

Alex A. Gorodetsky

CONTACT INFORMATION	Department of Aerospace Engineering University of Michigan 3025 FXB 1320 Beal Avenue Ann Arbor, MI, 48109, USA	<i>email:</i> goroda@umich.edu <i>email:</i> alex@alexgorodetsky.com <i>web:</i> www.alexgorodetsky.com
RESEARCH INTERESTS	Computational algorithms for decision making under uncertainty: Uncertainty quantification; Bayesian inference and statistics; machine learning; numerical analysis; dynamical systems; autonomous systems; multi-agent systems; path planning; stochastic optimal control; and optimization.	
EDUCATION	Massachusetts Institute of Technology , Cambridge, MA Ph.D., Computational Science and Engineering, Department of Aeronautics and Astronautics, February 2017 <ul style="list-style-type: none">• Thesis: <i>Continuous low-rank tensor decompositions, with applications to stochastic optimal control and data assimilation</i>• Advisers: Professor Sertac Karaman, Professor Youssef M. Marzouk• Areas of Study: Computational Science, Control, Autonomy S.M., Department of Aeronautics and Astronautics, June 2012 <ul style="list-style-type: none">• Thesis: <i>A learning method for the approximation of discontinuous functions for stochastic simulations</i>• Adviser: Professor Youssef M. Marzouk• Area of Study: Computational Science University of Michigan , Ann Arbor, MI B.S.E., Aerospace Engineering, June 2010 <ul style="list-style-type: none">• <i>Summa cum Laude</i>• Minor in Mathematics	
AWARDS	<ul style="list-style-type: none">• NSF CAREER Award, 2023• Air Force Office of Scientific Research Young Investigator Award, 2018• John von Neumann Postdoctoral Research Fellowship in Computational Science, 2016• Department of Energy Office of Science Graduate Fellowship (DOE SCGF), Finalist, 2012	
PROFESSIONAL EXPERIENCE	University of Michigan , Ann Arbor, MI <i>Assistant Professor</i> January 2018 – Present <i>Department of Aerospace Engineering</i> Sandia National Laboratories , Albuquerque, NM <i>John von Neumann Postdoctoral Fellow</i> October 2016 – December 2017 <i>Optimization and Uncertainty Quantification Group</i> <i>Computer Science Research Institute</i> Massachusetts Institute of Technology , Cambridge, MA <i>Graduate Research Assistant</i> September 2010 – September 2016 <i>Aerospace Computational Design Laboratory</i>	

- [1] Yang, H., Fujii, Y., Wang, K. W., and Gorodetsky, A. A. (2022). "Control Variate Polynomial Chaos: Optimal Fusion of Sampling and Surrogates for Multifidelity Uncertainty Quantification." *International Journal for Uncertainty Quantification*, 13:3 (2023): 69-90 <https://doi.org/10.1615/Int.J.UncertaintyQuantification.2022043638>
- [2] Gorodetsky, A. A., Safta, C., and Jakeman J.D. "Reverse-mode differentiation in arbitrary tensor network format: with application to supervised learning", *Journal of Machine Learning Research* 23:143 (2022): 1-29 <http://jmlr.org/papers/v23/21-0225.html>
- [3] Jakeman, J. D., Friedman, S., Eldred, M., Tamellini, L., Gorodetsky, A. A., and Allaire, D. "Adaptive experimental design for multi-fidelity surrogate modeling of multi-disciplinary systems." *International Journal for Numerical Methods in Engineering*, 123:12 (2022): 2760-2790. <https://doi.org/10.1002/nme.6958>
- [4] Pham, T., and Gorodetsky, A. A. "Ensemble Approximate Control Variate Estimators: Applications to MultiFidelity Importance Sampling." *SIAM/ASA Journal on Uncertainty Quantification*, 10:3 (2022): 1250-1292. <https://doi.org/10.1137/21M1390426>
- [5] Kachar, K.G., and Gorodetsky, A. A., "Dynamic Multi-agent assignment via discrete optimal transport." *IEEE Journal on Control of Network Systems*, (2022), <https://doi.org/10.1109/TCNS.2022.3141024>.
- [6] Aksoy, D., Alben, S., Deegan, R. D., and Gorodetsky, A. A. "Inverse Design of Self-Oscillatory Gels through Deep Learning." *Neural Computing and Applications*, (2022). <https://doi.org/10.1007/s00521-021-06788-9>
- [7] Soley, B., Bergold, P., Gorodetsky, A. A., Batista, V.S., "Functional Tensor-Train Chebyshev Method for Multidimensional Quantum Dynamics Simulations" *Journal of Chemical Theory and Computation* 18:1 (2022): 25-36 <https://doi.org/10.1021/acs.jctc.1c00941>
- [8] Yang, H. , Gorodetsky, A. A., Fujii, Y., Wang, K-W. "A Polynomial-Chaos-Based Multifidelity Approach to the Efficient Uncertainty Quantification of Online Simulations of Automotive Propulsion Systems.", *Journal of Computational and Nonlinear Dynamics*, (2022), <https://doi.org/10.1115/1.4053559>
- [9] Gorodetsky, A. A., Jakeman, J. D., and Geraci, G. "MFNETs: data efficient all-at-once learning of multifidelity surrogates as directed networks of information sources." *Computational Mechanics* 68:4 (2021): 741-758.
- [10] Gorodetsky, A. A., Jakeman, J.D., Geraci, G., Eldred, M.S., "MFNETS: multifidelity data-driven networks for Bayesian learning and prediction." *International Journal of Uncertainty Quantification* 10:6 (2020) : 595-622.
- [11] Galioto, N., Gorodetsky, A.A. "Bayesian system ID: optimal management of parameter, model, and measurement uncertainty." *Nonlinear Dynamics* (2020). <https://doi.org/10.1007/s11071-020-05925-8>
- [12] Gorodetsky, A. A., Geraci, G., Eldred M. S., Jakeman, J. A generalized approximate control variate framework for multifidelity uncertainty quantification. *Journal of Computational Physics*, 408, (2020): 109257
- [13] Jakeman, J., Eldred, M. S., Geraci, G., Gorodetsky, A.A. Adaptive multi-index collocation for uncertainty quantification and sensitivity analysis. *International Journal for Numerical Methods in Engineering*, 121:6 (2020) : 1314 – 1343.
- [14] Alben, S., Gorodetsky, A. A., Kim, D., Deegan, R. D. Semi-implicit methods for the dynamics of elastic sheets. *Journal of Computational Physics*, 399 (2019): 108952

- [15] Wildey, T., Gorodetsky, A.A., Belme, A.C., Shadid, J. N., Robust Uncertainty Quantification using reponse surface approximations of discontinuous functions *International Journal of Uncertainty Quantification*, 9:5 (2019): 415-437
- [16] Gorodetsky A. A., Jakeman, J. D. Gradient-based Optimization for Regression in the Functional Tensor-Train Format. *Journal of Computational Physics*, 374 (2018): 1219-1238
- [17] Gorodetsky A. A., Karaman, S., and Marzouk Y. M. A continuous analogue of the tensor-train decomposition. *Computer Methods in Applied Mechanics and Engineering*, 347 (2018): 59-94
- [18] Kramer, B., and Gorodetsky, A. System identification via CUR-factored Hankel approximation. *SIAM Journal on Scientific Computing* 40.2 (2018): A848-A866
- [19] Gorodetsky A. A., Karaman, S., and Marzouk Y. M. High-dimensional stochastic optimal control using continuous tensor decompositions. *International Journal of Robotics Research*, 37.2-3 (2018): 340-377
- [20] Gorodetsky, A. A., and Marzouk, Y. M. Mercer kernels and integrated variance experimental design: connections between Gaussian process regression and polynomial approximation *SIAM/ASA Journal on Uncertainty Quantification*, 4:1 (2016): 796-828
- [21] Gorodetsky, A. A., and Marzouk, Y. M. Efficient localization of discontinuities in complex computational simulations. *SIAM Journal on Scientific Computing*, 36.6 (2014): A2584-A2610

PREPRINTS

- [22] Galioto, N., and Gorodetsky, A. A.. "Robust identification of non-autonomous dynamical systems using stochastic dynamics models." 2022 *arXiv preprint arXiv:2212.13902*.
- [23] Aksoy, D., Gorsich, D. J., Veerapaneni, S., and Gorodetsky, A. A. "An Incremental Tensor Train Decomposition Algorithm." 2022 *arXiv preprint arXiv:2211.12487*.
- [24] De, S., Salehi, H. and Gorodetsky, A., "Efficient MCMC Sampling for Bayesian Matrix Factorization by Breaking Posterior Symmetries." 2020, arXiv preprint <https://arxiv.org/abs/2006.04295>
- [25] Rai, P., Kolla, H, Cannada, L., Gorodetsky, A.A., Randomized functional sparse Tucker tensor for compression and fast visualization of scientific data. arXiv preprint arXiv:1907.05884 (2019).

CONFERENCE PUBLICATIONS

- [26] Eckels, J., Whittaker, C. B., Jorns, B., and Gorodetsky, A. A.. "Optimal experimental design to learn reduced-fidelity models for porous electrosprays." *In AIAA SCITECH 2023 Forum*, National harbor, MD, USA, January 23-27, 2023. <https://doi.org/10.2514/6.2023-0066>
- [27] Zeng, X., Geraci, G., Gorodetsky, A. A., Jakeman, J., Eldred, M. S., and Ghanem, R. G.. "Improving Bayesian networks multifidelity surrogate construction with basis adaptation." *In AIAA SCITECH 2023 Forum*, National harbor, MD, USA, January 23-27, 2023. <https://doi.org/10.2514/6.2023-0917>
- [28] McKenna, C. and Gorodetsky A. A. "Online Parameter Estimation Within Trajectory Optimization for Dynamic Soaring." *In AIAA SCITECH 2023 Forum*, National harbor, MD, USA, January 23-27, 2023. <https://doi.org/10.2514/6.2023-1482>
- [29] Thompson, M., Geraci, G., Bomarito, G., Warner, J., Leser, P., Leser, W. P., Eldred, M.S., Jakeman, J., and Gorodetsky A. A. "Strategies for Automation of Model Tuning in Multi-fidelity Trajectory Uncertainty Propagation." *In AIAA SCITECH 2023 Forum*, National harbor, MD, USA, January 23-27, 2023. <https://doi.org/10.2514/6.2023-1481>.

- [30] Sharma, H., Galioto, N., Gorodetsky, A. A., and Kramer, B. "Bayesian Identification of Nonseparable Hamiltonian Systems Using Stochastic Dynamic Models." *In 2022 IEEE 61st Conference on Decision and Control (CDC)* (pp. 6742-6749). IEEE., Cancun, Mexico, December 6-9, 2022. <https://doi.org/10.1109/CDC51059.2022.9992571>
- [31] Eckels, J., Whittaker, C.B., Gorodetsky, A.A., and Jorns, B.A., "Simulation-based surrogate methodology of electric field for electrospray emitter geometry design and uncertainty quantification", *IEPC 2022*, June 2022
- [32] Whittaker, C.B., Eckels, J., Gorodetsky, A.A., and Jorns, B.A., "A Moment-Based Model of Multi-Site Emission for Porous Electrosprays", *IEPC 2022*, https://pepl.engin.umich.edu/pdf/IEPC-2022-Whittaker_1.pdf, June 2022
- [33] Hurley, W., Marks, T., Gorodetsky, A. A., and Jorns, B.A., "Application of Bayesian Inference to Develop an Air-Core Circuit for a Magnetically Shielded Hall Thruster", *IEPC 2022*, <https://pepl.engin.umich.edu/pdf/IEPC-2022-Hurley.pdf>, June 2022
- [34] Allen, M.G., Eckels, J., Byrne, M.P., Gorodetsky, A. A., and Jorns, B.A., "Application of Optimal Experimental Design to Characterize Pressure Related Facility Effects in a Hall Thruster." *IEPC 2022* <https://pepl.engin.umich.edu/pdf/IEPC-2022-Allen.pdf> June 2022
- [35] Walker, M.L., Lev, D., Saedifard, M., Jorns, B., Foster, J., Gallimore, A.D., Gorodetsky, A., Rovey, J.L., Chew, H.B., Levin, D., Williams, J.D., Yalin, A., Wirz, R.E., Marian, J., Boyd, I., Hara, K., and Lemmer, K. "Overview of the Joint Advanced Propulsion Institute (JANUS)." *International Electric Propulsion Conference (IEPC 2022)*, Boston, MA, USA, June 19-23, 2022.
- [36] Yang, H., Fujii, Y., Zhang, Y., Haria, H., Devendran, R.S., Saini, A., Gorodetsky, A. and Wang, K.W., "Uncertainty Quantification of Wet Clutch Actuator Behaviors in P2 Hybrid Engine Restart Process (No. 2022-01-0652)." (2022) SAE Technical Paper.
- [37] Whittaker, C.B., Gorodetsky, A.A., and Jorns, B. A. "Model Inference from Electrospray Thruster Array Tests." *AIAA SCITECH 2022 Forum.*, San Diego, CA, USA, January 3-7, 2022. <https://doi.org/10.2514/6.2022-0041>
- [38] Bomarito, G., Geraci, G., Warner, J., Leser, P., Leser, W., Eldred, M. S., and Gorodetsky, A.A. "Improving Multi-Model Trajectory Simulation Estimators using Model Selection and Tuning." *AIAA SCITECH 2022 Forum.*, San Diego, CA, USA, January 3-7, 2022. <https://doi.org/10.2514/6.2022-1099>
- [39] Gorodetsky, A. A., Whittaker, C.B., Szulman, A., Jorns, B. "Robust Design of Electrospray Emitters." *AIAA Propulsion and Energy 2021 Forum.* Virtual, August 11-13, 2021.
- [40] Ji, X., Molnar, T. G., Gorodetsky, A. A., Orosz, G. "Bayesian Inference for Time Delay Systems with Application to Connected Automated Vehicles." *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)*. 2021.
- [41] Chen, B., Tandon, S., Gorsich, D., Gorodetsky, A., Veerapaneni, S. "Behavioral Cloning in Atari Games Using a Combined Variational Autoencoder and Predictor Model." *IEEE Conference on Evolutionary Computation*, Virtual, June 28 - July 1, 2021.
- [42] Galioto, N. Gorodetsky, A. A., "A new objective for identification of partially observed linear time-invariant dynamical systems from input-output data." *Learning for Dynamics and Control (LADC)*, Virtual, June 7-8, 2021.

- [43] Galioto, N. Gorodetsky, A. A., "Bayesian Identification of Hamiltonian Dynamics from Symplectic Data." *Conference on Decision and Control (CDC)*, Virtual, December 14-18, 2020.
- [44] Yang, H., Kidambi, N., Fujii, Y., Gorodetsky, A., Wang, K-W. "Uncertainty Quantification Using Generalized Polynomial Chaos for Online Simulations of Automotive Propulsion Systems." *American Control Conference (ACC)* 2020. pp. 295-300. IEEE, July 1-3, 2020. <https://doi.org/10.23919/ACC45564.2020.9147870>
- [45] Whittaker, C.B., Gorodetsky, A. Jorns B. "Quantifying uncertainty in the scaling laws of porous electrospray emitters." *AIAA Propulsion and Energy 2020 Forum*, August 24-28, 2020.
- [46] Baskar, D., Gorodetsky, A. A Simulated Wind-field Dataset for Testing Energy Efficient Path-Planning Algorithms for UAVs in Urban Environment. *2020 AIAA Aviation Form*, 2020.
- [47] He, K. Wang, J. and Gorodetsky, A.. Uncertainty Analysis of Trajectory Tracking for Autonomous Dynamic Soaring. *AIAA Scitech 2020 Forum*. 2020.
- [48] Jorns, B., Gorodetsky, A., Lasky, I., Kimber, A., Dahl P., St. Peter, B., Dressler, R. Uncertainty Quantification of Electrospray Thruster Array Lifetime. *36th International Electric Propulsion Conference*, University of Vienna, Austria, September 15 – 20, 2019.
- [49] Eldred, M. S., Geraci, G., Gorodetsky, A., and Jakeman, J. Recent advancements in Multilevel-Multifidelity techniques for forward UQ in the DARPA SEQUOIA project. *AIAA Scitech Forum* January 2019.
- [50] Geraci, G., Eldred, M.S., Gorodetsky, A. A., Jakeman J. Leveraging Active Subspaces for Efficient Multifidelity Uncertainty Quantification. *ECCM-ECCFD 2018*, Glasgow, Scotland, UK 2018.
- [51] Tal, E., Gorodetsky, A. A, Karaman, S. Continuous Tensor Train-Based Dynamic Programming for High-Dimensional Zero-Sum Differential Games. *American Control Conference (ACC)*, Milwaukee, WI, USA, 2018.
- [52] Sayre-McCord, R. T., Guerra, W., Antonini, A., Arneberg, J., Brown, A., Cavalheiro, G., Fang, Y., Gorodetsky, A., McCoy, D., Quilter, S., Riether, F., Tal, E., Terzioglu, Y., Carlone, L., Karaman, S. Visual-inertial navigation algorithm development using photorealistic camera simulation in the loop. *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, Brisbane, Australia, 2018.
- [53] Eldred, M. S., Geraci, G., Gorodetsky, A., and Jakeman, J. Multilevel-Multifidelity Approaches for Forward UQ in the DARPA SEQUOIA project. *2018 AIAA Non-Deterministic Approaches Conference*. 2018.
- [54] Gorodetsky, A., Karaman S., and Marzouk, Y. M. Low-rank tensor integration for Gaussian filtering of continuous time nonlinear systems In: *56th IEEE Conference on Decision and Control*, Melbourne, Australia, December, 2017.
- [55] Alora, J., Gorodetsky, A., Karaman S., Lowry, N., and Marzouk, Y. M. Automated synthesis of low-rank control systems from sc-LTL specifications using tensor-train decompositions In: *55th IEEE Conference on Decision and Control*, Las Vegas, NV, USA, December, 2016.
- [56] Gorodetsky, A., Karaman S., and Marzouk, Y. M. Efficient high-dimensional stochastic optimal motion control using tensor-train decomposition. In: *Proceedings of Robotics: Science and Systems*, Rome, Italy, July, 2015.

INVITED TALKS

- [57] Methods and approaches to benchmark data-driven modeling in sparse and noisy data regimes. *USACM Workshop on Establishing Benchmarks for Data-Driven Modeling of Physical Systems*, University of Southern California, Los Angeles, CA. April 6-7, 2023.
- [58] Opportunities and challenges for uncertainty quantification in the analysis, design, and control of complex engineering Systems. In *NASA Langley Research Center, Uncertainty Quantification Seminar*, Hampton, VA., March 6, 2023.
- [59] Multi-fidelity approaches to uncertainty quantification: sampling and surrogates. In *Johns Hopkins Civil and Systems Engineering Seminar*, Baltimore, MD. November 17, 2022.
- [60] Uncertainty quantification: algorithms for analysis and decision making in an uncertain world. In *MIDAS Annual Data Science and AI Summit*, Ann Arbor, MI. November 14, 2022.
- [61] Uncertainty Quantification with Multi-fidelity networks. In *USACM Thematic Conference on Uncertainty Quantification for Machine Learning Integrated Physics Modeling*. Crystal City, Arlington, VA. August 18-19, 2022.
- [62] Tensor network approaches for fast and data efficient learning: applications to imitation learning from video data. In *ARC Collaborative Research Seminar, University of Michigan*, March 25, 2022.
- [63] Bayesian System ID: optimal management of parameter, model, and measurement uncertainty. In *Department of Mathematics, University of Iowa*, November 2, 2021.
- [64] Multi-fidelity approaches for uncertainty quantification. In *Chair's Distinguished Lecture Series, Department of Aerospace Engineering, University of Michigan*, October 13, 2021.
- [65] Control-oriented Bayesian identification of dynamical systems from input-output data. In *Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering & Technology*, San Diego, CA, September 26-29, 2021
- [66] Bayesian approaches for data-driven learning of dynamical system. In *Engineering Mechanics Institute Conference and Probabilistics Mechanics & Reliability Conference*, Columbia University (Virtual), May 25-28, 2021
- [67] Bayesian System ID: optimal management of parameter, model, and measurement uncertainty. In *Mechanical and Aerospace Engineering, University of San Diego*, May 7, 2021.
- [68] Sampling algorithms for generalized model ensembles in multifidelity uncertainty quantification. In *Workshop on multilevel and multifidelity sampling methods in UQ for PDEs, Erwin Schrödinger Institute (Virtual)*, May 4-5, 2020.
- [69] Compression algorithms for enabling high-dimensional motion planning. In *University of Maryland, College Park, Mathematics Department seminar*, October 15, 2019.
- [70] Tensor decompositions and their UQ applications. In *USC Summer School on Uncertainty Quantification*, Los Angeles, CA, USA, August 14-16, 2019
- [71] Compression algorithms for enabling high-dimensional motion planning. In *LIMSI-CNRS*, Orsay, France, June 20, 2019.
- [72] Scalable learning of dynamical systems: low-rank approaches for increasing computational efficiency. In *Physics Informed Machine Learning Workshop*, University of Washington, Seattle, WA, USA June 6 – 7, 2019.

- [73] Compression algorithms for enabling high-dimensional motion planning. In *Sandia National Laboratories*, Albuquerque, NM, May 23, 2019.
- [74] Low-rank tensor compression algorithms for generating, managing, and analyzing large scale scientific data. In *17th International Conference on Numerical Combustion*, Aachen Germany, May 5 – May 8, 2019.
- [75] Exploiting and learning structure for multifidelity UQ. In *U2CanUQ conference*, University of Arizona, Tuscon, Arizona, USA, April 10, 2019. **Keynote.**
- [76] Multifidelity uncertainty quantification through approximate control variates and Bayesian networks. In *University of Notre Dame, Department of Applied Mathematics*, Notre Dame, Indiana, USA, November 15, 2018.
- [77] Low-rank tensor approaches for adaptive function approximation: algorithms and examples. In *University of Michigan Applied Mathematics Seminar*, Ann Arbor, MI, USA, September 7, 2018.
- [78] Modeling connections between multifidelity information sources for uncertainty quantification. In *UTRC*, Hartford, CT, USA, August 20 – 21, 2018.
- [79] Functional tensor-train approach and algorithms. In *Yale, Department of Chemistry*, New Haven, CT, USA, August 13-16, 2018.
- [80] Regression in low-rank functional formats. In *USC Workshop on Scientific Machine Learning*, Los Angeles, CA, USA, June 4–6, 2018.
- [81] Compression for stochastic optimal control. In *Los Alamos National Laboratory.*, Los Alamos, NM, USA, June 20, 2017.
- [82] Real-time control and uncertainty quantification of autonomous systems using low-rank multilinear compression. In *University of Michigan Aerospace Engineering Seminar*, Ann Arbor, MI, USA, April 12, 2017.
- [83] Low-rank computation for optimal stochastic control and function approximation. In *MIT Aerospace Computational Design Laboratory Seminar*, Cambridge, MA, USA, November 3, 2015.

OPEN SOURCE
SOFTWARE

GPEXP: Experimental design for Gaussian process regression

- Python package for performing experimental design for Gaussian process models
- Github source code: <https://github.com/goroda/GPEXP>

C³: Compressed Continuous Computation

- Library for computing with multidimensional functions in a compressed format
- Has utilities to aid computation in the context of control, optimization, probabilistic inference, multilinear algebra, and integration
- Github source code: <https://github.com/goroda/Compressed-Continuous-Computation>

C³SC: Compressed Continuous Computation for Stochastic Optimal Control

- Library for solving stochastic optimal control problem with nonlinear dynamics
- Github source code: <https://github.com/goroda/c3sc>

MFNetsSurrogate: Multifidelity networked Surrogates

- A set of routines to enable construction of completely unstructured multifidelity surrogate models for fusing multiple information sources.
- Github source code: <https://github.com/goroda/MFNetsSurrogates>

PROFESSIONAL MEMBERSHIPS Society for Industrial and Applied Mathematics (SIAM), Member, 2010–present
American Institute of Aeronautics and Astronautics (AIAA), Member, 2017–present
Institute for Electrical and Electronics Engineers (IEEE), Member, 2018–present

STUDENTS/POSTDOCS

Current Postdoctoral Fellows

- Nicholas Galioto, PhD Candidate, Department of Aerospace Engineering

Current PhD Students

- Doruk Aksoy, PhD Candidate, Department of Aerospace Engineering
- Brian Chen (co-advised), PhD Candidate, Department of Mathematics
- Thomas Dixon, PhD Pre-Candidate, Department of Aerospace Engineering
- Joshua Eckels, PhD Pre-Candidate, Department of Aerospace Engineering
- Liliang Wang, PhD Candidate, Department of Aerospace Engineering

Past PhD Students

- Nicholas Galioto, Department of Aerospace Engineering
- Hang Yang (co-advised w. Kon-Well Wang), Department of Mechanical Engineering

PROFESSIONAL SERVICE

Referee Service

- *Advances in Computational Mathematics (ACOM)*
- *ASME Turbine Technical Conference and Exposition*
- *American Control Conference (ACC)*
- *AIAA Scitech*
- *BIT Numerical Mathematics*
- *Computational Geosciences (COMG)*
- *Computer Methods in Applied Mechanics and Engineering (CMAME)*
- *Conference on Decision and Control (CDC)*
- *Entropy*
- *IEEE Transactions on Aerospace and Electronic Systems*
- *IEEE Transactions on Very Large Scale Integration Systems*
- *IEEE Transactions on Automatic Control (TAC)*
- *International Journal of Robotics Research (IJRR)*
- *International Journal of Uncertainty Quantification (IJUQ)*
- *Journal of Aerospace Information Systems*
- *Journal of Computational Physics (JCP)*
- *Journal of Intelligent and Robotic Systems*
- *Journal of Machine Learning for Modeling and Computing*
- *Journal of Propulsion and Power*
- *Mathematical Methods in the Applied Sciences*
- *Neural Computation*
- *Robotics: Science and Systems Conference (RSS)*
- *AIAA Journal on Aerospace Information Systems*
- *SIAM Journal of Scientific Computing*
- *SIAM Journal of Dynamical Systems*
- *SIAM Journal of Data Science*
- *SIAM/ASA Journal on Uncertainty Quantification*

Reviewing

- Review DOE ASCR Career Award 2019,2020,2021
- Reviewer for ANR (France)

Society and Conference Service

- *Student paper competition chair, NDA TC: AIAA Scitech 2022*
- *Minisymposium organizer: SIAM Annual Meeting 2019*
- *Minisymposium organizer: SIAM CSE 2019, 2021, 2023*
- *Minisymposium organizer: ICIAM 2019*
- *Minisymposium organizer: USNCCM 2019, 2020, 2021, 2022, 2023, ECCOMAS 2022*
- *Minisymposium organizer : SIAM UQ 2020, 2022*
- *Minisymposium organizer : SIAM MDS 2020 (cancelled due to Covid-19)*
- *Minisymposium organizer: WCCM 2020 (cancelled due to Covid-19)*

CITIZENSHIP

USA