

ARMIN ZARE

Department of Mechanical Engineering
 University of Texas at Dallas
 800 W. Campbell Rd., Richardson, TX 75080

Phone: +1 (972) 883-3984
 E-mail: armin.zare@utdallas.edu
 URL: www.utdallas.edu/~armin.zare

APPOINTMENTS

Assistant Professor of Mechanical Engineering Aug. 2019 – Present
 University of Texas at Dallas, Richardson, TX

Postdoctoral Research Associate Feb. 2017 – Jul. 2019
 Ming Hsieh Department of Electrical and Computer Engineering
 University of Southern California, Los Angeles, CA
 Advisor: Professor Mihailo R. Jovanović

EDUCATION

PhD in Electrical Engineering Dec. 2016
 University of Minnesota, Twin Cities, MN
 Thesis: Low-complexity stochastic modeling of wall-bounded shear flows
 Advisor: Professor Mihailo R. Jovanović

MS in Electrical Engineering Dec. 2016
 University of Minnesota, Twin Cities, MN

BSc in Electrical Engineering Feb. 2010
 Sharif University of Technology, Tehran, Iran
 Thesis: Discretization Effects on the Efficiency of Fractional Order PID Controllers
 Advisor: Professor Mohammad Haeri

AWARDS, HONORS AND RECOGNITION

POSTDOCTORAL SCHOLAR TRAVEL AND TRAINING AWARD, University of Southern California, 2018.
 INVITED PARTICIPANT, Center for Turbulence Research Summer Program, Stanford University, 2016, 2014.
 DOCTORAL DISSERTATION FELLOWSHIP, University of Minnesota, 2015 – 2016.
 TRAVEL SCHOLARSHIP, The Burgers Program 2015 Summer Research School on Fluid Dynamics: Topics in Turbulence, University of Maryland, College Park, MD, 2015.
 FINALIST, BEST STUDENT PAPER AWARD, American Control Conference, 2014.
 TRAVEL SCHOLARSHIP, Workshop on Turbulence in Engineering Applications, Institute for Pure and Applied Mathematics, Los Angeles, CA, 2014.
 TRAVEL SCHOLARSHIP, Electrical and Computer Engineering, University of Minnesota, 2012.
 GRADUATE FELLOWSHIP, Electrical and Computer Engineering, University of Minnesota, 2010.
 RANKED TOP 0.02% IN NATIONWIDE UNIVERSITY ENTRANCE EXAM among 500,000 participants, Iran, 2005.
 SEMIFINALIST IN THE NATIONAL MATHEMATICS OLYMPIAD, Iran, 2003.
 SECOND RANK IN STATEWIDE COMPETITIONS IN MATHEMATICS AND PHYSICS, Shiraz, Iran, 2003.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

<i>Institute of Electrical and Electronics Engineers (IEEE), Control Systems Society</i>	Sept. 2006 – Present
<i>American Physical Society (APS), Division of Fluid Dynamics</i>	Aug. 2013 – Present
<i>Society for Industrial and Applied Mathematics (SIAM)</i>	Feb. 2021 – Present

RESEARCH INTERESTS

Distributed systems theory and applications
 Dynamics and control of complex fluid flows
 Large-scale and distributed optimization
 Renewable energy generation

PUBLICATIONS AND SOFTWARE

Journal Papers

- D. B. Hewawaduge and A. Zare, *Input-output analysis of stochastic base flow uncertainty*, Phys. Rev. Fluids, 2021. Note: Submitted; also arXiv:2012.14918.
- H. Mohammadi, A. Zare, M. Soltanolkotabi, and M. R. Jovanović, *Convergence and sample complexity of gradient methods for the model-free linear quadratic regulator problem*, IEEE Trans. Automat. Control, 2021. Note: Doi:10.1109/TAC.2021.3087455; also arXiv:1912.11899.
- W. Ran, A. Zare, and M. R. Jovanović, *Model-based design of riblets for turbulent drag reduction*, J. Fluid Mech., vol. 906, A7 (38 pages), January 2021.
- A. Zare, H. Mohammadi, N. K. Dhingra, T. T. Georgiou, and M. R. Jovanović, *Proximal algorithms for large-scale statistical modeling and sensor/actuator selection*, IEEE Trans. Automat. Control, vol. 65, no. 8, pp. 3441-3456, August 2020.
- A. Zare, T. T. Georgiou, and M. R. Jovanović, *Stochastic dynamical modeling of turbulent flows*, Annu. Rev. Control Robot. Auton. Syst., 3:195-219, May 2020.
- W. Ran, A. Zare, M. J. P. Hack, and M. R. Jovanović, *Stochastic receptivity analysis of boundary layer flow*, Phys. Rev. Fluids, vol. 4, no. 9, p. 093901 (28 pages), September 2019.
- W. Ran, A. Zare, M. J. P. Hack, and M. R. Jovanović, *Modeling mode interactions in boundary layer flows via Parabolized Floquet Equations*, Phys. Rev. Fluids, vol. 4, no. 2, p. 023901 (22 pages), February 2019.
- A. Zare, M. R. Jovanović, and T. T. Georgiou, *Colour of turbulence*, J. Fluid Mech., vol. 812, pp. 636-680, February 2017.
- A. Zare, Y. Chen, M. R. Jovanović, and T. T. Georgiou, *Low-complexity modeling of partially available second-order statistics: theory and an efficient matrix completion algorithm*, IEEE Trans. Automat. Control, vol. 62, no. 3, pp. 1368-1383, March 2017.

Refereed Proceedings

- A. H. Bhatt and A. Zare, *Toward stochastic dynamical wake-modeling for wind farms*, In Proceedings of the 2022 American Control Conference, Atlanta, GA, 2022. Note: Submitted.
- D. B. Hewawaduge and A. Zare, *The effect of base flow uncertainty on transitional channel flows*, In Proceedings of the 2022 American Control Conference, Atlanta, GA, 2022. Note: Submitted.

- [A. Zare](#), *Data-enhanced Kalman filtering of colored process noise*, In Proceedings of the 60th IEEE Conference on Decision and Control, Austin, TX, pp. 6603-6607, 2021.
- D. B. Hewawaduge, T. H. Summers, and [A. Zare](#), *Robustness of turbulence suppression in channel flows with imperfect transverse wall oscillations*, In Proceedings of the 2021 American Control Conference, New Orleans, LA, pp. 292-297, 2021.
- W. Ran, [A. Zare](#), and M. R. Jovanović, *Frequency-response analysis of riblets for turbulent drag reduction*, In Proceedings of the 24th International Symposium on Mathematical Theory of Network and Systems, Cambridge, UK, 2020.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Boundary layer receptivity analysis via the algebraic Lyapunov equation*, In Proceedings of the 2020 AIAA SciTech Forum, Orlando, FL, 2020, p. 0109 (15 pages).
- H. Mohammadi, [A. Zare](#), M. Soltanolkotabi, and M. R. Jovanović, *Global exponential convergence of gradient methods over the nonconvex landscape of the linear quadratic regulator*, In Proceedings of the 58th IEEE Conference on Decision and Control, Nice, France, pp. 7474-7479, 2019.
- W. Ran, [A. Zare](#), and M. R. Jovanović, *Drag reduction in turbulent channel flow over spatially periodic surfaces*, In Proceedings of the 58th IEEE Conference on Decision and Control, Nice, France, pp. 5918-5923, 2019.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Relating global and local stochastic receptivity analysis of boundary layer flows*, In Proceedings of the 2019 American Control Conference, Philadelphia, PA, pp. 3212-3217, 2019.
- [A. Zare](#), and M. R. Jovanović, *Optimal sensor selection via proximal optimization algorithms*, In Proceedings of the 57th IEEE Conference on Decision and Control, Miami, FL, pp. 6514-6519, 2018.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Low-complexity modeling of mode interactions in boundary layer flows*, In Proceedings of the 2018 American Control Conference, Milwaukee, WI, pp. 134-139, 2018.
- D. Deka, [A. Zare](#), A. Lokhov, M. R. Jovanović, and M. Chertkov, *Estimation of State and Noise Covariances in Power Grids using limited nodal PMUs*, In Proceedings of the 5th IEEE Global Conference on Signal and Information Processing (GlobalSIP), Montreal, Canada, 2017.
- [A. Zare](#), N. K. Dhingra, M. R. Jovanović, and T. T. Georgiou, *Structured covariance completion via proximal algorithms*, In Proceedings of the 56th IEEE Conference on Decision and Control, Melbourne, Australia, pp. 3775-3780, 2017.
- W. Ran, [A. Zare](#), J. W. Nichols, and M. R. Jovanović, *The effect of sponge layers on global stability analysis of Blasius boundary layer flow*, In Proceedings of the 47th AIAA Fluid Dynamics Conference, Denver, CO, pp. 3456, 2017.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Low-complexity stochastic modeling of spatially evolving flows*, In Proceedings of the 2017 American Control Conference, Seattle, WA, pp. 3815-3820, 2017.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Low-complexity stochastic modeling of spatially evolving flows*, In Proceedings of the 2016 Summer Program, Center for Turbulence Research, Stanford University/NASA, pp. 285-294, 2016.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Perturbation of System Dynamics and the Covariance Completion Problem*, In Proceedings of the 55th IEEE Conference on Decision and Control, Las Vegas, NV, pp. 7037-7041, 2016.
- C. Grussler, [A. Zare](#), M. R. Jovanović, and A. Rantzer, *The use of the r^* heuristic in covariance completion problems*, In Proceedings of the 55th IEEE Conference on Decision and Control, Las Vegas, NV, pp. 1978-1983, 2016.

- [A. Zare](#), Y. Chen, M. R. Jovanović, and T. T. Georgiou, *An alternating minimization algorithm for structured covariance completion problems*, In Proceedings of the 22nd International Symposium on Mathematical Theory of Network and Systems, Minneapolis, MN, pp. 117-119, 2016.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Alternating direction optimization algorithms for covariance completion problems*, In Proceedings of the 2015 American Control Conference, Chicago, IL, pp. 515-520, 2015.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Completion of partially known turbulent flow statistics via convex optimization*, In Proceedings of the 2014 Summer Program, Center for Turbulence Research, Stanford University/NASA, pp. 345-354, 2014.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Completion of partially known turbulent flow statistics*, In Proceedings of the 2014 American Control Conference, Portland, OR, pp. 1680-1685, 2014. (**Finalist, Best Student Paper Award**).
- [A. Zare](#), B. K. Lieu, and M. R. Jovanović, *Turbulent drag reduction by streamwise traveling waves*, In Proceedings of the 51st IEEE Conference on Decision and Control, Maui, HI, pp. 3122-3126, 2012.

Abstracts

- [A. Zare](#) and S. Abootorabi, *Spectral coherence analysis of turbulent flows using stochastically forced linearized Navier-Stokes*, in Bulletin of the American Physical Society, Phoenix, AZ, November 2021.
- S. Abootorabi and [A. Zare](#), *On the parametric refinement of data-enhanced linearized Navier-Stokes for modeling near-wall turbulences*, in Bulletin of the American Physical Society, Phoenix, AZ, November 2021.
- D. B. Hewawaduge and [A. Zare](#), *Input-output analysis of stochastic base flow uncertainty in channel flows*, in Bulletin of the American Physical Society, Phoenix, AZ, November 2021.
- W. Ran, [A. Zare](#), and M. R. Jovanović, *Model-based design of riblets for turbulent drag reduction*, 8th International Congress of the Serbian Society of Mechanics, Kragujevac, Serbia, June 2021.
- [A. Zare](#), *Spectral Coherence Analysis using Data-Enhanced Physics-Based Models*, SIAM Conference on Computational Science and Engineering, Fort Worth, TX, March 2021.
- [A. Zare](#), D. B. Hewawaduge, *An input-output approach to the robustness analysis of transverse wall oscillations in channel flows*, in Bulletin of the American Physical Society, Chicago, IL, November 2020.
- [A. Zare](#), A. Dwivedi, and M. R. Jovanović, *Toward stochastically forced turbulence closure models*, in Bulletin of the American Physical Society, Seattle, WA, November 2019.
- W. Ran, [A. Zare](#), and M. R. Jovanović, *Model-based analysis of turbulent drag reduction in channel flow over corrugated surfaces*, in Bulletin of the American Physical Society, Seattle, WA, November 2019.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Data-driven refinements of physics-based models with application to turbulence modeling*, SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2019.
- [A. Zare](#), J. Jeun, J. W. Nichols, and M. R. Jovanović, *Data-informed dynamic acoustic source modeling in high-speed jets*, in Bulletin of the American Physical Society, Atlanta, GA, November 2018.
- W. Ran, [A. Zare](#), M. J. P. Hack, and M. R. Jovanović, *Receptivity analysis of boundary layer flows subject to stochastic excitation*, in Bulletin of the American Physical Society, Atlanta, GA, November 2018.
- M. R. Jovanović, W. Ran, and [A. Zare](#), *Receptivity analysis of flows over structured corrugated surfaces*, in Bulletin of the American Physical Society, Atlanta, GA, November 2018.
- [A. Zare](#), M. R. Jovanović, and T. T. Georgiou, *Color of turbulence: Low-complexity stochastic dynamical modeling of turbulent flows*, 48th AIAA Fluid Dynamics Conference, Atlanta, GA, June 2018.

- A. Zare, J. W. Nichols, and M. R. Jovanović, *Coherent structures in high Reynolds number turbulent shear flows*, in Bulletin of the American Physical Society, Denver, CO, November 2017.
- W. Ran, A. Zare, M. J. P. Hack, and M. R. Jovanović, *Stochastic modeling of mode interactions via linear parabolized stability equations*, in Bulletin of the American Physical Society, Denver, CO, November 2017.
- A. Zare, W. Ran, M. J. P. Hack, and M. R. Jovanović, *Low-complexity stochastic modeling of spatially evolving flows*, in Bulletin of the American Physical Society, Portland, OR, November 2016.
- A. Zare, Y. Chen, M. R. Jovanović, and T. T. Georgiou, *Stochastic dynamical modeling: Structured matrix completion of partially available statistics*, in 2016 Information Theory and Applications Workshop, San Diego, CA, February 2016.
- A. Zare, M. R. Jovanović, and T. T. Georgiou, *Spatio-temporal frequency responses of turbulent shear flows*, in Bulletin of the American Physical Society, Boston, MA, November 2015.
- A. Zare, M. R. Jovanović, and T. T. Georgiou, *Low-complexity stochastic modeling of turbulent flows*, in SIAM Conference on Control and Its Applications, Paris, France, July 2015.
- A. Zare, Y. Chen, M. R. Jovanović, and T. T. Georgiou, *Low-complexity modeling of partially available second-order statistics via matrix completion*, in SIAM Conference on Control and Its Applications, Paris, France, July 2015.
- A. Zare, M. R. Jovanović, and T. T. Georgiou, *Completion of partially known second-order statistics of turbulent flows*, in Bulletin of the American Physical Society, San Francisco, CA, November 2014.
- M. R. Jovanović and A. Zare, *Model-based design of drag-reducing spanwise wall oscillations*, in Bulletin of the American Physical Society, San Francisco, CA, November 2014.
- A. Zare, R. Moarref, and M. R. Jovanović, *Model-based analysis of the effect of spanwise wall oscillations on drag reduction at high Reynolds numbers*, in Bulletin of the American Physical Society, Pittsburgh, PA, November 2013.

Software

- A. Zare and M. R. Jovanović, *A customized alternating minimization algorithm for structured covariance completion*, April 2016, available at: www.people.ece.umn.edu/~mihailo/software/ccama/

PRESENTATIONS

Invited and Conference Presentations

- Data-enhanced Kalman filtering of colored process noise, 60th IEEE Conference on Decision and Control, Austin, TX, December 2021.
- Input-output analysis of stochastic base flow uncertainty in channel flows, 74th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Phoenix, AZ, November 2021.
- Spectral coherence analysis of turbulent flows using stochastically forced linearized Navier-Stokes, 74th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Phoenix, AZ, November 2021.
- Data-enhanced physics-based modeling of turbulent flows, Department of Applied Mathematics, University of California, Santa Cruz, CA, October 2021.
- A stochastic framework for the quantification and data-enhanced dynamical modeling of uncertainty, Department of Mechanical Engineering, University of Texas at Dallas, Dallas, TX, October 2021.
- Spectral Coherence Analysis using Data-Enhanced Physics-Based Models, SIAM Conference on Computational Science and Engineering, Fort Worth, TX, March 2021.

- An input-output approach to the robustness analysis of transverse wall oscillations in channel flows, 73rd Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Chicago, IL, November 2020.
- Data-enhanced physics-based modeling of turbulent flows, Center for Control, Dynamical Systems and Computation, University of California at Santa Barbara, Santa Barbara, CA, October 2020.
- Boundary layer receptivity analysis via the algebraic Lyapunov equation, 2020 AIAA SciTech Forum, Orlando, FL, January 2020.
- Drag reduction in turbulent channel flow over spatially periodic surfaces, 58th IEEE Conference on Decision and Control, Nice, France, December 2019.
- Toward stochastically forced turbulence closure models, 72nd Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Seattle, WA, November 2019.
- Modeling and control of complex fluid flows using systems theory and optimization, Mechanical Engineering Faculty Mini-Talks, University of Texas at Dallas, Dallas, TX, September 2019.
- Data-enhanced physics-based modeling of turbulent flows, Department of Mechanical Engineering, University of Texas at Dallas, Dallas, TX, February 2019.
- Optimal sensor selection via proximal optimization algorithms, 57th IEEE Conference on Decision and Control, Miami Beach, FL, December 2018.
- Color of turbulence: Stochastic dynamical modeling of turbulent flows, Institute for Computational Engineering and Sciences, University of Texas at Austin, Austin, TX, December 2018.
- Data-informed dynamic acoustic source modeling in high-speed jets, 71st Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Atlanta, GA, November 2018.
- Color of turbulence: Low-complexity stochastic dynamical modeling of turbulent flows, Center for Turbulence Research Tea Seminar, Stanford University, Stanford, CA, October 2018.
- Color of turbulence: Low-complexity stochastic dynamical modeling of turbulent flows, Special session on modal analysis for flow control, 48th AIAA Fluid Dynamics Conference, Atlanta, GA, June 2018.
- Spectral coherence analysis using data-informed linearized Navier-Stokes, 12th Southern California Flow Physics Symposium, University of Southern California, Los Angeles, CA, April 2018.
- Coherent structures in high Reynolds number turbulent shear flows, 70th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Denver, CO, November 2017.
- Stochastic dynamical modeling: Structured matrix completion of partially available statistics, Beer Talk Seminar Series, University of Southern California, Los Angeles, CA, May 2017.
- Perturbation of System Dynamics and the Covariance Completion Problem, 32nd Southern California Control Workshop, Caltech, Los Angeles, CA, April 2017.
- Perturbation of System Dynamics and the Covariance Completion Problem, 55th IEEE Conference on Decision and Control, Las Vegas, NV, December 2016.
- Low-complexity stochastic modeling of spatially evolving flows, 69th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Portland, OR, November 2016.
- Spatio-temporal frequency responses of turbulent shear flows, 68th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Boston, MA, November 2015.
- Alternating direction optimization algorithms for covariance completion problems, the 2015 American Control Conference, Chicago, IL, July 2015.
- Low-complexity modeling of partially available second-order statistics via matrix completion, 4th Midwest Workshop on Control and Game Theory, Ames, IA, April 2015.
- Completion of partially known second-order statistics of turbulent flows, 67th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, San Francisco, CA, November 2014.

- Completion of partially known turbulent flow statistics, the 2014 American Control Conference, Portland, OR, June 2014.
- Model-based analysis of the effect of spanwise wall oscillations on drag reduction at high Reynolds numbers, 66th Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Pittsburgh, PA, November 2013.
- Turbulent drag reduction by streamwise traveling waves, 51st IEEE Conference on Decision and Control, Maui, HI, December 2012.

Poster Presentations

- Data-informed physics-based modeling of complex dynamical systems, Meet the Faculty Candidate Poster Session, 57th IEEE Conference on Decision and Control, Miami Beach, FL, December 2018.
- Completion of Partially Known Turbulent Flow Statistics, 2016 Doctoral Research Showcase, University of Minnesota, Minneapolis, MN, April 2016.
- Completion of Partially Known Turbulent Flow Statistics, 2016 MSI Research Exhibition, Minnesota Supercomputing Institute, Minneapolis, MN, April 2016.
- Completion of Partially Known Turbulent Flow Statistics, IMA Annual Program Workshop on Optimization and Parsimonious Modeling, Minneapolis, MN, January 2016.
- Low-complexity stochastic modeling of turbulent flows, The Burgers Program 2015 Summer Research School on Fluid Dynamics: Topics in Turbulence, University of Maryland, College Park, MD, June 2015.
- Low-complexity stochastic modeling of turbulent flows, 2015 MSI Research Exhibition, Minnesota Supercomputing Institute, Minneapolis, MN, April 2015.
- Low-complexity stochastic modeling of turbulent flows, Workshop on Turbulence in Engineering Applications, Institute for Pure and Applied Mathematics, Los Angeles, CA, November 2014.
- Controlling the onset of turbulence by streamwise traveling waves, Energy for Defense Meeting, Minneapolis, MN, May 2013.
- Model-based design of transverse wall oscillations for turbulent drag reduction, E3, Energy, Economy, Environment, the Upper Midwest's premier renewable energy conference, Minneapolis, MN, November 2011.

TEACHING AND MENTORSHIP EXPERIENCE

Teaching, Mechanical Engineering, University of Texas at Dallas

Graduate courses

(MECH 6313) <i>Nonlinear Systems</i>	Spring 2021
(MECH 6323) <i>Robust Control Systems</i>	Spring 2020, Spring 2022

Undergraduate courses

(MECH 3340) <i>System Dynamics Modeling and Analysis</i>	Spring 2022
(MECH 2340) <i>Circuits and Applied Electronics</i>	Fall 2020, Fall 2021
(MECH 4381) <i>Senior Design Project</i>	Fall 2021, Spring 2022

- Medical 3-D Body Part Scanner

(MECH 4381) <i>Senior Design Project</i>	Fall 2019, Spring 2020
--	------------------------

- Automated camera alignment and focus tool

1st PLACE, 2020 ASME Student Manufacturing Design Competition

Guest Lecturer, Electrical and Computer Engineering, University of Southern California(EE 510) *Linear Algebra for Engineering* Spring 2019**Guest Lecturer, Electrical and Computer Engineering, University of Minnesota**(EE 8215) *Nonlinear Systems* Spring 2016(EE 3015) *Recitation Sessions in Signals and Systems* Spring 2013, Spring 2016, Fall 2016**Teaching Assistant, Electrical and Computer Engineering, University of Minnesota**(EE 4231) *Linear Control Systems* Fall 2010(EE 3015) *Signals and Systems* Spring 2011(EE 5231) *Linear Systems and Optimal Control* Fall 2012(EE 8920) *Teaching Experience in ECE (course)* Spring 2013**Teaching Assistant, Electrical Engineering, Sharif University of Technology***Fundamentals of Electrical Engineering II* Fall 2008, Spring 2009*Digital Logic Circuits and Laboratory* Spring 2009, Fall 2009, Spring 2010**PhD Student Mentor**Seyedalireza (Arya) Abootorabi, Mechanical Engineering, University of Texas at Dallas Aug. 2020 – Present
Research: *Modeling, analysis, and control of wall turbulence*Dhanushki Hewawaduge, Mechanical Engineering, University of Texas at Dallas Jan. 2020 – Present
Research: *Modeling and analysis of wall-bounded shear flows subject to base flow uncertainty*Wei Ran, Aerospace & Mechanical Engineering, University of Southern California Jun. 2015 – Jul. 2020
Research: *Modeling and analysis of parallel and spatially-evolving wall-bounded shear flows***Master's Student Mentor**Aditya Hitesh Bhatt, Mechanical Engineering, University of Texas at Dallas Jan. 2021 – Present
Research: *Stochastic dynamical wake modeling for wind farms*Harshad Deshmane, Electrical and Computer Engineering, University of Minnesota Jun. 2013 – Jul. 2014
Research: *System Identification via Nuclear Norm Regularization***High-school Student Mentor**Aditya Behr, 12th grader at School for the Talented and Gifted Magnet Jun. 2021 – Present
Low-complexity wake modeling for wind farms**PROFESSIONAL SERVICES AND ACTIVITIES**

Panalist*National Science Foundation, CBET***Referee***AIAA Journal and Conference**American Control Conference*

*Applied Sciences**Automatica**Fluids**IEEE Conference on Decision and Control**IEEE Control Systems Letters**IEEE Multi-Conference on Systems and Control**IEEE Transactions on Automatic Control**Indian Control Conference**Journal of Fluid Mechanics**Learning for Dynamics and Control (L4DC)**Numerical Algorithms**Physics of Fluids**Physical Review Fluids**Physical Review Research**Theoretical and Computational Fluid Dynamics***Competition/Project Judge**

<i>Graduate poster competition, Mechanical Engineering, UTD</i>	Oct. 2021
<i>UTDesign Expo, Biomedical and Mechanical Engineering capstone projects, UTD</i>	Dec. 2020, May 2021
<i>ME Demo Day, Circuits and Applied Electronics, Mechanical Engineering, UTD</i>	Dec. 2019
<i>Student Poster Competition, 9th Annual Research Festival, Ming Hsieh Institute, USC</i>	Nov. 2018

Conference Session Chair

Chair - <i>"Iterative Learning Control II", 58th IEEE Conference on Decision and Control</i>	Dec. 2019
Co-chair - <i>"Distributed Parameter Systems II", 58th IEEE Conference on Decision and Control</i>	Dec. 2019
Co-chair - <i>"Feedback Flow Control", 2018 AIAA Aviation Forum</i>	Jun. 2018
Chair - <i>"Surface Roughness: General", 70th APS DFD Annual Meeting</i>	Nov. 2017
Co-chair - <i>"Optimization II", 55th IEEE Conference on Decision and Control</i>	Dec. 2016

Committees at the University of Texas at Dallas

Member - <i>Graduate Committee, Mechanical Engineering, UTD</i>	Aug. 2021 – present
Member - <i>Faculty Recruiting Committee, Mechanical Engineering, UTD</i>	Jan. 2021 – present
Member - <i>Computer Committee, Mechanical Engineering, UTD</i>	Aug. 2020 – Dec. 2020

Guest Speaker

Roundtable with faculty, Hobson Wildenthal Honors College, UTD	Apr. 2021
--	-----------

LANGUAGES

English (proficient), Farsi (native), French (basic)