

ALUMNI

Name	Degree	Discipline	Now
Nurbanu Bursa	Postdoc	U of I, IMCI	Postdoc at U of I, IMCI
Nardos Ashenafi	PHD	Electrical Eng.	On the job market
Wankun Sirichotiyakul	PHD	Electrical Eng.	Robotics engineer at Bastian Solutions
Wankun Sirichotiyakul	MS	Mechanical Eng.	PHD candidate at Boise State
Nardos Ashenafi	UG	Mechanical Eng.	PHD candidate at Boise State
Julianna Buzzard	UG	Mechanical Eng.	Engineer at Pitch Aeronautics
Gavin Hamilton	UG	Mechanical Eng.	Engineer at Idaho Power
Dylan Rolleigh	UG	Mechanical Eng.	Robotics engineer at Bastian Solutions
Ryan Montrose	MS	Mechanical Eng.	Research engineer at Lam Research
Maddie Cudworth	UG	Mechanical Eng.	Engineer at Boeing
Sabrina Mooers	UG	Mechanical Eng.	Unknown
Evan Daniels	UG	Mechanical Eng.	Senior
Jessica Carlson	UG	Mechanical Eng.	Graduate student
Jonathan Mott	UG	Mechanical Eng.	Unknown

LIST OF PUBLICATIONS

Underlined fonts indicate a student author while **bolded** fonts indicate the corresponding author.

Book Chapters and Magazines

1. Aykut C. Satici, Fabio Ruggiero, et. al. “*Robotic Dynamic Manipulation*“, Springer Nature Switzerland AG, 2022
2. Volkan Patoglu and Aykut Cihan Satici, “*Optimal Design of Haptic Interfaces*“, Advances in Haptics, IN-TECH, 2010. (*This book chapter has been downloaded over 5000 times from unique IP addresses.*)
3. F. Ruggiero, Aykut C. Satici, et. al. “*Perception of Deformable Objects and Nonprehensile Manipulation Control*“, ICINCO Springer, 2019
4. F. Ruggiero, **Aykut C. Satici**, et. al. “*Nonprehensile manipulation of deformable objects: Achievements and Perspectives from the RoDyMan Project*“, vol. 25, nu. 3, pp.83,92 IEEE Robotics & Automation Magazine, 2018

Upcoming Submissions

1. **Aykut C. Satici**, Alex Peterson, John Chiasson, and Zachary Adams, “*Estimation and Control using Electric and Magnetic Fields around Transmission Lines*“, Transactions on Control System Technology, 2024 (to be submitted by the end of Fall semester).

Submitted Manuscripts

1. **Aykut C. Satici**, Alex Peterson, John Chiasson, and Zachary Adams, “*Controlling UAVs by Sensing the Electric and Magnetic Field Around Power Lines*“, American Control Conference (ACC), June 2024 (submitted in August 2023).
2. Nardos A. Ashenafi, **Aykut C. Satici**, “*Control of Hybrid Dynamical Systems via Deep-net Mixture-of-Experts*“, International Journal of Artificial Intelligence and Robotics Research (IJAIRR), (submitted in June 2023).

3. Nardos A. Ashenafi, **Aykut C. Satici**, “*Data-Driven Passivity-Based Control of Rimless Wheel with Torso on Uneven Terrain*”, IEEE Transactions on Control Systems Technology (submitted in June 2023).
4. Nina Nikitina, Nurbanu Bursa, et. al., **Aykut C. Satici**, and Gunes Uzer, “*Data driven and cell specific determination of nuclei-associated actin structure*”, Small Structures, Wiley, 2023 (submitted in June 2023).
5. Nardos A. Ashenafi, Wankun Sirichotiyakul, **Aykut C. Satici**, “*Robust Data-Driven Design of Passivity-Based Controllers*”, IEEE Transactions on Automatic Control, 2023 (revised and resubmitted).
6. Omor Khan, Gunes Uzer, Aykut C. Satici, et. al. “*Building a Micrgravity-Compatible Vibrational Bioreactor: Development and Characterization of a Low-Intensity Vibrational System*”, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), (submitted), June 2023.

Refereed Journal Articles

1. Nardos A. Ashenafi, Wankun Sirichotiyakul, **Aykut C. Satici**, “*Robust Passivity-Based Control of Underactuated Systems via Neural Approximators and Bayesian Inference*”, IEEE Control Systems Letters, Vol. 6, 2022
2. Wankun Sirichotiyakul, **Aykut C. Satici**, “*Data-Driven Passivity-Based Control of Underactuated Mechanical Systems via Interconnection and Damping Assignment*”, International Journal of Control, 2022.
3. Ryan Montrose, **Aykut C. Satici**, and John Gardner, “*Centralized and Decentralized Optimal Control of Variable Speed Heat Pumps*”, Energies, MDPI, 2021
4. Wankun Sirichotiyakul, Volkan Patoglu, **Aykut C. Satici**, “*Efficient Singularity-Free Workspace Approximations Using Sum-of-Squares Programming*”, Journal of Mechanisms and Robotics, 2020.
5. D. Serra, F. Ruggierro, **A. C. Satici**, et. al., “*Time-Optimal Paths for a Robotic Batting Task*”, Informatics in Control, Automation and Robotics, Springer, 2018.
6. L. Buonocore, J. Cacace, A. Donaire, **A. C. Satici**, et. al., “*Nonprehensile manipulation of deformable objects*”, Robotics and Automation Magazine (RAM), 2018.
7. **Aykut Cihan Satici**, Alejandro Donaire, Bruno Siciliano, “*Intrinsic Dynamics and Total Energy Shaping Control of the Ballbot System*”, International Journal of Control, 2016.
8. **Aykut C Satici**, Mark W. Spong, “*Global Swarming With Connectivity Via Lagrange-Poincaré Equations*”, Automatica, Volume 71, 2016.
9. Ahmetcan Erdogan, Besir Celebi, Aykut C Satici, and **Volkan Patoglu**, “*A Reconfigurable Ankle Exoskeleton with Series-Elastic Actuation*”, Springer Autonomous Robots, Assistive and Rehabilitation Robotics, 2015.
10. **Hasan Alihusain Poonawala**, Aykut C Satici, Hazen Eckert, and Mark W. Spong, “*Collision-Free Formation Control with Decentralized Connectivity Preservation for Nonholonomic-Wheeled Mobile Robots*”, IEEE Transactions on Control of Network Systems, vol. 2, no. 2, pp.122-130, June, 2015.

11. **Aykut Cihan Satici**, Hasan Poonawala, and Mark W. Spong “*Robust Optimal Control of Quadrotor UAVs*,” Access, IEEE, vol. 1, no., pp.79-93, 2013.
12. David Tick, Aykut Cihan Satici, Jinglin Shen, and **Nicholas Gans**, “*Tracking Control of Mobile Robots Localized via Chained Fusion of Discrete and Continuous Epipolar Geometry, IMU and Odometry*,” IEEE Transactions on Cybernetics, vol.43, no.4, pp.1237-1250, Aug. 2013.
13. Aykut Cihan Satici, Ahmetcan Erdogan, and **Volkan Patoglu**, “*A Multi-Lateral Rehabilitation System*,” Turkish Journal of Electrical Engineering and Computer Sciences, vol. 19(5), 2011. (Selected for journal publication by conference PC members.)

Refereed Conference Proceedings

1. Nardos A. Ashenafi, Wankun Sirichotiyakul, and **Aykut C. Satici**, “*Robust Data-Driven Design of Passivity-Based Controllers*”, Conference on Decision and Control (CDC), December 2022.
2. Wankun Sirichotiyakul, Nardos A. Ashenafi, **Aykut C. Satici**, “*Robust Data-Driven Passivity-Based Control of Underactuated Systems via Neural Approximators and Bayesian Inference*”, American Control Conference (ACC), June 2022.
3. Nardos A. Ashenafi and **Aykut C. Satici**, “*Nonholonomic Cooperative Manipulation in the Plane using Linear Complementarity Formulation*”, Conference on Control Technology and Applications (CCTA), 2021.
4. Wankun Sirichotiyakul and **Aykut C. Satici**, “*Combining Energy-Shaping Control of Dynamical Systems with Data-Driven Approaches*”, Conference on Control Technology and Applications (CCTA), 2021.
5. E. Hernandez-Hinojosa, Aykut C. Satici, and **Pranav A. Bhounsule**, “*Optimal Control of a 5-Link Biped Using Quadratic Polynomial Model of Two-Point Boundary Value Problem*”, ASME IDETC-CIE, 2021
6. Wankun Sirichotiyakul, **Aykut C. Satici** “*Data-driven Design of Energy-Shaping Controllers for Swing-Up Control of Underactuated Robots*”, International Symposium on Experimental Robotics (ISER), 2020.
7. Wankun Sirichotiyakul, Sebastian Sanchez, Pranav A. Bhounsule, and **Aykut C. Satici** “*Energetically Optimal Discrete and Continuous Stabilization of Rimless Wheel with Torso*”, ASME IDETC-CIE, 2019.
8. Wankun Sirichotiyakul, Volkan Patoglu, **Aykut Cihan Satici**, “*Convex Multi-Criteria Design Optimization of Robotic Manipulators via Sum-of-Squares Programming*”, International Conference on Robotic Computing (IRC), February 2019.
9. Diana Serra, Aykut Cihan Satici, Fabio Ruggiero, Vincenzo Lippiello and **Bruno Siciliano**, “*An Optimal Trajectory Planner for Robotic Batting Task: The Table Tennis Example*”, 13th International Conference on Informatics in Control, Automation and Robotics, (ICINCO), 2016.
10. **Aykut Cihan Satici**, Fabio Ruggiero, Vincenzo Lippiello and Bruno Siciliano, “*Intrinsic Euler-Lagrange Dynamics and Control Analysis of the Ballbot*”, IEEE American Control Conference, (ACC), 2016.
11. **Aykut Cihan Satici**, Fabio Ruggiero, Vincenzo Lippiello and Bruno Siciliano, “*A Coordinate-Free Framework for Robotic Pizza Tossing and Catching*”, IEEE Conference on Robotics and Automation, (ICRA) 2016.

12. **Aykut Cihan Satici**, and Mark W. Spong, “*Global Swarming While Preserving Connectivity via Lagrange-Poincaré Equations*,” World Congress of the International Federation of Automatic Control, (IFAC) 2014, 24-29 Aug 2014.
13. **Aykut Cihan Satici**, Hasan Poonawala, Hazen Eckert, and Mark W. Spong, “*Connectivity preserving formation control with collision avoidance for nonholonomic wheeled mobile robots*,” IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2013, vol., no., pp.5080,5086, 3-7 Nov. 2013.
14. **Hasan Poonawala**, Aykut Cihan Satici, and Mark W. Spong, “*Leader-follower formation control of nonholonomic wheeled mobile robots using only position measurements*,” 9th Asian Control Conference (ASCC), 2013, vol., no., pp.1,6, 23-26 June 2013.
15. **Aykut Cihan Satici**, and Mark W. Spong, “*Connectivity control on Lie groups*,” 9th Asian Control Conference (ASCC), 2013, vol., no., pp.1,6, 23-26 June 2013.
16. Aykut Cihan Satici, David Tick, Jinglin Shen, **Nicholas Gans**, “*Path-following control for mobile robots localized via sensor-fused visual homography*,” IEEE American Control Conference, (ACC), 2013, vol., no., pp.6287,6293, 17-19 June 2013.
17. **Aykut Cihan Satici**, and Mark W. Spong, “*Nonholonomic cooperative manipulation of polygonal objects in the plane*,” IEEE 51st Annual Conference on Decision and Control (CDC), 2012, vol., no., pp.2439,2446, 10-13 Dec. 2012.
18. Hasan Poonawala, Aykut Cihan Satici, **Nicholas Gans**, and Mark W. Spong, “*Formation control of wheeled robots with vision-based position measurement*,” American Control Conference (ACC), 2012, vol., no., pp.3173,3178, 27-29 June 2012.
19. Ahmetcan Erdogan, Aykut Cihan Satici, and **Volkan Patoglu**, “*Passive velocity field control of a forearm-wrist rehabilitation robot*,” IEEE International Conference on Rehabilitation Robotics (ICORR), 2011, vol., no., pp.1,8, June 29 2011-July 1 2011.
20. M. Alper Ergin, Aykut Cihan Satici, and **Volkan Patoglu**, “*Design optimization, impedance control and characterization of a Modified Delta Robot*,” 2011 IEEE International Conference on Mechatronics (ICM), , vol., no., pp.737,742, 13-15 April 2011.
21. Aykut Cihan Satici, Ahmetcan Erdogan, and **Volkan Patoglu**, “*Design of a reconfigurable ankle rehabilitation robot and its use for the estimation of the ankle impedance*,” IEEE International Conference on Rehabilitation Robotics, 2009. ICORR 2009., vol., no., pp.257,264, 23-26 June 2009.
22. Ahmetcan Erdogan, Aykut Cihan Satici, and **Volkan Patoglu**, “*Design of a reconfigurable force feedback ankle exoskeleton for physical therapy*,” ASME/IFToMM International Conference on Reconfigurable Mechanisms and Robots, 2009. ReMAR 2009., vol., no., pp.400,408, 22-24 June 2009.