

GIULIA GIORDANO

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CURRICULUM VITAE, 20TH OCTOBER 2024

ACADEMIC EMPLOYMENT

- **Full Professor**, Department of Industrial Engineering, University of Trento, Italy.
- **Visiting Professor and Delft Technology Fellow**, Delft Center for Systems and Control, Delft University of Technology, The Netherlands.

Previously at:

- Delft Center for Systems and Control, Delft University of Technology, The Netherlands, as an Assistant Professor (September 2017 - December 2019) and, since September 2018, as a Delft Technology Fellow.
- Department of Automatic Control and LCCC Linnaeus Center, Lund University, Sweden, as a Post-doctoral Research Fellow (June 2016 - August 2017).
- Department of Mathematics and Computer Science, University of Udine, Italy, as a Research Fellow, supported by a PoCN Italian Grant for Industrial Innovation (January-May 2016).

EDUCATION AND PROFESSIONAL QUALIFICATIONS

- **2016**: Ph.D. in Industrial and Information Engineering: Automation (*Excellent*), University of Udine, 08/04/2016. Thesis: “Structural Analysis and Control of Dynamical Networks”.
- **2013**: Italian State Examination and Professional Qualification to practice as an ICT Engineer.
- **2012**: M.Sc. in Electrical Engineering (*110/110 cum laude*), University of Udine, 22/10/2012. Thesis: “Structural Properties of Biochemical Systems”.
- **2010**: B.Sc. in Electrical Engineering (*110/110 cum laude*), University of Udine, 18/11/2010. Thesis: “Equalized Filtering of Discrete-Time Processes”.
- **2007**: High School (Lyceum) Diploma (*100/100 cum laude*), Liceo “G. Berton”, Udine, 13/07/2007.

HONOURS AND AWARDS

AWARDS AND PRIZES

- **2021: SIAM Activity Group on Control and Systems Theory Prize** 2021, awarded every two years to one outstanding early career researcher for distinguished contributions to the mathematical theory of systems and control, for “significant contributions to the development of innovative methodologies for the structural analysis of networked control systems and their applications to biological networks”, *Society for Industrial and Applied Mathematics*.
- **2017: NAHS Best Paper Prize** for the best paper published on the journal in the triennium 2014-2016, *Nonlinear Analysis: Hybrid Systems*.
- **2017: EECI PhD Award** 2016, for the best Ph.D. thesis in Europe in the field of Control for Complex and Heterogeneous Systems, *European Embedded Control Institute*.
- **2022: Outstanding Service as Associate Editor** of the **IEEE Control Systems Letters** for the year 2021, awarded every year to a single Associate Editor, *IEEE Control Systems Letters*.
- **2020: Outstanding Reviewer**, *Annals of Internal Medicine*.
- **2016: Outstanding TAC Reviewer**, *IEEE Transactions on Automatic Control*.
- **2021-2022-2023**: listed in the “single year” *World’s Top 2% Scientists* ranking by Stanford University of the most cited scientists in the world in the periods 2020-2021, 2021-2022 and 2022-2023.
- **2006**: XIV International Philosophy Olympiad (IPO), second place in national rankings.

GRANTS

- **2023-2027: ERC Starting Grant**, “INSPIRE – Integrated Structural and Probabilistic Approaches for Biological and Epidemiological Systems”, Horizon Europe, *European Research Council*; Principal Investigator (personal grant).

- **2023-2025:** PRIN project, “PRIDE – Proliferation, Resistance and Infection Dynamics in Epidemics”, *Italian Ministry of University*; Principal Investigator (coordinator of the whole project).
- **2021-2023:** Horizon 2020 project, “POSHBEE – Pan-european assessment, monitoring, and mitigation Of Stressors on the Health of BEEs”, *European Commission*; participant as a third party contributor.
- **2021-2022:** COVID-19 Strategic University Projects, “MOSES – Models for Reasoning about the Spreading of Diseases”, *University of Trento*; co-PI with Marco Roveri.
- **2020-2025:** NWO Crossover programme, “SYNERGIA – SYstem change for New Ecology-based and Resource efficient Growth with high tech In Agriculture”, *Dutch Research Council (Nederlandse organisatie voor Wetenschappelijk Onderzoek)*; task leader within the interdisciplinary consortium.
- **2019-2022:** NWO Talent Scheme VENI grant, “NISSA – Nonlinear Interconnected Systems: a Structural Approach”, VI.Veni.192.035, *Dutch Research Council (Nederlandse organisatie voor Wetenschappelijk Onderzoek)*; Principal Investigator (personal grant).
- **2018-2023:** Delft Technology Fellowship grant, *TU Delft*; Principal Investigator (personal grant).
- **2018:** BioDate Grant for the project “Robustness by design? Structural analysis of dynamic metabolic models”, *Delft Bioengineering Institute*; PI with S. Aljoscha Wahl.
- **2018:** BioDate Grant for the project “Optimal control of combined chemo-radiation therapy treatments for improving cancer care”, *Delft Bioengineering Institute*; PI with Zoltán Perkó.
- **2018:** Aspasia grant, *3mE Faculty, Delft University of Technology*; personal grant.
- **2017:** Aspasia grant, *3mE Faculty, Delft University of Technology*; personal grant.
- **2016:** Travel grant, *Knut och Alice Wallenberg Foundation*; personal grant.

COMPETITIVE SCHOLARSHIPS/FELLOWSHIPS

- **2016:** Research Fellowship, *Italian Ministry of Education and University*.
- **2015:** DAAD Research Scholarship, *Deutscher Akademischer Austausch Dienst (German Academic Exchange Service)*.
- **2013-2015:** Ph.D. Scholarship, *Italian Ministry of Education and University*.
- **2012:** Summer Undergraduate Research Fellowship (SURF), *California Institute of Technology*. SURF Project: “Biomolecular Rate-Regulator Circuits”.
- **2007-2012:** Scholarship for excellence, *University of Udine*.
- **2007:** Scholarship for excellence and enrolment in the National Register of Excellence, *Italian Ministry of Education and University*.

PLENARY AND KEYNOTE TALKS

- 19/08/2024: Invited **Semi-Plenary Speaker** at the *26th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2024)*, Cambridge, UK; *invited by Rodolphe Sepulchre*.
- 26/06/2024: Invited **Semi-Plenary Speaker** at the *European Control Conference (ECC 2024)*, Stockholm, Sweden; *invited by Karl H. Johansson, Anders Rantzer, Henrik Sandberg and Antonis Papachristodoulou*.
- 17/11/2022: Invited **Keynote Speaker** at the event “Eccellenza della ricerca italiana durante la pandemia da COVID-19” (*Excellence of Italian research during the COVID-19 pandemic*), Roma, Italy; *invited by Cristina Mussini*.
- 18/10/2022: Invited **Plenary Speaker** at the *XXIV Brazilian Congress of Automatics (CBA 2022)*, Fortaleza, Brazil; *invited by Grace Daecto and the congress organisers*.
- 02/09/2022: Invited **Plenary Speaker** at *ROCOND2022*, Kyoto, Japan; *invited by Yoshio Ebihara, Dimitri Peaucelle and Hiroyuki Ichihara*.
- 24/09/2021: Invited **Keynote Speaker** at the *19th International Conference on Computational Methods in Systems Biology*, Bordeaux, France, September 2021, *invited by Eugenio Cinquemani and Loïc Paulevé*.
- 21/07/2021: **Plenary Speaker**, SIAM Activity Group on Control and Systems Theory Prize Lecture, *SIAM Conference on Control and Its Applications (CT21)*.
- 13/12/2020: Invited **Plenary Speaker** at the opening of the National Congress of the *Italian Society of Gynaecology and Obstetrics*, *invited by Luca Gianaroli*.
- 07/07/2020: Invited **Keynote Speaker** at the *36th Annual Meeting of the European Society of Human Reproduction and Embryology (ESHRE)*, *invited by Luca Gianaroli*.

- 09/09/2019: Invited **Keynote Speaker** at the *3rd International Workshop on Control Engineering and Synthetic Biology*, Oxford, UK, *invited by Antonis Papachristodoulou and Guy-Bart Stan.*

INVITED TALKS AND SEMINARS (SELECTED)

- 14/11/2024: Invited Speaker at the “Autocatalysis in reaction networks” seminar series, *invited by Nicola Vassena.*
- 28/08/2024: Invited Speaker at the Workshop “Methods and Algorithms for the Control of Complex Systems” in honor of Sophie Tarbouriech, Banyuls, France, *invited by Francesco Ferrante.*
- 27/09/2023: Seminar, IMT Lucca, *invited by Filippo Fabiani.*
- 14/09/2023: Seminar, Paris Saclay, *invited by Guilherme Mazanti and Riccardo Bonalli.*
- 26/08/2023: Invited Speaker at the BIRS workshop *Emerging Mathematical Challenges in Synthetic Biological Network Design*, BIRS (Banff International Research Station for Mathematical Innovation and Discovery), Banff (Alberta), Canada; *invited by Enoch Yeung, Andras Gyorgy, Mustafa Khammash, Ophelia Venturelli.*
- 05/07/2023: Invited Speaker at the *2023 Workshop on Uncertain Dynamical Systems (WUDS 2023)*, Kyoto, Japan; *invited by Mario Sznajder.*
- 14/06/2023: Seminar, TU Eindhoven, *invited by Valentina Breschi.*
- 11/04/2023: Online Seminar on Formal Reaction Kinetics, *invited by János Tóth.*
- 27/01/2023: LSU Control and Optimization Seminar, Mathematics Department, Louisiana State University, *invited by Michael Malisoff.*
- 13/01/2023: Seminar, University of Perugia, *invited by Paolo Valigi.*
- 07/11/2022: DEWS Colloquia Seminar, University of L’Aquila, Italy, *invited by Giordano Pola, Elena De Santis, Maria Domenica Di Benedetto.*
- 27/01/2022: CRAN Seminar, CNRS and Université de Lorraine, Nancy, France, *invited by Romain Postoyan.*
- 18/11/2021: Seminar on the Mathematics of Reaction Networks, *invited by Daniele Cappelletti, Elisenda Feliu and Stefan Müller.*
- 09/11/2021: BIOTECH Seminar, University of Trento, Italy, *invited by Antonella Motta.*
- 22/10/2021: CCDC Seminar, UC Santa Barbara, USA, *invited by Francesco Bullo.*
- 24/08/2021: Invited Speaker at the Mini-symposium *Dynamics and control of biological networks, Dynamics Days Europe 2021* conference, Nice, France, August 2021, *invited by Diego Oyarzún.*
- 21/06/2021: Invited Speaker, Control & Systems Theory Seminar, Technion, Haifa, Israel, *invited by Daniel Zelazo.*
- 27/05/2021: Invited **Keynote Speaker**, PhD Conference, University of Udine, Italy, *invited by David Esseni.*
- 19/05/2021: Invited Speaker at the Seminars in Computational Biology and Bioinformatics, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw, Poland, *invited by Ewa Szczurek and Bartek Wilczynski.*
- 11/03/2021: Invited Speaker at the seminar series “Advances in Socio-Epidemic Mathematical Modelling”, *Unione Matematica Italiana* (Italian Mathematical Society), *Modellistica Socio-Epidemiologica*, *invited by Andrea Pugliese.*
- 25/02/2021: Control Theory and Systems Biology Seminar, ETH Zürich, Switzerland, *invited by Mustafa Khammash.*
- 14/07/2020: Invited Speaker at the Panel Discussion “Data Driven Decision Making in the COVID-19 Pandemic”, Corona Session, *21st IFAC World Congress*, *invited by Teodoro Alamo.*
- 22/06/2020: Invited Speaker at the webinar *Modellistica e Covid-19* (Modelling and Covid-19), *Unione Matematica Italiana* (Italian Mathematical Society), *invited by Andrea Pugliese.*
- 24/04/2020: Invited Speaker at the *IEEE-CSS Italy Workshop on Modeling and Control of the COVID-19 Outbreak* (webinar), *invited by Fabrizio Dabbene.*
- 23/07/2019: DII Seminar, University of Trento, Italy, *invited by Dario Petri and Luca Zaccarian.*
- 22/05/2019: DISMA Seminar, Politecnico di Torino, Italy, *invited by Giacomo Como.*
- 10/05/2019: Invited Speaker at the *Control Days 2019* Workshop, University of Padova, Italy, *invited by Luca Schenato.*
- 02/05/2019: SAAS Seminar, Université Libre de Bruxelles, Belgium, *invited by Emanuele Garone.*
- 02/02/2019: ISSUGE Seminar, University of Genova, Italy, *invited by Bruno Burlando.*

- 19/09/2018: DII Seminar, University of Trento, Italy, *invited by Luca Zaccarian*.
- 14/09/2018: Invited Speaker at the **Plenary** Round Table: “Automatica oltre l’ingegneria” (*Automatic Control beyond Engineering*), congress Automatica.it (SIDRA), Firenze, Italy, *invited by Laura Giarre and Pietro Tesi*.
- 03/04/2018: Invited Session Speaker at NMC, *54th Dutch Mathematical Congress*, Koningshof in Veldhoven, The Netherlands, *invited by Jan Willem Polderman*.
- 07/03/2018: DIMI Seminar, University of Udine, Italy, *invited by Franco Blanchini*.
- 01/11/2017: DCSC Seminar, TU Delft, The Netherlands, *invited by Bart De Schutter*.
- 20/10/2017: NAS Seminar, TU Delft, The Netherlands, *invited by Piet Van Mieghem*.
- 28/09/2017: SACS Seminar, University of Twente, The Netherlands, *invited by Wilbert Samuel Rossi*.
- 20/04/2017: ISY Seminar, Linköping University, Sweden, *invited by Claudio Altafini*.
- 25/10/2016: MAC Seminar, LAAS-CNRS, Toulouse, France, *invited by Didier Henrion*.
- 15/06/2016: LCCC Seminar, Department of Automatic Control, Lund University, Sweden, *invited by Anders Rantzer*.
- 27/04/2016: ACSE Research Seminar, University of Sheffield, UK, *invited by Dario Bauso*.
- 26/05/2015: Systems Biology Seminar, Institute for System Theory and Automatic Control, University of Stuttgart, Germany, *invited by Nicole Radde*.
- 31/03/2015: Kolloquium Technische Kybernetik, Institute for System Theory and Automatic Control, University of Stuttgart, Germany, *invited by Frank Allgöwer*.

VISITS

- February 2025: University of Bayreuth, Germany, *invited by Lars Grüne, forthcoming*.
- January 2025: Tel Aviv University, Israel, supported by The Mortimer and Raymond Sackler Institute of Advanced Studies (IAS) as an IAS Outstanding Junior Fellow 2024/2025, *forthcoming*.
- October 2025: Università degli Studi del Sannio, Benevento, Italy, *invited by Carmen Del Vecchio*.
- August 2024: University of Cambridge, UK, *invited by Malcolm Smith*.
- September 2023: IMT Lucca, Italy, *invited by Filippo Fabiani*.
- February 2023: University of California at Los Angeles, USA, *invited by Elisa Franco*.
- May 2019: Politecnico di Torino, Italy, *invited by Giacomo Como*.
- April-May 2019: Université Libre de Bruxelles, Belgium, *invited by Emanuele Garone and supported by a European Erasmus+ Grant*.
- January-February 2019: University of Genova, Italy, *invited by Bruno Burlando and Paolo Giannoni*.
- September 2018: University of Trento, Italy, *invited by Luca Zaccarian*.
- December 2017: CSIRO Research Centre, Hobart, Australia, *invited by Jeffrey Dambacher*.
- December 2016: UC Riverside, USA, *invited by Elisa Franco*.
- October 2016: LAAS-CNRS Toulouse, France, *invited by Didier Henrion and Luca Zaccarian*.
- April 2016: University of Sheffield, UK, *invited by Dario Bauso*.
- March-May 2015: Universität Stuttgart, Germany, *hosted by Frank Allgöwer and supported by a DAAD Scholarship*.
- December 2014: UC Riverside, USA, *invited by Elisa Franco*.
- May 2014: Grenoble INP (Institut National Polytechnique de Grenoble), France.
- April 2014: CentraleSupélec (École supérieure d’électricité), Gif-sur-Yvette, France, *hosted by Sorin Oлару and supported by the Franco-Italian project Galileo*.
- June-August 2012: Caltech (California Institute of Technology), Pasadena (CA), USA, *hosted by Richard M. Murray and supported by a SURF Fellowship*.

EDITORIAL ACTIVITY AND ORGANISATION OF SCIENTIFIC EVENTS

JOURNALS

- Senior Editor for *IEEE Control Systems Letters*, since January 2025.
- Associate Editor for *Automatica*, since February 2022.
- Associate Editor for *IEEE Control Systems Letters*, January 2020 - December 2024.
Outstanding AE for the year 2021.
- Guest Editor for the 2025 Special Issue on “Feedback Control in Multicellular Molecular Communication Systems”, *IEEE Transactions on Molecular, Biological, and Multi-Scale Communications*.

- Lead Guest Editor for the 2022 Special Issue on “Control-Theoretic Approaches for Systems in the Life Sciences”, *International Journal of Robust and Nonlinear Control*.
- Guest Editor for the 2020-2021 Special Issues on “Systems & Control Research Efforts Against COVID-19 and Future Pandemics”, *Annual Reviews in Control*.
- Guest Associate Editor for the 2018 Special Issue on Systems and Synthetic Biology, “Control and Network Theory for Biological Systems”, *IEEE Control Systems Letters*.

CONFERENCES

- CSS Student Activities Chair, yearly involved in the organisation of the two main CSS-sponsored conferences – IEEE Conference on Decision and Control (CDC) and IEEE Conference on Control Technology and Applications (CCTA) – to manage Student Travel Awards, 2020-2021.
- Member of the Organizing Committee for the SIAM Control Theory Conference (SIAM CT '23), USA, July 2023.
- Student Activities Chair for the *60th IEEE Conference on Decision and Control (CDC 2021)*, Austin (TX), USA, December 13-17, 2021.
- Program Co-Chair and Publications Chair for the *15th IFAC Symposium on Large Scale Complex Systems (LSS 2019)*, Delft, The Netherlands, May 26-28, 2019.
- Member of the European Control Association Conference Editorial Board (EUCA-CEB, joining the International Program Committee of the *European Control Conference*), since 2019.
- Member of the IFAC Conference Editorial Board (joining the International Program Committee of the *IFAC World Congress*), since 2019.
- Member of the International Program Committee for
 - *65th IEEE Conference on Decision and Control (CDC 2026)*, Hawaii, USA, 2026.
 - *13th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2025)*, Reykjavik, Iceland, 2025.
 - *European Control Conference 2025*, Thessaloniki, Greece, 2025.
 - *63rd IEEE Conference on Decision and Control (CDC 2024)*, Milano, Italy, 2024.
 - *28th International Conference on System Theory, Control and Computing (ICSTCC 2024)*, Sinaia, Romania, 2024.
 - *10th International Conference on the Foundations of Engineering in Biology (FOSBE 2024)*, Corfu, Greece, 2024.
 - *18th IFAC Workshop on Time Delay Systems*, Udine, Italy, 2024.
 - *26th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2024)*, Cambridge, United Kingdom, 2024.
 - *4th IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON 2024)*, Lyon, France, 2024.
 - *European Control Conference 2024*, Stockholm, Sweden, 2024.
 - *22nd IFAC World Congress*, Yokohama, Japan, 2023.
 - *European Control Conference 2023*, Bucharest, Romania, 2023.
 - *12th IFAC Symposium on Nonlinear Control Systems*, Canberra, Australia, 2023.
 - *61st IEEE Conference on Decision and Control (CDC 2022)*, Cancún, Mexico, 2022.
 - *2022 IFAC Symposium on Robust Control Design (ROCOND 2022)*, Kyoto, Japan, 2022.
 - *30th Mediterranean Conference on Control and Automation (MED 2022)*, Vouliagmeni-Athens, Greece, 2022.
 - *25th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2022)*, Bayreuth, Germany, 2022.
 - *18th IFAC Workshop on Control Applications of Optimization (CAO 2022)*, Gif-sur-Yvette (Paris-Saclay), France, 2022.
 - *IFAC Conference on Network Systems (NECSYS'22)*, Zurich, Switzerland, 2022.
 - *European Control Conference 2022*, London, United Kingdom, 2022.
 - *European Control Conference 2021*, Rotterdam, The Netherlands, 2021.
 - *59th IEEE Conference on Decision and Control (CDC 2020)*, Jeju Island, Republic of Korea, 2020.
 - *21st IFAC World Congress*, Berlin, Germany, 2020.
 - *European Control Conference 2020*, St. Petersburg, Russia, 2020.
 - *7th International Workshop on Hybrid Systems and Biology (HSB 2020)*, Vienna, Austria, 2020.

- *8th IFAC Conference on Foundations of Systems Biology in Engineering (FOSBE 2019)*, València, Spain, 2019.
- *6th International Workshop on Hybrid Systems and Biology (HSB 2019)*, Prague, Czech Republic, 2019.
- *2nd IFAC Workshop on Linear Parameter Varying Systems (LPVS'18)*, Florianopolis, Brazil, 2018.

CONFERENCE SESSIONS AND WORKSHOPS

- Organiser of the Invited Session “Biological systems: Modelling, analysis and algorithms” (with Alessandro Borri, Rami Katz, Pasquale Palumbo and Abhyudai Singh) at the *63rd IEEE Conference on Decision and Control (CDC 2024)*, Milano, Italy, 2024.
- Organiser of the Invited Session “Optimal and model-based control of biological systems” (with Alessandro Borri, Rami Katz, Pasquale Palumbo and Abhyudai Singh) at the *63rd IEEE Conference on Decision and Control (CDC 2024)*, Milano, Italy, 2024.
- Organiser of the Invited Session “Modelling and dynamical aspects of biological systems” (with Shodhan Rao, Nirav Bhatt and Bayu Jayawardhana) at the *26th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2024)*, Cambridge, UK, 2024.
- Organiser of the Tutorial Session “Modelling and Control of Epidemics Across Scales” at the *61st IEEE Conference on Decision and Control (CDC 2022)*, Cancún, Mexico, 2022.
- Organiser of the “COVID-19 Focus Workshop” (with Philip E. Paré, Ji Liu, Emma Tegling, Henrik Sandberg, Carolyn L. Beck and Karl H. Johansson) at the *60th IEEE Conference on Decision and Control (CDC 2021)*, Austin (TX), USA, 2021.
- Organiser of the Open Invited Track “COVID-19 Pandemic: Modelling, Identification and Control” (with Julio Elias Normey-Rico and Teodoro Alamo) at the *11th IFAC Symposium on Biological and Medical Systems*, Ghent, Belgium, 2021.
- Organiser of the Invited Session “Biological rhythms and oscillators” (with Abhyudai Singh) at the *58th IEEE Conference on Decision and Control*, Nice, France, 2019.
- Organiser of the Invited Session “Modelling and analysis of the dynamics of competing agents” (with Daniele Casagrande) at the *2019 European Control Conference*, Napoli, Italy, 2019.
- Organiser of the Tutorial Session “Control-theoretic methods for biological networks” (with Franco Blanchini) at the *57th IEEE Conference on Decision and Control*, Fontainebleau, Miami Beach, USA, 2018.
- Organiser of the Invited Session “Biomolecular computing and feedback systems” (with Christian Cuba Samaniego) at the *57th IEEE Conference on Decision and Control*, Fontainebleau, Miami Beach, USA, 2018.
- Organiser of the Invited Session “Biological feedback systems: analysis and synthesis” (with Elisa Franco) at the *56th IEEE Conference on Decision and Control*, Melbourne, Australia, 2017.

SCIENTIFIC SOCIETIES AND COMMUNITY SERVICE

SCIENTIFIC COMMUNITY

- Elected Representative of Italy at the European Control Association (EUCA) Assembly, 2024-2029.
- Elected Member of the Board of Governors of the IEEE Control Systems Society, 2024-2026.
- SIAM Activity Group Liaison on Control and Systems Theory for the SIAM News, 2022-2024.
- CSS Associate Editor of the IEEE Life Sciences Community, 2019-2021.

SOCIETIES AND TECHNICAL COMMITTEES

- Member of the *IEEE* (Institute of Electrical and Electronics Engineers) and of the *CSS* (Control Systems Society); **elevated to the grade of Senior Member** in November 2021.
- Affiliate of the *IFAC* (International Federation of Automatic Control).
- Member of the IEEE TC on Robust and Complex Systems, since January 2019.
- Member of the IEEE TC on Systems and Synthetic Biology, since December 2016.
- Member of the IFAC TC 2.5 on Robust Control, since December 2013.

REVIEWING ACTIVITY

Outstanding Reviewer for the *IEEE Transactions on Automatic Control* (2016) and the *Annals of Internal Medicine* (2020).

INTERNATIONAL JOURNALS (SELECTED)

ACS Synthetic Biology, Annals of Internal Medicine, Automatica, Bioinformatics, BMJ Global Health, Communications Medicine, Digital Medicine, European Journal of Control, IEEE Trans. Automatic Control, IEEE Control Systems Letters, IEEE Trans. Control of Network Systems, IEEE Trans. Control Systems Technology, IEEE Trans. Intelligent Transportation Systems, IEEE Trans. Network Science and Engineering, IET Control Theory & Applications, IET Systems Biology, IET Synthetic Biology, IMA Journal of Mathematical Control and Information, Journal of Computational Science, Journal of Mathematical Biology, Journal of Mathematics in Industry, Journal of the Royal Society Interface, Linear Algebra and its Applications, Mathematical Problems in Engineering, Nature Communications, Nature Human Behaviour, Nature Medicine, Nonlinear Analysis: Hybrid Systems, PLOS One, Results in Applied Mathematics, SIAM Journal on Control and Optimization, Scientific Reports, Systems & Control Letters, Synthetic Biology.

INTERNATIONAL CONFERENCES (SELECTED)

American Control Conference, European Control Conference, IEEE Life Sciences Conference, IEEE Conference on Control Technology and Applications, IEEE Conference on Decision and Control, IEEE Multi-Conference on Systems and Control, IFAC Conference on Foundations of Systems Biology in Engineering, IFAC Symposium on Large Scale Complex Systems, IFAC Symposium on Robust Control Design, IFAC Workshop on Distributed Estimation and Control in Networked Systems, IFAC Workshop on Linear Parameter Varying Systems, IFAC Workshop on Time Delay Systems, IFAC World Congress, International Workshop on Hybrid Systems and Biology, Mediterranean Conference on Control & Automation.

GRANT PROPOSALS (SELECTED)

ANR (Agence Nationale de la Recherche, French Research Council), 2017; Belspo (Belgian Science Policy), 2023; FNRS (Fonds de la Recherche Scientifique, Belgian Research Council), 2021; WWTF (Vienna Science and Technology Fund), 2022; ERC (European Research Council), 2020-2021; FNR Luxembourg, 2024; ZonMw (The Netherlands Organisation for Health Research and Development), 2023.

ACADEMIC SERVICE

- Since 2024, chair of the Department Teacher-Student Committee for study programmes, University of Trento.
- Since 2022, member of the University Board for Doctoral Studies, University of Trento.
- Since 2021, member of the Department Committee for Study Orientation, University of Trento.
- 2021-2024, member of the Department Committee for the M.Sc. programme in Management and Industrial Systems Engineering, University of Trento.
- Since 2020, member of the Faculty Board of the Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.
- 2014-2016: member of the working group for the implementation of the *European Charter for Researchers* and of the *Code of Conduct for the Recruitment of Researchers*, University of Udine.

TEACHING

PH.D. COURSES

- June-July 2024: *Modern methods of finite-time control and observation* (with Rami Katz), Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.
- March 2024: *Mathematical epidemiology - modelling, parametrization and applications* (with Daniele Proverbio), Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.
- July 2023: *Network Dynamics* and *Introduction to Systems Biology*, Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.
- July 2021: *Introduction to Systems Biology*, Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.
- March 2021: *Systems Biology: quantitative and qualitative approaches to life sciences*, PhD Winter School in Agricultural Science and Biotechnology, University of Udine (*invited*).
- November 2020: *Network Dynamics*, Doctoral School in Materials, Mechatronics and Systems Engineering, University of Trento.

- October 2019: *Multi-Agent Network Dynamics and Games* (with Sergio Grammatico), National Graduate School for Systems and Control, Dutch Institute of Systems and Control (DISC).
- July 2019: *Dynamical System Approaches for Biology*, CISM-UniUD Joint Ph.D. School “Biosystems and Health: How to Take Advantage of Signal and System Modelling” (*invited*).
- 2016/2017: *An overview of Systems Biology: a quantitative approach to life sciences*, Ph.D. in Industrial and Information Engineering, University of Udine (*invited*).

SCHOOLS FOR ADVANCED STUDIES

- May 2023: Guest lecturer within the course on *Control of systems with delays* (held by Dimitri Breda), Scuola Superiore Universitaria (School for Advanced Studies), University of Udine (*invited*).

M.Sc. COURSES

- Yearly since 2021/2022: *Dynamics in Systems and Networks (Dynamical Systems and Network Dynamics)*, M.Sc. in Management and Industrial Systems Engineering, University of Trento.
- Yearly since 2020/2021: *Network Dynamics*, M.Sc. in Mechatronics Engineering, University of Trento.
- 2019/2020, 2020/2021, 2023/2024, 2024/2025: *Automatic Control* (with Luca Zaccarian), M.Sc. in Mechatronics Engineering, University of Trento.
- 2018/2019 (regular) and 2019/2020 (*invited*): *Networked and Distributed Control Systems* (with Tamás Keviczky), M.Sc. in Systems and Control, TU Delft.
- 2018/2019: *Robust and Multivariable Control Design* (with Simone Baldi), M.Sc. in Systems and Control, TU Delft.
- 2016/2017: *Network Dynamics* (with Giacomo Como), M.Sc. in Engineering, Lund University.
- 2015/2016: Lecturer of seminars within the course *Systems and Control Theory* (held by Franco Blanchini), M.Sc. in Electrical Engineering, University of Udine.

B.Sc. COURSES

- 2015/2016: Teaching assistant for the course *Mathematical Analysis I* (held by Fabio Zanolin), B.Sc. in Mechanical Engineering, University of Udine.

RESEARCH GROUP, SUPERVISION AND MENTORING

POSTDOCTORAL RESEARCHERS

- Since November 2024: **Alejandro Anderson**, University of Trento.
- Since September 2024: **Gustav Nilsson**, University of Trento.
- Since November 2023: **Francesca Calà Campana**, University of Trento.
- Since October 2023: **Rami Katz**, University of Trento.
- Since July 2023: **Daniele Proverbio**, University of Trento.
- November 2021 - November 2022: **Francesca Calà Campana**, University of Trento.

PH.D. STUDENTS

- Since November 2023: **Uros Sutulovic**, University of Trento; supervisor.
- Since July 2021: **Maarten de Jong**, TU Delft; supervisor (*promotor*).
- June 2019 - June 2023: **Carlos Andrés Devia**, TU Delft; supervisor (*promotor*); thesis “Behaviour and Stability of Interconnected Systems: From Biological Applications to Opinion Dynamics” defended on June 12th, 2023.
- Since October 2021: Gianni Lunardi, University of Trento; co-supervisor (advisory role).
- 2018-2019: Gabriel de Albuquerque Gleizer, TU Delft; co-promotor (advisory role).

POST-LAUREAM RESEARCHERS

- June-November 2023: **Uros Sutulovic**, University of Trento.

M.Sc./B.Sc. THESIS STUDENTS

- Ongoing M.Sc. thesis students, Trento: Riccardo Tessarin.

- Graduated M.Sc. thesis students, Trento: Damiano Reginato (March 2024), Nicola Rossi (October 2023), Giulia Tuccio (September 2022), Domenico Fiore (December 2021), Francesco Riz (September 2020); TU Delft: Jerry An (December 2020), Nicolas Mavrocordatos (April 2020), Ghiline van Furth (March 2020), Jeroen Postma (February 2020), Tijmen Witte (December 2019), Neel Nagda (August 2019), Patrick Ledzian (August 2019), Xiajing Li (May 2019), Lotte M. de Graaf (May 2019), Rik Oude Grote Bevelsberg (March 2019), Daan van Wijk (September 2018).
- Graduated B.Sc. thesis students, Trento: Elia Bontempelli (November 2021); TU Delft: Chris van der Hoorn, Bob van der Meer, Bart Schoone, Erik Sieburgh (June 2019); Sibren Allard, Koen Bakker, Thomas Ceha, Anton Louwen (June 2018).

GRADUATION/EVALUATION COMMITTEES

- Ph.D. Reviewer for Martina Alutto, Politecnico di Torino (2025).
- Ph.D. Reviewer for Juan Marcelo Castellino, University of Trieste (2023).
- Ph.D. Reviewer and Graduation Committee Chair for Graziano Manduzio, University of Firenze (2023).
- Ph.D. Graduation Committee Member for Davide Salzano, University of Napoli Federico II and University of Bristol (2022).
- Ph.D. Reviewer for Sara Calandrini, University of Perugia (2022).
- Ph.D. Reviewer and Graduation Committee Chair for Martin Heyden, Lund University (2022).
- Ph.D. Final Examination and Graduation Committee Member for 10 candidates, University of Padova (2022).
- Ph.D. Reviewer for Mirko Brentari, University of Trento (2019).
- Ph.D. Reviewer and Graduation Committee Member for Hadi Taghvafard, University of Groningen (2018).
- Ph.D. Yearly Evaluation Committee Member for several Ph.D. students (Trento, since 2020).
- Ph.D. Go/No-Go Evaluation Committee Member for 5 Ph.D. students (TU Delft, 2018-2019).
- M.Sc. Graduation Committee Member for several students each year (Trento, yearly since 2020; TU Delft, 2017-2020).
- B.Sc. Graduation Committee Member (Trento, 2021 and TU Delft, 2018-2019).

HIRING COMMITTEES

- Member of the hiring committee for an Assistant Professor, Università degli Studi di Bologna, 2023.
- Member of the hiring committee for an Assistant Professor, IMT Lucca, 2023.
- Member of the hiring committee for a Full Professor, Università degli Studi di Bergamo, 2024.

PRESS, OUTREACH AND PUBLIC ENGAGEMENT ACTIVITIES

- Featured in the column “People in Control”, *IEEE Control Systems Magazine*, Volume 41, Issue 6, December 2021 (DOI: 10.1109/MCS.2021.3107760).
- Invited speaker at TEDxTrento, November 25, 2023.
- From March 2020 onwards: Interviews and media coverage on local, national and international media about research on COVID-19 modelling and control:
 - International Media: Nature News; “Rethinking Testing” by Michael Le Page, *New Scientist*, vol. 246, n. 3281, p. 10, 2020, DOI: 10.1016/S0262-4079(20)30876-9; The Times of India Blog *Seeing the Invisible* by Sanjeev Sabhlok
 - National Television: SkyTG24 (“Timeline” and “I numeri della pandemia”);
 - National Press Agencies and Newspapers: AGI, ADNkronos, ANSA, Focus, InsideOver Il Giornale, Il Manifesto, Il Mattino, Il Messaggero, Il Sole 24 Ore, La Repubblica, La Stampa;
 - Local Television: RAI TGR Trentino;
 - Local Newspapers: Alto Adige, L’Adige, Il Dolomiti, Il Trentino, Messaggero Veneto.
- In 2017, interviews and coverage on local media (Messaggero Veneto) after receiving the EECI Ph.D. Award 2016.

- Participation in the preparation and generation of the dissemination and awareness-raising content for the website <https://containcovid-pan.eu/>
- 17/03/2023: Speaker at *Pensa Trasversale 2023: Visioni Pandemiche*, event for high school students organised by the Study Orientation services of the University of Trento, Italy.
- 09/06/2021: Invited speaker at *Scienziati nella Pandemia (Scientists in the Pandemic)*, event organised by the Department of Physics, University of Trento, Italy, *invited by Roberto Battiston, Chiara La Tessa, Gianluca Lattanzi.*
- 08/10/2020: Invited speaker at *XX Seminario di Tecnologie dell'Informazione, Ingegneria dei sistemi e sistemi biologici: prospettive e opportunità per una medicina personalizzata* (XX Information Technologies Seminar, Systems Engineering and Biological Systems: Perspectives and Opportunities for Personalised Medicine); *Proprietà strutturali per l'analisi e il controllo di sistemi biologici* (Structural Properties for the Analysis and the Control of Biological Systems), Accademia Galileiana di Scienze Lettere ed Arti in Padova, Padova, Italy, *invited by Maria Elena Valcher.*
- 22/05/2020: Seminar at the University of Trento, Italy, *Modelli matematici per capire e prevedere l'epidemia di COVID-19* (Mathematical models to understand and predict the COVID-19 epidemic), within the course *Fondamenti di analisi di sistemi biomedici* (Analysis of biomedical systems), B.Sc. in Industrial Engineering, *invited by Giandomenico Nollo.*
- 20/05/2020: Seminar at the High School "Liceo Michelangelo Buonarroti", Monfalcone (GO), Italy, *Modelli matematici per capire e prevedere l'epidemia di COVID-19* (Mathematical models to understand and predict the COVID-19 epidemic), *invited by Armando Pisani.*
- 26/10/2019: Invited speaker at *Festival della Scienza 2019* (Science Festival 2019), Genova, Italy, *invited by Bruno Burlando.*
- 2015/2016: Representative of the University of Udine in lectures given at high schools to illustrate the university engineering programmes and increase the presence of women in science and technology by providing role models.
- 2015/2016: Involved in open days at the University of Udine, aimed at promoting scientific and engineering disciplines.

PERSONAL INTERESTS

LANGUAGES

- Italian (mother tongue).
- English (fluent).
- Dutch, German and Swedish (basic).

INTERESTS AND ACTIVITIES

- Deep love for Humanities: Literature, History, Philosophy, Classical languages (Greek and Latin).
- Writing poems and novels; Singing; Playing the flute and the clarinet; Classical Music and Opera; Theater; Art & Photography; Swimming, cycling, hiking; Travelling.

PUBLICATIONS

BIBLIOMETRIC INDICES (20TH OCTOBER 2024)

- Citations: 2613 (Scopus), 3935 (Google Scholar)
- H-index: 19 (Scopus), 23 (Google Scholar)

Authors of papers marked with () are listed in alphabetical order, following the tradition in mathematical disciplines.*

REFEREED JOURNAL ARTICLES

The corresponding author is underlined.

- [J75] E. Salvato, F. Blanchini, G. Fenu, **G. Giordano**, F. A. Pellegrino, “Model-free kinematic control for robotic systems”, *Automatica*, **2024**.
- [J74] P. Braun, **G. Giordano**, C. M. Kellett, I. Shames, L. Zaccarian, “Optimizing shifted stabilizers with asymmetric input saturation”, *IEEE Transactions on Automatic Control*, **2024**.(*)
- [J73] N. Zaupa, **G. Giordano**, I. Queinnec, S. Tarbouriech, L. Zaccarian, “Equivalent conditions for the synchronization of identical linear systems over arbitrary interconnections”, *European Journal of Control*, Volume 80, Part B, 101099, **2024**.
- [J72] F. Calà Campana, R. Katz, **G. Giordano**, “Sequential-Quadratic-Hamiltonian optimal control of epidemic models with an arbitrary number of infected and non-infected compartments”, *IEEE Control Systems Letters*, 8:1805-1810, **2024**.
Also selected for presentation as an invited paper at the 63rd IEEE Conference on Decision and Control, Milano, Italy, on December 16-19, 2024.
- [J71] I. Demori, S. Losacco, **G. Giordano**, V. Mucci, F. Blanchini, B. Burlando, “Fibromyalgia pathogenesis explained by a neuroendocrine multistable model”, *PLOS One*, 19 (7), e0303573, **2024**.
- [J70] C. A. Devia, **G. Giordano**, “Graphical analysis of agent-based opinion formation models”, *PLOS One*, 19 (5), e0303204, **2024**.
- [J69] F. Blanchini, **G. Giordano**, “Spiking systems in population-infection dynamics”, *IEEE Control Systems Letters*, 8:688-693, **2024**.(*)
Also selected for presentation as an invited paper at the 63rd IEEE Conference on Decision and Control, Milano, Italy, on December 16-19, 2024.
- [J68] D. De Cecco, F. Blanchini, D. Casagrande, **G. Giordano**, E. Salvato, “Linear systems with uncertain complex coefficients for AC sensitivity analysis”, *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2024**.
- [J67] C. A. Devia, **G. Giordano**, “Probabilistic analysis of agent-based opinion formation models”, *Scientific Reports*, 13:20152, **2023**.
- [J66] M. de Jong, F. Calà Campana, P. Li, Q. Pan, **G. Giordano**, “A novel viral infection model to guide optimal mpox treatment”, *IEEE Control Systems Letters*, 7:3145-3150, **2023**.
Also selected for presentation as an invited paper at the 62nd IEEE Conference on Decision and Control, Marina Bay Sands, Singapore, on December 13-15, 2023.
- [J65] F. Blanchini, E. Franco, **G. Giordano**, D. Osmanović, “Robust microphase separation through chemical reaction networks”, *IEEE Control Systems Letters*, 7:2281-2286, **2023**.(*)
Also selected for presentation as an invited paper at the 62nd IEEE Conference on Decision and Control, Marina Bay Sands, Singapore, on December 13-15, 2023.
- [J64] C. A. Devia, **G. Giordano**, “Classification-based opinion formation model embedding agents’ psychological traits”, *Journal of Artificial Societies and Social Simulation*, 26(3), 1, **2023**.
- [J63] S. Milanese, F. Rosset, M. Colaneri, **G. Giordano**, K. Pesenti, F. Blanchini, P. Bolzern, P. Colaneri, P. Sacchi, G. De Nicolao, R. Bruno, “Early detection of variants of concern via funnel plots of regional reproduction numbers”, *Scientific Reports*, 13:1052, **2023**.
- [J62] F. Blanchini, D. Breda, **G. Giordano** and D. Liessi, “Michaelis-Menten networks are structurally stable”, *Automatica*, 147(1), 110683, **2023**.(*)
- [J61] F. Blanchini, P. Bolzern, P. Colaneri, G. De Nicolao and **G. Giordano**, “Optimal control of compartmental models: the exact solution”, *Automatica*, 147(1), 110680, **2023**.(*)

- [J60] J. Landau, C. Cuba Samaniego, **G. Giordano**, E. Franco, “Computational characterization of recombinase circuits for periodic behaviors”, *iScience*, 26(1), 105624, **2023**.
- [J59] F. Blanchini, **G. Giordano**, F. Riz and L. Zaccarian, “Solving nonlinear algebraic loops arising in input-saturated feedbacks”, *IEEE Transactions on Automatic Control*, 68(4), 2079-2093, **2023**.(*)
- [J58] B. Burlando, V. Mucci, C. J. Browne, S. Losacco, I. Indovina, L. Marinelli, F. Blanchini, **G. Giordano**, “Mal de Debarquement Syndrome explained by a vestibulo-cerebellar oscillator”, *Mathematical Medicine and Biology*, 40(1), 96-110, **2023**.
- [J57] D. Breda, D. Frizzera, **G. Giordano**, E. Seffin, V. Zanni, D. Annoscia, C. J. Topping, F. Blanchini, F. Nazzi, “A deeper understanding of system interactions can explain contradictory field results on pesticide impact on honey bees”, *Nature Communications*, 13(1), 5720, **2022**.
- [J56] Q. Zheng, C. Bao, P. Li, A. C. de Vries, **G. Giordano**, Q. Pan, “Projecting the impact of testing and vaccination on the transmission dynamics of the 2022 monkeypox outbreak in the United States”, *Journal of Travel Medicine*, taac101, **2022**.
- [J55] F. Blanchini, P. Colaneri, **G. Giordano**, I. Zorzan, “Vertex results for the robust analysis of uncertain biochemical systems”, *Journal of Mathematical Biology*, 85(4), 35, **2022**.(*)
- [J54] C. A. Devia and **G. Giordano**, “A framework to analyze opinion formation models”, *Scientific Reports*, 12(1), 13441, **2022**.
- [J53] I. Demori, **G. Giordano**, V. Mucci, S. Losacco, L. Marinelli, P. Massobrio, F. Blanchini and B. Burlando, “Thalamocortical bistable switch as a theoretical model of fibromyalgia pathogenesis inferred from a literature survey”, *Journal of Computational Neuroscience*, 50(4), 471-484, **2022**.
- [J52] F. Blanchini, C. A. Devia, **G. Giordano**, R. Pesenti and F. Rosset, “Fair and sparse solutions in network-decentralised flow control”, *IEEE Control Systems Letters*, 6:2984-2989, **2022**.(*)
Also selected for presentation at the 61st IEEE Conference on Decision and Control, Cancún, Mexico, on December 6-9, 2022.
- [J51] T. Krueger, K. Gogolewski, M. Bodych, A. Gambin, **G. Giordano**, S. Cuschieri, T. Czypionka, M. Perc, E. Petelos, M. Rosińska and E. Szczurek, “Risk assessment of COVID-19 epidemic resurgence in relation to SARS-CoV-2 variants and vaccination passes”, *Communications Medicine*, 2:23, **2022**.
- [J50] A. Calero Valdez, E. N. Iftekhhar, M. Oliu-Barton, R. Böhm, S. Cuschieri, T. Czypionka, U. Dumpis, **G. Giordano**, C. Hanson, Z. Hel, A. Helova, I. Kickbusch, P. Klimek, L. Kojan, M. Kretzschmar, T. Krueger, J. Krutzinna, B. Lange, J. V. Lazarus, H. Machado, M. McKee, K. Nagel, M. Perc, E. Petelos, N. Popivanov, B. Pradelski, B. Prainsack, K. Schroeder, S. Tsiodras, P. Wilmes and G. Wolff, “Europe must come together to confront omicron”, *BMJ*, 376:o90, **2022**.
- [J49] T. Alamo, P. Millán, D. G. Reina, V. M. Preciado and **G. Giordano**, “Challenges and future directions in pandemic control”, *IEEE Control Systems Letters*, 6:722-727, **2022**.
Also selected for presentation as an **invited paper** at the 60th IEEE Conference on Decision and Control, Austin (TX), USA, on December 15, 2021.
- [J48] P. Braun, **G. Giordano**, C. M. Kellett and L. Zaccarian, “An asymmetric stabilizer based on scheduling shifted coordinates for single-input linear systems with asymmetric saturation”, *IEEE Control Systems Letters*, 6:746-751, **2022**.(*)
Also selected for presentation at the 60th IEEE Conference on Decision and Control, Austin (TX), USA, on December 16, 2021.
- [J47] F. Blanchini and **G. Giordano**, “Dual chemical reaction networks and implications for Lyapunov-based structural stability”, *IEEE Control Systems Letters*, 6:488-493, **2022**.(*)
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- [J46] T. Alamo, P. Millán, D. G. Reina, V. M. Preciado and **G. Giordano**, “Data-driven methods for present and future pandemics: Monitoring, modelling and managing”, *Annual Reviews in Control*, 52:448-464, **2021**.
- [J45] **G. Giordano**, M. Colaneri, A. Di Filippo, F. Blanchini, P. Bolzern, G. De Nicolao, P. Sacchi, P. Colaneri and R. Bruno, “Modeling vaccination rollouts, SARS-CoV-2 variants and the requirement for non-pharmaceutical interventions in Italy”, *Nature Medicine*, 27:993-998, **2021**.
- [J44] V. Priesemann, M. Brinkmann, S. Ciesek, S. Cuschieri, T. Czypionka, **G. Giordano**, D. Gurdasani, C. Hanson, N. Hens, E. Iftekhhar, M. Kelly-Irving, P. Klimek, M. Kretzschmar, A. Peichl, M. Perc,

- F. Sannino, E. Schernhammer, A. Schmidt, A. Staines and E. Szczurek, “Call for a pan-European COVID-19 response must be comprehensive – Authors’ reply”, *The Lancet*, 397(10284):1541, **2021**.
- [J43] A. Fochesato, G. Simoni, F. Reali, **G. Giordano**, E. Domenici and L. Marchetti, “A retrospective analysis of the COVID-19 pandemic evolution in Italy”, *Biology*, 10(4):311, **2021**.
- [J42] F. Blanchini and **G. Giordano**, “Structural analysis in biology: a control-theoretic approach”, survey, *Automatica*, 126(4):109376, **2021**.^(*)
- [J41] V. Priesemann, R. Balling, M. Brinkmann, S. Ciesek, T. Czypionka, I. Eckerle, **G. Giordano**, C. Hanson, Z. Hel, P. Hotulainen, P. Klimek, A. Nassehi, A. Peichl, M. Perc, E. Petelos, B. Prainsack and E. Szczurek, “An action plan for pan-European defence against new SARS-CoV-2 variants”, *The Lancet*, 397(10273):469-470, **2021**.
- [J40] C. A. Devia and **G. Giordano**, “Topology-independent robust stability conditions for uncertain MIMO networks”, *IEEE Control Systems Letters*, 5(1):325-330, **2021**.
Also selected for presentation as an **invited paper** at the **59th IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, on December 15, 2020**.
- [J39] F. Blanchini, D. Casagrande, F. Fabiani, **G. Giordano**, D. Palma and R. Pesenti, “A threshold mechanism ensures minimum-path flow in lightning discharge”, *Scientific Reports*, 11:280, **2021**.^(*)
- [J38] V. Priesemann, M. Brinkmann, S. Ciesek, S. Cuschieri, T. Czypionka, **G. Giordano**, D. Gurdasani, C. Hanson, N. Hens, E. Iftekhar, M. Kelly-Irving, P. Klimek, M. Kretzschmar, A. Peichl, M. Perc, F. Sannino, E. Schernhammer, A. Schmidt, A. Staines and E. Szczurek, “Calling for pan-European commitment for rapid and sustained reduction in SARS-CoV-2 infections”, *The Lancet*, 397(10269):92-93, **2021**.
- [J37] C. Drioli, **G. Giordano**, D. Salvati, F. Blanchini and G. L. Foresti, “Acoustic target tracking through a cluster of mobile agents”, *IEEE Transactions on Cybernetics*, 51(5):2587-2600, **2021**.
- [J36] B. Burlando, M. Milanese, **G. Giordano**, T. Bonifacino, S. Ravera, F. Blanchini and G. Bonanno, “A multistationary loop model of ALS unveils critical molecular interactions involving mitochondria and glucose metabolism”, *PLOS One*, 15(12):e0244234, **2020**.
- [J35] **G. Giordano**, F. Blanchini, R. Bruno, P. Colaneri, A. Di Filippo, A. Di Matteo and M. Colaneri, “Modelling the COVID-19 epidemic and implementation of population-wide interventions in Italy”, *Nature Medicine*, 26:855-860, **2020**.
- [J34] V. Mucci, I. Indovina, C. J. Browne, F. Blanchini, **G. Giordano**, L. Marinelli and B. Burlando, “Mal de Debarquement Syndrome: a matter of loops?”, *Frontiers in Neurology*, 11:1387, **2020**.
- [J33] D. Palma, F. Blanchini, **G. Giordano** and P. L. Montessoro, “A dynamic biometric authentication algorithm for near-infrared palm vascular patterns”, *IEEE Access*, 8:118978–118988, **2020**.
- [J32] T. Rollo, F. Blanchini, **G. Giordano**, R. Specogna and D. Esseni, “Stabilization of negative capacitance in ferroelectric capacitors with and without a metal interlayer”, *Nanoscale*, 12(10):6121–6129, **2020**; Correction: *Nanoscale*, 12(22):12177-12178, **2020**.
- [J31] C. Cuba Samaniego, **G. Giordano** and E. Franco, “Periodic switching in a recombinase-based molecular circuit”, *IEEE Control Systems Letters*, 4(1):241–246, **2020**.
Also selected for presentation as an **invited paper** at the **58th IEEE Conference on Decision and Control, Nice, France, on December 11, 2019**.
- [J30] F. Blanchini, G. Chesi, P. Colaneri and **G. Giordano**, “Checking structural stability of BDC-decomposable systems via convex optimisation”, *IEEE Control Systems Letters*, 4(1):205-210, **2020**.^(*)
Also selected for presentation at the **58th IEEE Conference on Decision and Control, Nice, France, on December 13, 2019**.
- [J29] B. Burlando, F. Blanchini and **G. Giordano**, “Loop analysis of blood pressure/volume homeostasis”, *PLOS Computational Biology*, 15(9): e1007346, **2019**.
- [J28] **G. Giordano**, M. Segata, F. Blanchini and R. Lo Cigno, “The joint network/control design of platooning algorithms can enforce guaranteed safety constraints”, *Ad Hoc Networks*, 94:101962, **2019**.
- [J27] D. Palma, P. L. Montessoro, **G. Giordano** and F. Blanchini, “Biometric palmprint verification: a dynamical system approach”, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 49(12):2676-2687, **2019**.
- [J26] F. Blanchini, D. Casagrande, F. Fabiani, **G. Giordano** and R. Pesenti, “Network-decentralised optimisation and control: an explicit saturated solution”, *Automatica*, 103:379-389, **2019**.^(*)

- [J25] F. Blanchini and **G. Giordano**, “BDC-decomposition for global influence analysis”, *IEEE Control Systems Letters* – Special Issue on Control and Network Theory for Biological Systems, 3(2):260-265, **2019**.^(*)
- [J24] **G. Giordano**, D. Bauso and F. Blanchini, “A robust saturated strategy for n -player Prisoner’s dilemma”, *SIAM Journal on Control and Optimization*, 56(5):3478-3498, **2018**.
- [J23] **G. Giordano**, “CERT-mediated ceramide transfer is a structurally tunable flow-inducing mechanism with structural feed-forward loops”, *Royal Society Open Science*, 5(6):180494, **2018**.
- [J22] F. Blanchini, C. Cuba Samaniego, E. Franco and **G. Giordano**, “Homogeneous time constants promote oscillations in negative feedback loops”, *ACS Synthetic Biology*, 7(6):1481-1487, **2018**.^(*)
- [J21] F. Blanchini, C. Cuba Samaniego, E. Franco and **G. Giordano**, “Aggregates of Monotonic Step Response systems: a structural classification”, *IEEE Transactions on Control of Network Systems* – Special Issue on Approaches to Control Biological and Biologically Inspired Networks, 5(2):782-792, **2018**.^(*)
- [J20] F. Blanchini, D. Casagrande, **G. Giordano** and U. Viaro, “A bounded complementary sensitivity function ensures topology-independent stability of homogeneous dynamical networks”, *IEEE Transactions on Automatic Control*, 63(4):1140-1146, **2018**.^(*)
- [J19] F. Blanchini and **G. Giordano**, “Polyhedral Lyapunov functions structurally ensure global asymptotic stability of dynamical networks iff the Jacobian is non-singular”, *Automatica*, 86(12):183-191, **2017**.^(*)
- [J18] **G. Giordano** and C. Altafini, “Qualitative and quantitative responses to press perturbations in ecological networks”, *Scientific Reports*, 7:11378, **2017**.
- [J17] F. Blanchini, G. Fenu, **G. Giordano** and F. A. Pellegrino, “Model-free plant tuning”, *IEEE Transactions on Automatic Control*, 62(6):2623-2634, **2017**.^(*)
- [J16] **G. Giordano** and F. Blanchini, “Flow-inducing networks”, *IEEE Control Systems Letters*, 1(1):44-49, **2017**.
Also selected for presentation at the 56th IEEE Conference on Decision and Control, Melbourne, Australia, on December 14, 2017.
- [J15] F. Blanchini, D. Casagrande, **G. Giordano**, S. Miani, S. Oлару and V. Reppa, “Active fault isolation: a duality-based approach via convex programming”, *SIAM Journal on Control and Optimization*, 55(3):1619-1640, **2017**.^(*)
- [J14] F. Blanchini, G. Fenu, **G. Giordano** and F. A. Pellegrino, “A convex programming approach to the inverse kinematics problem for manipulators under constraints”, *European Journal of Control*, 33:11-23, **2017**.^(*)
- [J13] F. Blanchini, D. Casagrande, **G. Giordano** and P. L. Montessoro, “A robust decentralized control for channel-sharing communication”, *IEEE Transactions on Control of Network Systems*, 4(2):336-346, **2017**.^(*)
- [J12] C. Cuba Samaniego, **G. Giordano**, F. Blanchini and E. Franco, “Stability analysis of an artificial biomolecular oscillator with non-cooperative regulatory interactions”, *Journal of Biological Dynamics*, 11(1):102-120, **2017**.
- [J11] **G. Giordano**, F. Blanchini, E. Franco, V. Mardanlou and P. L. Montessoro, “The smallest eigenvalue of the generalized Laplacian matrix, with application to network-decentralized estimation for homogeneous systems”, *IEEE Transactions on Network Science and Engineering*, 3(4):312-324, **2016**.
- [J10] M. T. Laraba, S. Oлару, S.-I. Niculescu, F. Blanchini, **G. Giordano**, D. Casagrande and S. Miani, “Guide on set invariance for delay difference equations”, 41:13-23, *Annual Reviews in Control*, **2016**.
- [J9] F. Blanchini, D. Casagrande, **G. Giordano** and U. Viaro, “Robust constrained Model Predictive Control of fast electromechanical systems”, *Journal Franklin Institute*, 353(9):2087-2103, **2016**.^(*)
- [J8] C. Cuba Samaniego, **G. Giordano**, J. Kim, F. Blanchini and E. Franco, “Molecular titration promotes oscillations and bistability in minimal network models with monomeric regulators”, *ACS Synthetic Biology*, 5(4):321-333, **2016**.
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- [J5] **G. Giordano**, C. Cuba Samaniego, E. Franco and **F. Blanchini**, “Computing the structural influence matrix for biological systems”, *Journal of Mathematical Biology*, 72(7):1927-1958, **2016**.
- [J4] F. Blanchini, E. Franco and **G. Giordano**, “Network-decentralized control strategies for stabilization”, *IEEE Transactions on Automatic Control*, 60(2):491-496, **2015**.^(*)
- [J3] **F. Blanchini** and **G. Giordano**, “Piecewise-linear Lyapunov functions for structural stability of biochemical networks”, *Automatica*, 50(10):2482-2493, **2014**.^(*)
- [J2] **F. Blanchini**, E. Franco and **G. Giordano**, “A structural classification of candidate oscillatory and multistationary biochemical systems”, *Bulletin of Mathematical Biology*, 76(10):2542-2569, **2014**.^(*)
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BOOK CHAPTERS

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