averaging of a class of hybrid systems with applications to power converters”. In: *Control Engineering Practice* 16.8 (Aug. 2008). INVITED PAPER, Impact Factor: 1.871, pp. 961–975. ISSN: 0967-0661. DOI: 10.1016/j.conengprac.2007.10.005. URL: <http://dx.doi.org/10.1016/j.conengprac.2007.10.005>.
- [IJ8] **L. Iannelli**, K.H. Johansson, U. Jönsson, and F. Vasca. “Averaging of Nonsmooth Systems Using Dither”. In: *Automatica* 42.4 (Apr. 2006). Impact Factor: 2.273, pp. 669–676. ISSN: 0005-1098. DOI: 10.1016/j.automatica.2005.12.012. URL: <http://dx.doi.org/10.1016/j.automatica.2005.12.012>.
- [IJ9] L. Glielmo, **L. Iannelli**, V. Vacca, and F. Vasca. “Gearshift Control for Automated Manual Transmissions”. In: *IEEE/ASME Transactions on Mechatronics* 11.1 (Feb. 2006). Impact Factor: 0.979, pp. 17–26. ISSN: 1083-4435. DOI: 10.1109/TMECH.2005.863369. URL: <http://ieeexplore.ieee.org/lpdocs/epic03/wrapper.htm?arnumber=1597172>.
- [IJ10] M. di Bernardo, F. Garofalo, **L. Iannelli**, and F. Vasca. “Bifurcations in Piecewise Smooth Feedback Systems”. In: *International Journal of Control* 75.16/17 (Nov. 2002). SPECIAL ISSUE, Impact Factor: 0.861, pp. 1243–1259. ISSN: 0020-7179. DOI: 10.1080/0020717021000023681.

October 20, 2020

Luigi Iannelli