

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

- **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, Jeju Island, Republic of Korea. 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

- **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 - 30/06/2024.
- **Understanding and Manipulating Cellular and Circuit-Level Vulnerability to Neurodegeneration in Parkinson’s Disease:** \$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 - 08/31/2021.
- **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 - 06/09/22.
- **Analysis, Design, and Operation of Resilient Networks Against Localized, Strategic, and Dynamic Adversaries:** \$1.5M, AFOSR, Lead PI, 07/01/19 - 06/30/22.
- **Integrated Perception and Planning in Resilient, Multi-Modal, Multi-Agent Networks:** \$1.2M, ONR, co-PI, 10/01/18 - 09/30/22.
- **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

- **Karthik Elamvazhuthi**
Postdoc, Mechanical Engineering, University of California at Riverside Apr. 2022 - Present
- **Sarbendu Rakshit**
Postdoc, Mechanical Engineering, University of California at Riverside May 2022 - Present
- **Yuzhen Qin**
Postdoc, Mechanical Engineering, University of California at Riverside Jan. 2020 - 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
- **Federico Celi**
Ph.D. student, Mechanical Engineering, University of California at Riverside Sep. 2019 - Present
- **Abed Al Makdah**
Ph.D. student, Electrical and Computer Engineering, University of California at Riverside Jun. 2018 - Present
- Former students and postdocs*
- **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
- **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
- **Giacomo Baggio**
Postdoc, Mechanical Engineering, University of California at Riverside Mar. 2018 - 2019
- **Vaibhav Katewa**
Postdoc, Mechanical Engineering, University of California at Riverside Jan. 2017 - 2019
- **Vishaal Krishnan**
Postdoc, Mechanical Engineering, University of California at Riverside Jan. 2020 - 2022

TEACHING

- **Secure and Reliable Control Systems**
ME223(V), Mechanical Engineering, University of California at Riverside S16, S17, S19, S20, W22
- **Robotic Planning and Kinematics**
ME145, Mechanical Engineering, University of California at Riverside W15, W16, W17, F17, W20, S22
- **Introduction to Mechatronics**
ME145, Mechanical Engineering, University of California at Riverside W14, F15, F16, W18, W19, F19
- **Introduction to Engineering Computation**
ME018, Mechanical Engineering, University of California at Riverside F14
- **Experimental Techniques**
ME170A, Mechanical Engineering, University of California at Riverside S14, S15

PROFESSIONAL SERVICE

- **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 - Present
- **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, Arpa-E, BSF, ERC, NWO 2014 - Present

SELECTED INVITED TALKS

- **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] F. Celi, G. Baggio, and F. Pasqualetti. “Closed-form Estimates Of The LQR Gain From Finite Data”. In: *IEEE Conf. on Decision and Control*. Submitted. Cancún, Mexico, Dec. 2022.
- [2] F. Celi and F. Pasqualetti. “Data-driven Meets Geometric Control: Zero Dynamics, Subspace Stabilization, and Malicious Attacks”. In: *IEEE Control Systems Letters* (2022). Submitted.
- [3] D. Gadginmath, V. Krishnan, and F. Pasqualetti. “Direct vs Indirect Methods for Behavior-based Attack Detection”. In: *IEEE Conf. on Decision and Control*. Submitted. Cancún, Mexico, Dec. 2022.
- [4] A. A. Al Makdah, V. Krishnan, V. Katewa, and F. Pasqualetti. “Behavioral Feedback for Optimal LQG Control”. In: *IEEE Conf. on Decision and Control*. Submitted. Cancún, Mexico, Dec. 2022.
- [5] 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* (2022). Submitted.

- [6] Y. Qin, D. S. Bassett, and F. Pasqualetti. “Flexible Information Propagation in Oscillator Networks”. In: *IEEE Conf. on Decision and Control*. Submitted. Cancún, Mexico, Dec. 2022.
- [7] Y. Qin, D. S. Bassett, and F. Pasqualetti. “Vibrational Control of Cluster Synchronization: Connections with Deep Brain Stimulation”. In: *IEEE Conf. on Decision and Control*. Submitted. Cancún, Mexico, Dec. 2022.
- [8] 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* (2022). Submitted.
- [9] J. Swartz, F. Celi, F. Pasqualetti, and A. von Meier. “Parameter Conditions to Prevent Voltage Oscillations Caused by LTC-Inverter Hunting on Power Distribution Grids”. In: *European Control Conference*. Submitted. London, UK, July 2022.
- [10] 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.
- [11] G. Bianchin and F. Pasqualetti. “Routing Apps May Deteriorate Performance in Traffic Networks: Oscillating Congestions and Robust Information Design”. In: *IEEE Transactions on Automatic Control* (2020). Submitted.
- [12] 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.
- [13] J. D. Medaglia, S. Gu, F. Pasqualetti, R. L. Ashare, C. Lerman, J. Kable, and D. S. Bassett. “Cognitive Control in the Controllable Connectome”. In: *Journal of Neuroscience* (2017). Submitted.

Journal articles

- [1] R. Anguluri, V. Katewa, S. Roy, and F. Pasqualetti. “Network Theoretic Analysis of Maximum a Posteriori Detectors for Sensor Analysis and Design”. In: *Automatica* (2022). To appear.
- [2] G. Baggio, D. S. Bassett, and F. Pasqualetti. “Data-Driven Control of Complex Networks”. In: *Nature Communications* 12.1429 (2021).
- [3] 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. “Pathological and metabolic underpinnings of energetic inefficiency in temporal lobe epilepsy”. In: *bioRxiv* (2021).
- [4] V. Katewa, R. Anguluri, and F. Pasqualetti. “On a Security vs Privacy Trade-off in Interconnected Dynamical Systems”. In: *Automatica* 125 (2021).
- [5] 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.
- [6] 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.
- [7] 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.
- [8] Y. Qin, T. Menara, D. S. Bassett, and F. Pasqualetti. “Phase-Amplitude Coupling in Neuronal Oscillator Networks”. In: *Physical Review Research* 3.2 (June 2021).
- [9] 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.
- [10] P. Srivastava, P. Mucha, K. Ochsner, E. Falk, F. Pasqualetti, and D. S. Bassett. “Structural underpinnings of control in multiplex networks”. In: *Nature Communications* (2021).

- [11] 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.
- [12] 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* (2020). DOI: 10.1073/pnas.2003601117.
- [13] F. Celi, A. Allibhoy, F. Pasqualetti, and J. Cortés. “Linear-Threshold Dynamics for the Study of Epileptic Events”. In: *IEEE Control Systems Letters* (2020). To appear.
- [14] 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.
- [15] 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>.
- [16] V. Katewa and F. Pasqualetti. “On the real stability radius of sparse systems”. In: *Automatica* 113 (2020), p. 108685.
- [17] V. Krishnan and F. Pasqualetti. “Data-Driven Attack Detection for Linear Systems”. In: *IEEE Control Systems Letters* 5.2 (2020), pp. 671–676.
- [18] Y-C. Liu, G. Bianchin, and F. Pasqualetti. “Secure Trajectory Planning Against Undetectable Spoofing Attacks”. In: *Automatica* 112 (Feb. 2020), p. 108655.
- [19] 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.
- [20] 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.
- [21] F. Pasqualetti, S. Zhao, C. Favaretto, and S. Zampieri. “Fragility Limits Performance in Complex Networks”. In: *Scientific Reports* 10.1774 (2020).
- [22] 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.
- [23] 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.
- [24] P. Srivastava, E. Nozari, J. Z. Kim, H. Ju, D. Zhou, C. Becker, F. Pasqualetti, and D. S. Bassett. “Models of communication and control for brain networks: distinctions, convergence, and future outlook”. In: *Network Neuroscience* 4.4 (2020).
- [25] J. Stiso, M.-C. Corsi, J. Vettel, J. Garcia, F. Pasqualetti, F. de Vico-Fallani, T. Lucas, and D. S. Bassett. “Learning in brain-computer interface control evidenced by joint decomposition of brain and behavior”. In: *Journal of Neural Engineering* 17.4 (2020).
- [26] E. Tang, G. L. Baum, D. R. Roalf, T. D. Satterthwaite, F. Pasqualetti, and D. S. Bassett. “Control of brain network dynamics across diverse scales of space and time”. In: *Physical Review E* 101.6 (2020).
- [27] G. Baggio, V. Katewa, and F. Pasqualetti. “Data-driven Minimum-Energy Controls for Linear Systems”. In: *IEEE Control Systems Letters* 3.3 (2019), pp. 589–594.
- [28] G. Bianchin, Y.-C. Liu, and F. Pasqualetti. “Secure Navigation of Robots in Adversarial Environments”. In: *IEEE Control Systems Letters* 4.1 (2019), pp. 1–6.
- [29] G. Bianchin and F. Pasqualetti. “Gramian-Based Optimization for the Analysis and Control of Traffic Networks”. In: *IEEE Transactions on Intelligent Transportation Systems* (2019), pp. 1–12. ISSN: 1558-0016.

- [30] E. J. Cornblath, E. Tang, G. L. Baum, T. M. Moore, A. Abedimpe, D. R. Roalf, R. C. Gur, R. E. Gur, F. Pasqualetti, T. D. Satterthwaite, and D. S. Bassett. “Sex differences in network controllability as a predictor of executive function in youth”. In: *Neuroimage* 188 (2019), pp. 122–134. DOI: 10.1016/j.neuroimage.2018.11.048.
- [31] A. A. Al Makdah, V. Katewa, and F. Pasqualetti. “A Fundamental Performance Limitation for Adversarial Classification”. In: *IEEE Control Systems Letters* 4.1 (2019), pp. 169–174.
- [32] T. Menara, D. S. Bassett, and F. Pasqualetti. “Structural Controllability of Symmetric Networks”. In: *IEEE Transactions on Automatic Control* 64.9 (2019), pp. 3740–3747.
- [33] E. Nozari, F. Pasqualetti, and J. Cortés. “Heterogeneity of central nodes explains the benefits of time-varying control scheduling in complex dynamical networks”. In: *Journal of Complex Networks* (Feb. 2019), pp. 1–43. DOI: 10.1093/comnet/cnz001.
- [34] F. Pasqualetti, S. Gu, and D. S. Bassett. “RE: Warnings and caveats in brain controllability”. In: *NeuroImage* 197 (2019), pp. 586–588. DOI: 10.1016/j.neuroimage.2019.05.001.
- [35] J. Stiso, A. N. Khambhati, T. Menara, A. E. Kahn, J. M. Stein, S. R. Das, R. Gorniak, J. Tracy, B. Litt, K. A. Davis, F. Pasqualetti, T. H. Lucas, and D. S. Bassett. “White Matter Network Architecture Guides Direct Electrical Stimulation through Optimal State Transitions”. In: *Cell Reports* 28.10 (2019), 2554–2566.e7.
- [36] S. Zhao and F. Pasqualetti. “Networks with Diagonal Controllability Gramians: Analysis, Graphical Conditions, and Design Algorithms”. In: *Automatica* 102 (2019), pp. 10–18.
- [37] S. Gu, M. Cieslak, B. Baird, S. F. Muldoon, S. T. Grafton, F. Pasqualetti, and D. S. Bassett. “The Energy Landscape of Neurophysiological Activity Implicit in Brain Network Structure”. In: *Scientific Reports* 8.2507 (2018). DOI: 10.1038/s41598-018-20123-8.
- [38] J. Kim, J. M. Soffer, A. E. Kahn, J. M. Vettel, F. Pasqualetti, and D. S. Bassett. “Role of graph architecture in controlling dynamical networks with applications to neural systems”. In: *Nature Physics* 14 (2018), pp. 91–98. DOI: 10.1038/nphys4268.
- [39] E. Wu-Yan, R. F. Betzel, E. Tang, S. Gu, F. Pasqualetti, and D. S. Bassett. “Benchmarking measures of network controllability on canonical graph models”. In: *Journal of Nonlinear Science* (2018), pp. 1–39. DOI: <https://doi.org/10.1007/s00332-018-9448-z>.
- [40] S. Amini, F. Pasqualetti, M. Abbaszadeh, and H. Mohsenian-Rad. “Hierarchical Location Identification of Destabilizing Faults and Attacks in Power Systems: A Frequency-Domain Approach”. In: *IEEE Transactions on Smart Grid* 10.2 (2017), pp. 2036–2045.
- [41] C.-Z. Bai, V. Gupta, and F. Pasqualetti. “On Kalman Filtering with Compromised Sensors: Attack Stealthiness and Performance Bounds”. In: *IEEE Transactions on Automatic Control* 62.12 (2017), pp. 6641–6648.
- [42] C.-Z. Bai, F. Pasqualetti, and V. Gupta. “Data-injection attacks in stochastic control systems: Detectability and performance tradeoffs”. In: *Automatica* 82 (2017), pp. 251–260.
- [43] G. Bianchin, P. Frasca, A. Gasparri, and F. Pasqualetti. “The Observability Radius of Networks”. In: *IEEE Transactions on Automatic Control* 62.6 (2017), pp. 3006–3013.
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