Fabio Pasqualetti

Curriculum Vitae

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University of California at Riverside
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Current Positions

- **Professor**
  Mechanical Engineering, University of California at Riverside — July 2021 – Present
- **Graduate Advisor**
  MS Robotics Program, University of California at Riverside — July 2021 – Present
- **Associate Director**
  Center for Robotics and Intelligent Systems (CRIS), University of California, Riverside — May 2019 – Present
- **Cooperating Faculty**
  Electrical and Computer Engineering, University of California, Riverside — July 2016 – Present

Previous Positions

- **Associate Professor**
  Mechanical Engineering, University of California at Riverside — July 2019 – June 2021
- **Assistant Professor**
  Mechanical Engineering, University of California at Riverside — July 2013 – June 2019
- **Postdoctoral Scholar**
  Mechanical Engineering, University of California at Santa Barbara — Oct. 2012 – June 2013

Education

- **University of California at Santa Barbara** — Santa Barbara, CA
  Ph.D. in Mechanical Engineering; Advisor: Francesco Bullo — Jan. 2008 – Sep. 2012
- **University of Pisa** — Pisa, Italy
  Laurea Magistrale (M.Sc. equivalent) in Automation Engineering; Advisor: Antonio Bicchi — Sep. 2004 – Oct. 2007
- **University of Pisa** — Pisa, Italy
  Laurea (B.Sc. equivalent) in Computer Engineering — Sep. 2000 – Aug. 2004

Honors and Awards

- **Antonio Ruberti Young Researcher Prize**: "For his foundational contributions to the theories of cyber-physical security, complex networks, and data-driven control," IEEE Control Systems Society. Dec. 2023
- **O. Hugo Schuck Best Paper Award**: "Accuracy Prevents Robustness in Perception-based Control", American Control Conference, 1838-1844, Denver, CO, July, 2020. May 2021
- **Control Systems Letters Outstanding Paper Award**: "Data-driven Minimum-Energy Controls for Linear Systems", IEEE LCSS 3(3), 589-594, 2019. Dec. 2020
- **Roberto Tempo Best CDC Paper Award**: "A Framework to Control Functional Connectivity in the Human Brain", IEEE Conference on Decision and Control, 4697-4704, Nice, France, December, 2019. Dec. 2020
- **ACC Best Student Paper Award Finalist (senior author)**: "Accuracy Prevents Robustness in Perception-based Control," American Control Conference, Denver, CO. July 2020
- **AFOSR Young Investigator Research Award**: "Data-Driven Control of Dynamical Networks". Oct. 2019
- **ACC Best Student Paper Award (senior author)**: "Exact and Approximate Stability Conditions for Cluster Synchronization of Kuramoto Oscillators," American Control Conference, Philadelphia, PA. July 2019
- **ARO Young Investigator Program Award**: "Design and Operation of Secure Multi-Agent Networks". Sep. 2017

- **IEEE Transactions on Control of Network Systems Outstanding Paper Award**: "Controllability Metrics, Limitations and Algorithms for Complex Networks," IEEE TCNS 1(1), 40-52, 2014. Dec. 2016
- **ACC Best Student Paper Award Finalist (co-author)**: "Security in stochastic control systems: Fundamental limitations and performance bounds," American Control Conference, Chicago, IL. July 2015
- **Outstanding Research Award**: From the Dept. of Mechanical Engineering, UC Riverside, Riverside. May 2015
- **Regents Fellowship**: From the Dept. of Mechanical Engineering, UC Riverside, Riverside. Jun. 2014
- **Best PhD Thesis Award**: From the Dept. of Mechanical Engineering, UC Santa Barbara, Santa Barbara. Mar. 2013
- **Excellence Fellowship**: From the Dept. of Mechanical Engineering, UC Santa Barbara, Santa Barbara. Jun. 2012
- **General Chairs' Recognition Award for Interactive Papers**: IEEE CDC, Shanghai, China. Dec. 2012

Sponsored Projects

- **Collaborative Research: CRCNS-France Research Proposal: Integrating astrocytes as contextual multiplexers of neural dynamics and computation**: $900K, NSF, Co-PI, 10/01/24 - 09/30/2027.
- **MURI: NEURAL-SYNC: From Synchronized Oscillations to Neural Computing, Communication, and Adaptation**: $9M, NSF, Co-PI, 05/01/24 - 04/30/2029.
- **Collaborative Research: Analysis and Control of Nonlinear Oscillatory Networks for the Design of Novel Cortical Stimulation Strategies**: $600K, NSF, PI, 10/01/23 - 09/30/2026.
- **MURI: Understanding and Implementing Multi-Scale Neuro-Glial Dynamics for Robust Non-Markovian Learning and Decision-Making**: $3.75M, ARO, co-PI, 07/01/21 - 06/30/2024.
- **Understanding and Manipulating Cellular and Circuit-Level Vulnerability to Neurodegeneration in Parkinson's Disease**: $9M ($300K my share), ASAP, co-PI, 10/01/21 - 30/09/2024.
- **NC4: Center for Networked Configurable Command, Control and Communications for Rapid Situational Awareness**: $7.5M, ARL, co-PI, 10/01/20 - 09/30/2025.
- **AI Institute: Planning: AI-Enabled Secure and Responsive Smart Manufacturing**: $500K, NSF, co-PI, 09/01/20 - 08/31/2022.
- **AFOSR YIP: Data-Driven Control of Dynamical Networks: Fundamental Limitations, Algorithms, and Robustness Guarantees**: $444K, AFOSR, PI, 06/15/20 - 06/14/23.
- **NCS-FO: Collaborative Research: Analysis, prediction, and control of synchronized neural activity**: $1M, NSF, Lead PI, 09/01/19 - 08/31/23.
- **Analysis and Control of Phase-Amplitude Cluster Synchronization in Structural Brain Networks**: $383K, ARO, Lead PI, 06/10/19 - 06/09/23.
- **Analysis, Design, and Operation of Resilient Networks Against Localized, Strategic, and Dynamic Adversaries**: $1.5M, AFOSR, Lead PI, 07/01/19 - 06/30/23.
- **Integrated Perception and Planning in Resilient, Multi-Modal, Multi-Agent Networks**: $1.2M, ONR, co-PI, 10/01/18 - 09/30/23.
- **Time-Varying Actuation and Interconnection in Network Systems for the Control of Epileptic Seizures**: $440K, ARO, co-PI, 06/25/18 - 06/24/21.
- **UC-Lab Center for Electricity Distribution Cybersecurity**: $3.8M, UCOP, co-PI, 03/01/18 - 02/28/21.
- **GAANN Fellowships in Mechanical Engineering**: $895K, Office of Postsecondary Education, co-PI, 10/01/18 - 09/30/21.
- **ARO YIP: Design and Operation of Secure Multi-Agent Networks**: $323k, ARO, PI, 09/22/17 - 09/21/20.
- **DURIP: A Computational and Robotics Infrastructure for Learning-based Autonomous Systems**: $428K, ONR, co-PI, 06/16/18 - 06/15/19.
- **DURIP: A Large Outdoor Motion-tracking Arena for Research on Heterogeneous Autonomous Multi-robot Systems**: $589K, ARO, co-PI, 06/16/18 - 06/15/19.
- **Securing the Timing of Cyber-Physical Systems**: $750K, NSF, co-PI, 09/01/16 - 08/31/19.
- **A Mechanistic Model of Cognitive Control**: $210K, NSF, PI, 09/01/16 - 08/31/19.
- **Secure Algorithms for Cloud-Connected Autonomous Robots Interacting with Humans**: $25k, CITRIS, PI, 07/01/16 - 06/30/17.
- **Control-Theoretic Defense Strategies for Cyber-Physical Systems**: $384K, NSF, Lead PI, 9/01/14 - 8/31/17.
- **Mapping and Control of Large-Scale Neural Dynamics**: $343K, NSF, PI, 09/01/14 - 08/31/17.
- **Secure Cyber-Physical Systems Through Security Algorithm and Embedded Platform Co-Design**: $500K, ONR, Lead PI, 10/01/14 - 09/30/17.

Advising

- **Ahmed Allibhoy**
  Postdoc, Mechanical Engineering, University of California at Riverside — July 2024 - Present
- **Shiqi Zhang**
  Postdoc, Mechanical Engineering, University of California at Riverside — Nov. 2023 - Present
- **Zhe Du**
  Postdoc, Mechanical Engineering, University of California at Riverside — Apr. 2023 - Present
- **Danial Zenoozi**
  Postdoc, Mechanical Engineering, University of California at Riverside — Sep. 2024 - Present
- **Shivanshu Tripathi**
  Ph.D. student, Electrical and Computer Engineering, University of California at Riverside — Oct. 2022 - Present
- **Taosha Guo**
  Ph.D. student, Mechanical Engineering, University of California at Riverside — Oct. 2020 - Present
- **Darshan Gadginmath**
  Ph.D. student, Mechanical Engineering, University of California at Riverside — Sep. 2020 - Present

Former students and postdocs

- **Federico Celi**
  Ph.D. student, Mechanical Engineering, University of California at Riverside — Sep. 2019 - March 2024
- **Abed Al Makdah**
  Ph.D. student, Electrical and Computer Engineering, University of California at Riverside — Jun. 2018 - Dec. 2024
- **Tommaso Menara**
  Ph.D. student, Mechanical Engineering, University of California at Riverside — Sep. 2016 - Dec. 2021
- **Gianluca Bianchin**
  Ph.D., Mechanical Engineering, University of California at Riverside — Sep. 2015 - March 2020
- **Rajasekhar Anguluri**
  Ph.D., Mechanical Engineering, University of California at Riverside — Sep. 2014 - Dec. 2019
- **Akila Ganlath**
  M.S., Mechanical Engineering, University of California at Riverside — Sep. 2016 - 2019
- **Yin-Chen Liu**
  M.S., Mechanical Engineering, University of California at Riverside — Sep. 2015 - Oct. 2018
- **John Tran**
  M.S., Mechanical Engineering, University of California at Riverside — Sep. 2013 - Jun. 2014
- **Mikalie Lai**
  M.S., Bioengineering, University of California at Riverside — Sep. 2013 - Dec. 2015
- **Karthik Elamvazhuthi**
  Postdoc, Mechanical Engineering, University of California at Riverside — Apr. 2022 - July 2024
- **Sarbendu Rakshit**
  Postdoc, Mechanical Engineering, University of California at Riverside — May 2022 - Aug. 2023
- **Yuzhen Qin**
  Postdoc, Mechanical Engineering, University of California at Riverside — Jan. 2020 - July 2023
- **Vishaal Krishnan**
  Postdoc, Mechanical Engineering, University of California at Riverside — Jan. 2020 - 2022
- **Vaibhav Katewa**
  Postdoc, Mechanical Engineering, University of California at Riverside — Jan. 2017 - 2019

- **Giacomo Baggio**
  Postdoc, Mechanical Engineering, University of California at Riverside — Mar. 2018 - 2019
- **Sofia Karamintziou**
  Postdoc, Mechanical Engineering, University of California at Riverside — Jun. 2017 - Jun. 2018
- **Shiyu Zhao**
  Postdoc, Mechanical Engineering, University of California at Riverside — Aug. 2015 - Aug. 2016

Teaching

- **Secure and Reliable Control Systems**
  ME223(V), Mechanical Engineering, University of California at Riverside
- **Robotic Planning and Kinematics**
  ME145, Mechanical Engineering, University of California at Riverside
- **Introduction to Mechatronics**
  ME145, Mechanical Engineering, University of California at Riverside
- **Introduction to Engineering Computation**
  ME018, Mechanical Engineering, University of California at Riverside
- **Experimental Techniques**
  ME170A, Mechanical Engineering, University of California at Riverside

Professional Service

- **Finance Chair**
  IEEE Conference on Decision and Control — May 2023 - Present
- **CSS Day Task Force**
  IEEE CSS — Jan. 2022 - Present
- **Guest Editor IEEE Open Journal of Control Systems**
  Special issue on "Synchronization in Natural and Engineering Systems" — Sep. 2022 - Present
- **Electronic Information, Chair**
  IEEE CSS — Jan. 2022 - Present
- **Associate Editor IEEE Transactions on Automatic Control**
  Handling papers in the areas of networks, learning, distributed control and estimation — Nov. 2019 - Present
- **Guest Editor IEEE Transactions on Automatic Control**
  Special issue on "Security and Privacy of Distributed Algorithms and Network Systems" — Aug. 2018 - Aug. 2019
- **Conference Editorial Board**
  ACC, CDC, CASE, Necsys, CCNC, CPS-ED — Sep. 2017 - Present
- **Local Arrangement co-Chair**
  IEEE Conference on Decision and Control — Mar. 2016 - Dec. 2016
- **Vice Chair**
  IFAC Symposium on Large Scale Complex Systems: Theory and Applications — Jan. 2015 - Jun. 2015
- **Session Organizer**
  "Analysis, Design, and Control of Neural Systems", SIAM Annual Meeting, Portland, OR — Jul. 2018
- **Session Organizer**
  "Analysis, Design, and Control of Systems in Neuroscience", IEEE ACC, Milwaukee, WI — Jun. 2018
- **Session Organizer**
  "Analysis and Control of Neural Systems", IEEE ACC, Seattle, WA — May 2017
- **Session Organizer**
  "Research Avenues in Network Neuroscience and Controls", IEEE ACC, Chicago, IL — Jun. 2015
- **Session Organizer**
  "Security and Privacy in Cyber-Physical Systems", IEEE CDC, Maui, HI — Dec. 2012

- **Workshop Organizer**
  "Neurotechnologies and closed-loop control of neurodynamics", IEEE ACC, New Orleans, LA — May 2021
- **Workshop Organizer**
  "Control Systems Security: Challenges and Directions", IEEE CDC, Orlando, FL — Dec. 2012
- **Workshop co-Organizer**
  "The 2011 Santa Barbara Control Workshop: Decision, Dynamics and Control in Multi-Agent Systems" — Jun. 2011
- **Affiliations**
  "IEEE, IEEE-CSS, SIAM, SIAG on Control & Systems Theory" — 2016 - Present
- **Proposal Reviewer**
  NSF, ARO, AFOSR, Arpa-E, BSF, ERC, NWO — 2014 - Present

Selected Invited Talks

- **Department of Electrical Engineering and Computer Science, UCI**
  "Data-driven and Brain-Inspired Autonomous Systems" — Sep. 2024
- **Department of Mechanical Engineering, UIOWA**
  "Analysis and Control of Functional Brain Networks" — Oct. 2023
- **Department of Information Engineering, UniPD**
  "Analysis and Control of Functional Brain Networks" — May 2023
- **School for Advanced Studies, SSM**
  "Analysis and Control of Functional Brain Networks" — Mar. 2023
- **Department of Mechanical Engineering, UNM**
  "Analysis and Control of Functional Brain Networks" — Nov. 2022
- **IFAC Conference on Networked Systems (NecSys), Plenary Speaker**
  "Analysis and Control of Functional Brain Networks" — Jul. 2022
- **Department of Aerospace Engineering, UMICH**
  "Analysis and Control of Functional Brain Networks" — Mar. 2022
- **Department of Mechanical Engineering, UCSB**
  "Analysis and Control of Functional Brain Networks" — Jan. 2022
- **NetSci2019: Controlling Complex Networks, Burlington, Vermont**
  "Controllability Metrics, Limitations and Algorithms for Complex Networks" — May 2019
- **Department of Electrical Engineering, USC**
  "Analysis and Design of Secure Cyber-Physical Systems" — Apr. 2018
- **Department of Mechanical and Aerospace Engineering, UCSD**
  "Synchronization Patterns in Networks of Kuramoto Oscillators" — Feb. 2018
- **Center for Systems and Control, USC**
  "Synchronization Patterns in Networks of Kuramoto Oscillators" — Oct. 2017
- **CROSS Symposium, UCSC**
  "A Control-Theoretic and Data-Driven Approach to Securing Cyber-Physical Systems and Networks" — Oct. 2017
- **International Conference for Technology and AnaLysis of Seizures (ICTALS)**
  "Synchronization Patterns in Networks of Kuramoto Oscillators" — Aug. 2017
- **DISC Summer School, The Netherlands**
  "A Systems and Control Perspective on Privacy, Safety, and Security in large-scale Cyber-Physical Systems" — Jul. 2017
- **Brain Dynamics and Neurocontrol Engineering, Washington Univ. in St. Louis**
  "Synchronization Patterns in Networks of Kuramoto Oscillators" — Jun. 2017
- **Department of Electrical and Computer Engineering, UCSD**
  "Controllability Metrics, Limitations and Algorithms for Complex Networks" — Apr. 2015
- **Department of Mechanical and Aerospace Engineering, UCI**
  "Controllability Metrics, Limitations and Algorithms for Complex Networks" — Feb. 2015

- **Department of Mechanical and Aerospace Engineering, UCSB**
  "Controllability Metrics, Limitations and Algorithms for Complex Networks" Feb. 2015
- **IEEE TCNS Symposium on Control of Network Systems, Boston**
  "Controllability Metrics, Limitations and Algorithms for Complex Networks" Feb. 2015
- **Department of Electrical Engineering, University of Notre Dame, Notre Dame**
  "A Control-Theoretic Approach to Network Science" Sep. 2014
- **Department of Computer Science, UCR**
  "Cyber-Physical Security, Robotic Surveillance, and Network Controllability" Apr. 2013

Publications

Submitted writings

[1] U. Casti, G. Baggio, S. Zampieri, and F. Pasqualetti. "Controllable Neural Architectures for Multi-Task Control". In: *European Control Conference*. Submitted. Thessaloniki, Greece, June 2025.

[2] K. Elamvazhuthi, S. Oymak, and F. Pasqualetti. "Noise in the reverse process improves the approximation capabilities of diffusion models". In: *ArXiv* (2024). Submitted.

[3] D. Gadginmath, S. Tripathi, and F. Pasqualetti. "Fusing Multiple Algorithms for Heterogeneous Online Learning". In: *IEEE Control Systems Letters* (2024). Submitted.

[4] C. De Persis, D. Gadginmath, F. Pasqualetti, and P. Tesi. "Feedback linearization through the lens of data". In: *IEEE Transactions on Automatic Control* (2024). Submitted.

[5] Y. Qin, F. Pasqualetti, D. S. Bassett, and M. van Gerven. "Vibrational Control of Complex Networks". In: *IEEE Transactions on Control of Network Systems* (2024). Submitted.

[6] S. Tripathi, A. A. Al Makdah, and F. Pasqualetti. "Time Varying Quadratic Optimization With Unknown Objective Function Using Noisy Gradients". In: *American Control Conference*. Submitted. Denver, CO, June 2024.

[7] K. P. Szymula, F. Pasqualetti, A. M. Graybiel, T. M. Desrochers, and D. S. Bassett. "Habit learning supported by efficiently controlled network dynamics in naive macaque monkeys". In: *Nature Neuroscience* (2020). Submitted.

Journal articles

[1] G. Bianchin and F. Pasqualetti. "Navigation Systems May Deteriorate Stability in Traffic Networks". In: *IEEE Open Journal of Control Systems* 3 (2024), pp. 239–252.

[2] D. Gadginmath, V. Krishnan, and F. Pasqualetti. "Data-Driven Feedback Linearization using the Koopman Generator". In: *IEEE Transactions on Automatic Control* (2024). To appear.

[3] L. Gong, F. Pasqualetti, T. Papouin, and S. Ching. "Astrocytes as a mechanism for meta-plasticity and contextually-guided network function". In: *PLoS Computational Biology* (2024).

[4] L. Parkes, J. Kim, J. Stiso, J. Brynildsen, M. Cieslak, S. Covitz, R. Gur, R. Gur, F. Pasqualetti, R. Shinohara, D. Zhou, T. Satterthwaite, and D. S. Bassett. "A network control theory pipeline for studying the dynamics of the structural connectome". In: *Nature Protocols* (2024). DOI: 10.1038/s41596-024-01023-w.

[5] F. Celi, G. Baggio, and F. Pasqualetti. "Closed-form and Robust Formulas for Data-driven LQ Control". In: *Annual Reviews in Control* 56 (100916 2023).

[6] F. Celi, G. Baggio, and F. Pasqualetti. "Distributed Data-Driven Control of Network Systems". In: *IEEE Open Journal of Control Systems* 2 (2023), pp. 93–107. DOI: 10.1109/OJCSYS.2023.3259228.

[7] T. Guo, A. A. Al Makdah, V. Krishnan, and F. Pasqualetti. "Imitation and Transfer Learning for LQG Control". In: *IEEE Control Systems Letters* 7 (2023), pp. 2149–2154. DOI: 10.1109/LCSYS.2023.3285167.

[8] Y. Qin, A. M. Nobili, D. S. Bassett, and F. Pasqualetti. "Vibrational Stabilization of Cluster Synchronization in Oscillator Networks". In: *IEEE Open Journal of Control Systems* 2 (2023), pp. 439–453. DOI: 10.1109/OJCSYS.2023.3331195.

[9] S. Rakshit and F. Pasqualetti. "Robustness of Synchronization with Heterogeneous Self-dynamics and Interactions". In: *IEEE Control Systems Letters* (2023). To appear.

[10] A. A. Al Makdah, V. Krishnan, and F. Pasqualetti. "Learning Lipschitz Feedback Policies from Expert Demonstrations: Closed-Loop Guarantees, Generalization and Robustness". In: *IEEE Open Journal of Control Systems* 1 (2022), pp. 85–99. DOI: 10.1109/OJCSYS.2022.3181584.

[11] A. Allibhoy, F. Celi, F. Pasqualetti, and J. Cortés. "Optimal Network Interventions to Control the Spreading of Oscillations". In: *IEEE Open Journal of Control Systems* 1 (2022), pp. 141–151.

[12] R. Anguluri, V. Katewa, S. Roy, and F. Pasqualetti. "Network Theoretic Analysis of Maximum a Posteriori Detectors for Sensor Analysis and Design". In: *Automatica* 141 (2022), p. 110277.

[13] G. Baggio, F. Pasqualetti, and S. Zampieri. "Energy-Aware Controllability of Complex Networks". In: *Annual Reviews in Control* 5 (2022), pp. 465–489.

[14] M. Boldrer, F. Pasqualetti, L. Palopoli, and D. Fontanelli. "Multi-Agent Persistent Monitoring via Time-Inverted Kuramoto Dynamics". In: *IEEE Control Systems Letters* 6 (2022), pp. 2798–2803.

[15] F. Celi and F. Pasqualetti. "Data-driven Meets Geometric Control: Zero Dynamics, Subspace Stabilization, and Malicious Attacks". In: *IEEE Control Systems Letters* 6 (2022), pp. 2569–2574.

[16] X. He, L. Caciagli, L. Parkes, J. Stiso, T. M Karrer, J. Z. Kim, Z. Lu, T. Menara, F. Pasqualetti, M. R. Sperling, J. I. Tracy, and D. S. Bassett. "Uncovering the biological basis of control energy: Structural and metabolic correlates of energy inefficiency in temporal lobe epilepsy". In: *Science Advances* 8.45 (2022), eabn2293.

[17] T. Menara, G. Baggio, D. S. Bassett, and F. Pasqualetti. "Functional Control of Oscillator Networks". In: *Nature Communications* 13 (2022), p. 4721. DOI: 10.1038/s41467-022-31733-2.

[18] Y. Qin, T. Menara, S. Oymak, S. Ching, and F. Pasqualetti. "Non-Stationary Representation Learning in Sequential Linear Bandits". In: *IEEE Open Journal of Control Systems* 1 (2022), pp. 41–56.

[19] G. Baggio, D. S. Bassett, and F. Pasqualetti. "Data-Driven Control of Complex Networks". In: *Nature Communications* 12.1429 (2021). DOI: 10.1038/s41467-021-21554-0.

[20] U. Braun, A. Harneit, G. Pergola, T. Menara, A. Schaefer, R. F. Betzel, Z. Zang, J. I. Schweiger, X. Zhang, K. Schwarz, J. Chen, G. Blasi, A. Bertolino, D. Durstewitz, F. Pasqualetti, E. Schwarz, A. Meyer-Lindenberg, D. S. Bassett, and H. Tost. "Brain network dynamics during working memory are modulated by dopamine and diminished in schizophrenia". In: *Nature Communications* 1 (2021), p. 3478. DOI: 10.1038/s41467-021-23694-9.

[21] V. Katewa, R. Anguluri, and F. Pasqualetti. "On a Security vs Privacy Trade-off in Interconnected Dynamical Systems". In: *Automatica* 125 (2021).

[22] V. Katewa and F. Pasqualetti. "Minimum-gain Pole Placement with Sparse Static Feedback". In: *IEEE Transactions on Automatic Control* 66.8 (2021), pp. 1558–2523.

[23] T. Menara, G. Lisi, F. Pasqualetti, and A. Cortese. "Brain network dynamics fingerprints are resilient to data heterogeneity". In: *Journal of Neural Engineering* 18.2 (2021), p. 026004.

[24] T. Menara, Y. Qin, D. S. Bassett, and F. Pasqualetti. "Relay Interactions Enable Remote Synchronization in Networks of Phase Oscillators". In: *IEEE Control Systems Letters* 6 (2021), pp. 500–505. DOI: 10.1109/LCSYS.2021.3082029.

[25] Y. Qin, T. Menara, D. S. Bassett, and F. Pasqualetti. "Phase-Amplitude Coupling in Neuronal Oscillator Networks". In: *Physical Review Research* 3.2 (2021). DOI: 10.1103/PhysRevResearch.3.023218.

[26] B. H. Scheid, A. Ashourvan, J. Stiso, K. A. Davis, F. Mikhail, F. Pasqualetti, B. Litt, and D. S. Bassett. "Time-evolving controllability of effective connectivity networks during seizure progression". In: *Proceedings of the National Academy of Sciences* (2021). DOI: 10.1073/pnas.2006436118.

[27] P. Srivastava, P. Mucha, K. Ochsner, E. Falk, F. Pasqualetti, and D. S. Bassett. "Structural underpinnings of control in multiplex networks". In: *Arxiv* (2021).

[28] R. Anguluri, V. Katewa, and F. Pasqualetti. "Centralized versus Decentralized Detection of Attacks in Stochastic Interconnected Systems". In: *IEEE Transactions on Automatic Control* 65.9 (2020), pp. 3903–3910.

[29] J. K. Brynildsen, K. D. Mace, E. J. Cornblath, C. Weidler, F. Pasqualetti, D. S. Bassett, and J. A. Blendy. "Gene coexpression patterns predict opiate-induced brain state transitions". In: *Proceedings of the National Academy of Sciences* 141 (2020), p. 110277. DOI: 10.1073/pnas.2003601117.

[30] F. Celi, A. Allibhoy, F. Pasqualetti, and J. Cortés. "Linear-Threshold Dynamics for the Study of Epileptic Events". In: *IEEE Control Systems Letters* 5 (4 2020), pp. 1405–1410. DOI: 10.1109/LCSYS.2020.3037835.

[31] Z. Cui, J. Stiso, G. L. Baum, J. Z. Kim, D. R. Roalf, R. F. Betzel, S. Gu, Z. Lu, C. H. Xia, R. Ciric, T. M. Moore, R. T. Shinohara, K. Ruparel, C. Davatzikos, F. Pasqualetti, R. E. Gur, R. C. Gur, D. S. Bassett, and T. D. Satterthwaite. "Optimization of Energy State Transition Trajectory Supports the Development of Executive Function During Youth". In: *eLife* 9 (Mar. 2020), e53060.

[32] T. M. Karrer, J. Z. Kim, J. Stiso, A. E. Kahn, F. Pasqualetti, U. Habel, and D. S. Bassett. "A practical guide to methodological considerations in the controllability of structural brain networks". In: *Journal of Neural Engineering* 17.026031 (2020). URL: http://iopscience.iop.org/10.1088/1741-2552/ab6e8b.

[33] V. Katewa and F. Pasqualetti. "On the real stability radius of sparse systems". In: *Automatica* 113 (2020), p. 108685.

[34] V. Krishnan and F. Pasqualetti. "Data-Driven Attack Detection for Linear Systems". In: *IEEE Control Systems Letters* 5.2 (2020), pp. 671–676.

[35] Y-C. Liu, G. Bianchin, and F. Pasqualetti. "Secure Trajectory Planning Against Undetectable Spoofing Attacks". In: *Automatica* 112 (Feb. 2020), p. 108655.

[36] T. Menara, G. Baggio, D. S. Bassett, and F. Pasqualetti. "Conditions for Feedback Linearization of Network Systems". In: *IEEE Control Systems Letters* 4.3 (2020), pp. 578–583.

[37] T. Menara, G. Baggio, D. S. Bassett, and F. Pasqualetti. "Stability Conditions for Cluster Synchronization in Networks of Heterogeneous Kuramoto Oscillators". In: *IEEE Transactions on Control of Network Systems* 7.1 (2020), pp. 302–314. DOI: 10.1109/TCNS.2019.2903914.

[38] F. Pasqualetti, S. Zhao, C. Favaretto, and S. Zampieri. "Fragility Limits Performance in Complex Networks". In: *Scientific Reports* 10.1774 (2020).

[39] S. P. Patankar, J. Z. Kim, F. Pasqualetti, and D. S. Bassett. "Path-dependent connectivity, not modularity, consistently predicts controllability of structural brain networks". In: *Network Neuroscience* (2020). In press. DOI: 10.1162/netn_a_00157.

[40] Y. Qin, M. Cao, B. D. O. Anderson, D. S. Bassett, and F. Pasqualetti. "Mediated Remote Synchronization: the Number of Mediators Matters". In: *IEEE Control Systems Letters* 5.3 (2020), pp. 767–772. DOI: 10.1109/LCSYS.2020.3005449.

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