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Education

The University of Michigan **Ann Arbor, MI**
Ph.D. in Aerospace Engineering, August 1992.
Dissertation: Control and Stabilization of Nonholonomic Dynamic Systems

The University of Michigan **Ann Arbor, MI**
M.S. in Electrical Engineering: Systems, December 1991.

The Ohio State University **Columbus, OH**
M.S. in Aeronautical and Astronautical Engineering, December 1987.
Thesis: Model Truncation Effects in Variable Structure Control System Maneuvering of Flexible Spacecraft

Istanbul Technical University **Istanbul, Turkey**
M.S. in Mechanical Engineering, July 1984.
Thesis: Dynamic Characteristics of Hydrostatic Driving Systems

Istanbul Technical University **Istanbul, Turkey**
B.S. in Aeronautical Engineering, July 1982.
Senior Thesis: Dynamic Characteristics of Unsteady Boundary Layer Flows

Employment

2017-pres	Glaxo Wellcome Distinguished Professor and Chair of Engineering, University of North Carolina Asheville, NC; Teaching Professor of Mechanical & Aerospace Engineering, North Carolina State University (NCSU), Raleigh, NC; Director of NCSU Engineering Programs at UNC Asheville, NC
2014-2017	Professor and Associate Department Chair, ERAU, Daytona Beach, FL
2013-2014	Visiting Professor, Aerospace Engineering Division, School of Mechanical and Aerospace Engineering, Nanyang Technological University (NTU), Singapore
2011-2013	Professor, Graduate Program and Associate Department Chair, ERAU, Daytona Beach, FL
2007-2011	Professor, Associate Department Chair, and Program Coordinator of B.S. in Engineering Physics (BSEP) & B.S. in Space Physics (BSSP) programs, ERAU, Daytona Beach, FL
2005-2007	Professor, Associate Department Chair &Program Chair of BSEP, ERAU, Daytona Beach, FL
2000-2005	Associate Professor & Program Chair of BSEP, ERAU, Daytona Beach, FL
1998-2000	Assistant Professor of Engineering Physics, ERAU, Daytona Beach, FL
1997-1998	Instructor, Automation Robotics Technology, Texas State Technical College, Sweetwater, TX

1996-1997 Visiting Assistant Professor, Mechanical Eng., Ohio University, Athens, OH
1995-1996 Research Fellow, Applied Mathematics, University of Twente, Netherlands
1992-1995 Assistant Professor, Mechanical Engineering, King Fahd University, KSA

Honors & Awards

- First Runner-Up, ERAU Researcher of the Year (2012, 2013).
- Finalist, ERAU Researcher of the Year (2004, 2005, 2006).
- Rackham Block Grant Fellowship (1990-1992).
- National Merit Scholarship from Turkish Government (1985-1990).

Societies & Activities

- Senior Member of IEEE (Institute of Electrical & Electronics Engineers).
- Senior Member of AIAA (American Institute of Aeronautics & Astronautics).
- Associate Editor, International Journal of Aerospace Engineering (2010-present).
- Associate Editor, IEEE Transactions on Automatic Control Editorial Board (2001-2007).
- Associate Editor, IEEE Control Systems Society Conference Editorial Board (1997-2001).
- AIAA Guidance, Navigation & Control Technical Committee Member (1999-2002).
- International Program Committee Member for IEEE and IFAC Conferences.
- Technical reviewer for IEEE, IFAC, and SIAM Journals, Systems & Control Letters, and IEEE sponsored conferences.

Service and Administrative Activities at ERAU

- Served as Associate Department Chair.
- Served as Acting Chair.
- Served as EP (Engineering Physics) and SP (Space Physics) Program Chair.
- Served as EP Graduate Program Chair.
- Served as PS (Physical Sciences) Faculty Development Committee Member.
- Served as PS Faculty Search Committee Chair.
- Served as PS Promotion and Tenure Committee Chair.
- Served as COAS (College of Arts and Sciences) Assessment Committee Member.
- Served as COAS Admission / Recruitment Committee Member.
- Served as COAS Promotion and Tenure Committee Member.
- Served as Vice Speaker of ERAU Faculty Senate.
- Served as Faculty Senate Research Committee Member.
- Served as Faculty Advisor for Sigma Pi Sigma National Physics Honor Society.
- Developed the PhDEP program at ERAU.
- Designed and implemented the SACS (Southern Association of Colleges and Schools) Assessment Plans for the BSEP, BSSP, MSEP, and PhDEP programs.
- Developed the ABET Self-Study Reports and coordinated the highly successful ABET accreditation visits for the BSEP program in 2001 and 2007.
- Advised undergraduate and graduate students
- Advised McNair Scholars.
- Advised Capstone Senior Design and Microgravity Student Projects.

Research Interests

Unmanned Aerial Vehicles, Aerial Robots, Autonomous Systems, Thermoacoustics, Nonlinear Systems, Dynamics & Control of Space Multibody Systems, Space Robotics, Control of Mechatronics & Aerospace Systems, Astrodynamics, Differential Geometric Control Theory.

Graduate Students Supervised/Supervising

- **Brigette Riley** (Current student)
- **Aaron Steinbusch** (Current student)
- **Jari Jacobus van Steen** (Current student)
- **Peter Lambert** (May 2018)
  Thesis Title: Observer-based Sliding Mode Control of a Six DOF Quadcopter
- **Derek Hoffman** (March 2018)
  Dissertation Title: Nonlinear Control of Underactuated and Constrained Systems
- **Muhammad Rehan** (April 2018)
  Dissertation Title: Global Formulation and Control of a Class of Nonholonomic Systems
- **Michael Campobasso** (May 2017)
  Thesis Title: Leader-Follower Trajectory Generation and Tracking for Quadrotor Swarms
- **Mikael Molina Sandoval** (May 2016)
  Thesis Title: Nonlinear Control of a Thermoacoustic System with Multiple Heat Sources and Actuators
- **Remon Damen** (December 2015)
  Thesis Title: Nonlinear Control of a Hover System
- **Jop de Wit** (May 2014)
  Thesis Title: Modeling and Control of a Two-Link Flexible Robot Manipulator
- **Jaime Rubio** (July 2013)
  Dissertation Title: Dynamics and Control of Higher-Order Nonholonomic Systems
- **Juan Alvarado** (March 2012)
  Thesis Title: Space Vehicle Debris Hazard Airspace Stratification
- **Takahiro Kuhara** (December 2011)
  Thesis Title: Dynamics and Control of an Asteroid Orbiting Satellite
- **Jaime Rubio** (May 2011)
  Thesis Title: Nonlinear Control of Underactuated Space Systems
- **Chau T. Ton** (June 2009)
  Thesis Title: Magnetic Stabilization of Nadir-Pointing Small Satellites
- **Pavan Donepudi** (May 2007)
  Thesis Title: Control System Design and Simulation of Spacecraft Formations via Virtual Structure Approach
- **Jasper van de Loo** (May 2006)
  Thesis Title: Control of a Nonholonomic Control Moment Gyroscope
- **Philip Savella** (August 2005)
  Thesis Title: Maneuvering Control of a Spacecraft with Propellant Sloshing
- **Daniel Dyer** (June 2005)
  Thesis Title: Control System Design and Simulation of Spacecraft Formations

- **Jeremy Eckhart** (May 2005)
  Thesis Title: Modeling and Slew-Maneuver Control of a Flexible Spacecraft
- **Theo Geluk** (May 2004)
  Thesis Title: Control of First-Order Nonholonomic Systems
- **Ard Bommer (**May 2004)
  Thesis Title: Control of Underactuated Mechanical Systems
- **Emad I. Al-Regib** (May 1994)
  Thesis Title: Nonholonomic Motion Planning for Wheeled Mobile Systems Using Geometric Phases

Research Grant Activities

- Research Institution Lead, DOE SBIR/STTR Phase II, Fully-Automated PV Array Assembly System, 2019-2021 (pending).
- Co-PI, NIH, A Blinded Randomized-Controlled Trial to Examine the Effects of Hip Muscle Retraining on Fall Prevention and Balance-related Physiological Variables in Older Adults with Increased Fall Risk, 2019-2023 (pending).
- Cisco Systems Contract, Autonomous Mobile Robot, 2018-2019.
- NAVAIR Contract, Semi-Automatic ECASS Carrier, 2017-2018.
- NC Community Foundation/Duke Energy Grant, Growing UNC Asheville's Engineering & Mechatronics Program, 2017-2018.
- Co-PI, DSO National Laboratories of Singapore, Automatic Landing System for UAVs, 2013-2014.
- PI, FAA-CST Contract, Space Vehicle Debris Hazard Airspace Stratification Feasibility Study, 2011-2012.
- PI, FAA-CST Contract, Spacecraft and Propulsion Technician Training and Certification, 2011-2012.
- PI, NASA FSGC Research Grant, Development of Novel Attitude Control Algorithms for Small Satellites Using only Magnetic Actuation, 2008-2009.
- PI, NASA FSGC Research Grant, Dynamics and Control of Underactuated Spacecraft Systems, 2003-2004.
- PI, Daytona Beach Research Grants, Dynamics and Control of Underactuated Mechanical Systems, 1999-2002.
- ERAU Equipment Grants. Purchased a 4-DOF Control Moment Gyroscope, a 3-DOF Hovercraft, a Two-Link Flexible Robot Arm, an Air bearing system, and a Compressor for the Spacecraft Engineering Research Lab.
- Research Fellow, Dutch Institute of Systems and Control, Modeling and Control of Open Physical Systems, University of Twente, Enschede, Netherlands, 1995-1996.
- Participated in research projects supported by the NSF under Grants MSM-8722266 and MSS-9114630, and by the NASA Grant under NAG-1-1419, University of Michigan, 1989-1992.
  Titles: Control and Stabilization of Space Multibody Systems, Spacecraft Attitude Dynamics and Control, Control and Stabilization of Nonholonomic Dynamic Systems.

Peer-Reviewed Publications (over 6000 citations-- Google Scholar)

Journal and Proceedings Papers (ISI Web of Knowledge/ Scopus)

2019 [1] M. Mendiratta, E. Kayacan, **M. Reyhanoglu**, D. Rus, and E. Kayacan, "Robust tracking control of aerial robots via a simple learning strategy-based feedback linearization," under review, *Aerospace Science and Technology*, 2019.

[2] M. Navabi, A. Davoodi, and **M. Reyhanoglu**, "Modeling and control of a nonlinear coupled spacecraft-fuel system," under review, *Acta Astronautica*, 2019.

[3] J. R. Hervas, A. Gupta, Y.-W. Ong, and **M. Reyhanoglu**, "Pay-per-flight Dynamic Pricing of UAV Operations," under review, *International Journal of Aerospace Engineering*, 2019.

[4] A. Steinbusch and **M. Reyhanoglu**, "Robust Nonlinear Output Feedback Control of a 6-DOF Quadrotor UAV," to appear in *Proc. Asian Control Conference*, 2019.

[5] A. Steinbusch and **M. Reyhanoglu**, "Robust Nonlinear Tracking Control of a 2-DOF Helicopter Systems," to appear in *Proc. Asian Control Conference*, 2019.

[6] J. van Steen and **M. Reyhanoglu**, "Trajectory Tracking Control of a Rolling Disk on a Smooth Manifold," to appear in *Proc. Asian Control Conference*, 2019.

[7] M. Rehan and **M. Reyhanoglu**, "Trajectory Tracking of a Knife-Edge on the Flat Surface," to appear in *Proc. European Control Conference*, 2019.

[8] J. van Steen and **M. Reyhanoglu**, "Trajectory Tracking Control for a Mobile Robot on a Smooth Manifold," submitted to *European Conference on Mobile Robots*, 2019.

2018 [9] M. Rehan and **M. Reyhanoglu**, "Global Formulation and Motion Planning for a Sphere Rolling on a Smooth Surface," *International Journal of Control, Automation and Systems*, Vol. 16, No. 6, 2018, pp. 2709-2717.

[10] M. Rehan and **M. Reyhanoglu**, "Control of Rolling Disk Motion on an Arbitrary Smooth Surface," *IEEE Control Systems Letters*, Vol. 2, No. 3, 2018, pp. 357-362.

[11] D. Hoffman, M. Rehan, W. MacKunis, and **M. Reyhanoglu**, "Quaternion-based Robust Trajectory Tracking Control of a Quadrotor Hover System," *International Journal of Control, Automation and Systems,* Vol. 16, No. 6, 2018, pp. 2575-2584.

[12] D. Hoffman and **M. Reyhanoglu**, "Differential Geometric Approach to Robust Control of an Oscillatory Base Robot Manipulator," *Proc. IEEE Industrial Electronics Society*, 2018, pp. 2262-2267.

[13] M. Rehan and **M. Reyhanoglu**, "Motion Planning for a Knife-Edge Moving on the Surface of a Torus," *Proc. IEEE Industrial Electronics Society*, 2018, pp. 2354-2359.

[14] N. Ramos-Pedroza, K. Kidambi, W. MacKunis, and **M. Reyhanoglu**, "A Nonlinear Output Feedback Regulation Method for Limit Cycle Oscillation Suppression Using a Sliding Mode Observer," *Proc. IEEE Conf. Decision and Control*, 2018, pp. 5646-5651.

[15] P. Lambert and **M. Reyhanoglu**, "Observer-Based Sliding Mode Control of a 6-DOF Quadrotor UAV," *Proc. IEEE Industrial Electronics Society,* 2018, pp. 2379-2384.

[16] P. Lambert and **M. Reyhanoglu**, "Observer-Based Sliding Mode Control of a 2-DOF Helicopter System," *Proc. IEEE Industrial Electronics Society,* 2018, pp. 2596-2600.

2017

[17] E. Kayacan, M. A. Khanesar, J. R. Hervas, and **M. Reyhanoglu**, "Learning Control of Unmanned Aerial Vehicles Using Fuzzy Neural Networks," *International Journal of Aerospace Engineering*, Vol. 2017, Article ID 5402809, 12 pages, DOI: 10.1155 2017/5402809.

[18] N. Harris McClamroch, **M. Reyhanoglu**, and M. Rehan, "Knife-Edge Motion on a Surface as a Nonholonomic Control Problem," *IEEE Control Systems Letters*, Vol. 1, No.1, 2017, pp. 26-31.

[19] N. Ramos-Pedroza, W. MacKunis, and **M. Reyhanoglu,** "Synthetic Jet Actuator-based Aircraft Tracking Using a Continuous Robust Nonlinear Control Strategy," *International Journal of Aerospace Engineering,* Vol. 2017, Article ID 4934281, 13 pages, DOI: 10.1155/2017/4934281.

[20] S. Stebler, M. Campobasso, K. Kidambi, W. MacKunis, and **M. Reyhanoglu**, "Dynamic Neural Network-Based Sliding Mode Estimation of Quadrotor Systems," *Proc. American Control Conf.*, 2017, DOI: 10.23919/ACC.2017.7963344, pp. 2600-2605,

[21] D. Hoffman, M. Rehan, W. MacKunis, and **M. Reyhanoglu**, "Robust Quaternion-based Nonlinear Output Feedback Tracking Control of a Quadrotor Hover System," *Proc. IEEE Conf. Decision and Control*, 2017, DOI: 10.1109/CDC.2017.8264379, pp. 4872-4877.

[22] S. Stabler, W. MacKunis, N. Ramos-Pedroza, and **M. Reyhanoglu**, "A Dynamic Neural Network-based Sliding Mode Observer Method for a Class of Uncertain Dynamic Systems," *Proc. IEEE Conf. Control Tech. App.*, 2017, DOI: 10.1109/CCTA.2017.8062431, pp. 1-6.

[23] **M. Reyhanoglu** and D. Hoffman, "Finite-Time Control of a Compliant Base Robot Manipulator," *Proc. Asian Control Conf.*, 2017, DOI: 10.1109/ASCC.2017.8287365, pp. 1335-1340.

[24] D. Hoffman and **M. Reyhanoglu**, "Geometric Tracking Control of a Three-Dimensional Revolute Joint Robot," *Proc. Asian Control Conf.*, 2017, DOI: 10.1109/ASCC.2017.8287245, pp. 641-646.

[25] M. Rehan, **M. Reyhanoglu**, and N. Harris McClamroch, "Motion Planning for a Knife-Edge on the Surface of a Hyperboloid," *Proc. Asian Control Conf.*, 2017, DOI: 10.1109/ASCC.2017.8287363, pp. 1326-1330.

2016 [26] J. R. Hervas, **M. Reyhanoglu**, H. Tang, and E. Kayacan, "Nonlinear Control of Fixed-Wing UAVs in Presence of Stochastic Winds," *Communications in Nonlinear Science and Numerical Simulation*, Vol. 33, 2016, pp. 57-69.

[27] J. R. Hervas and **M. Reyhanoglu**, "Nonlinear Control of a Robot Manipulator with a Nonholonomic Jerk Constraint,'' *Asian Journal of Control*, Vol. 18, No. 5, 2016, pp. 1-8.

[28] W. MacKunis, **M. Reyhanoglu**, K. Kidambi, and J. R. Hervas, "Robust and Adaptive Nonlinear Control of Thermoacoustic Oscillations in Rijke-Type Systems," *Proc. IEEE Int. Conf. Adv. Intelligent Mechatronics*, 2016, DOI: 10.1109/AIM. 2016.7576873, pp. 840-845.

[29] **M. Reyhanoglu** and D. Hoffman, "Modeling and Control of a Flexible-Structure-Mounted Robot Manipulator," *Proc. IEEE Int. Con. Adv. Intelligent Mechatronics*, 2016, DOI: 10.1109/AIM.2016.7576892, pp. 953-957.

[30] R. Damen, **M. Reyhanoglu**, W. MacKunis, and J. R. Hervas, "Passivity-Based Quaternion Feedback Control of a Hover System," *Proc. Int. Conf. Control, Automation and Systems,* 2016, DOI: 10.1109/ICCAS.2016.7832321, pp. 201-206.

[31] W. MacKunis, **M. Reyhanoglu**, K. Kidambi, and J. R. Hervas, "Nonlinear Control of Thermoacoustic Oscillations in Rijke-Type Systems," *Proc. Int. Conf. Control, Automation and Systems,* 2016, DOI: 10.1109/ICCAS.2016.7832470, pp. 1221-1226.

[32] **M. Reyhanoglu**, D. Hoffman, and J. de Wit, "Nonlinear Modeling and Control of a Two-Link Hybrid Manipulator," *Proc. Inter. Conf. Control, Automation, Robotics and Vision,* 2016, DOI: 10.1109/ICARCV.2016.7838809, pp. 1-5.

[33] **M. Reyhanoglu**, R. Damen, and W. MacKunis, "Observer-Based Sliding Mode Control of a 3-DOF Hover System," *Proc. Inter. Conf. Control, Automation, Robotics and Vision,* 2016, pp. 1-6, DOI: 10.1109/ICARCV.2016.7838643.

[34] S. Stebler, W. MacKunis, and **M. Reyhanoglu**, "Nonlinear Output Feedback Tracking Control of a Quadrotor UAV in the Presence of Uncertainty," *Proc. Inter. Conf. Control, Automation, Robotics and Vision,* 2016, DOI: 10.1109/ICARCV. 2016.7838569, pp. 1-6.

[35] N. Ramos-Pedroza, K. Kidambi, W. MacKunis, and **M. Reyhanoglu**, "Nonlinear Tracking Control and Structural Vibration Suppression for Aircraft Using Synthetic Jet Actuators," *Proc. Int. Conf. Control, Automation, Robotics and Vision,* 2016, DOI: 10.1109/ ICARCV.2016.7838797, pp. 1-6.

2015 [36] J. R. Hervas, D. Zhao, and **M. Reyhanoglu**, "Nonlinear Feedback Control of Self-Sustained Thermoacoustic Oscillations," *Aerospace Science and Technology*, Vol. 41, 2015, pp. 209-215.

[37] M. A. Khanesar, E. Kayacan, **M. Reyhanoglu**, and O. Kaynak, "Feedback Error Learning Control of Magnetic Satellites using Type-2 Fuzzy Neural Networks with Elliptic Membership Functions," *IEEE Transactions on Cybernetics,* Vol. 45, No. 4, 2015, pp. 858-868.

[38] J. R. Hervas and **M. Reyhanoglu**, "Controllability and Stabilizability of a Class of Systems with Higher-Order Nonholonomic Constraints," *IFAC Journal Automatica,* Vol. 54, 2015, pp. 229-234.

[39] J. R. Hervas, **M. Reyhanoglu**, and W. MacKunis, "Observer-based Sliding Mode Control of Rijke-type Combustion Instability," *Journal of Low Frequency Noise and Active Vibration Control*, Vol. 34, No. 2, 2015, pp. 201-218.

[40] N. Ramos-Pedroza, W. MacKunis, and **M. Reyhanoglu**, "A Sliding Mode LCO Regulation Strategy for Dual-Parallel Underactuated UAV Systems Using Synthetic Jet Actuators," *International Journal of Aerospace Engineering*, Vol. 2015, Article ID 795348, 7 pages, DOI:10.1155/2015/795348.

[41] N. Ramos-Pedroza, W. MacKunis, and **M. Reyhanoglu**, "Sliding Mode Control-Based Limit Cycle Oscillation Suppression for UAVs Using Synthetic Jet Actuators," *Proc. Int. Workshop on Recent Advances in Sliding Modes*, 2015, pp. 1-5, DOI: 10.1109/ RASM. 2015.7154584.

[42] J. R. Hervas, **M. Reyhanoglu**, and W. MacKunis, "Sliding Mode Control of Rijke-Type Thermoacoustic Systems," *Proc. Int. Workshop on Recent Advances in Sliding Modes*, 2015, pp. 1-6, DOI: 10.1109/RASM.2015.7154639.

2014

[43] J. R. Hervas and **M. Reyhanoglu**, "Thrust-Vector Control in 3D Maneuvering of a Spacecraft with Fuel Slosh Dynamics," *Acta Astronautica*, Vol. 98, 2014, pp. 120-127.

[44] D. Zhao and **M. Reyhanoglu**, "Feedback Control of Transient Growth in a Non-normal Thermoacoustic System," *Journal of Sound and Vibration*, Vol. 333, No. 16, 2014, pp. 3639-3656.

[45] J. R. Hervas, D. Zhao, and **M. Reyhanoglu**, "Linear-Quadratic-Gaussian Control of Rijke-Type Combustion Instability*," Mathematics in Engineering, Science and Aerospace*, Vol. 5, No. 4, 2014, pp. 1-12.

[46] J. R. Hervas, D. Zhao, and **M. Reyhanoglu**, "Nonlinear Feedback Control of Thermoacoustic Oscillations in a Rijke Tube," *Proc. IEEE Int. Symp. Industrial Electronics*, 2014, pp. 173-177, DOI: 10.1109/ISIE.2014.6864606.

[47] J. R. Hervas, **M. Reyhanoglu**, and H. Tang, "Automatic Landing Control of Unmanned Aerial Vehicles on Moving Platforms," *Proc. IEEE Int. Symp. Industrial Electronics*, 2014, pp. 69-74, DOI: 10.1109/ISIE.2014.6864588.

[48] J. R. Hervas and **M. Reyhanoglu**, "Observer-Based Nonlinear Control of Space Vehicles with Multi-Mass Fuel Slosh Dynamics," *Proc. IEEE Int. Symp. Industrial Electronics*, 2014, pp. 178-182, DOI: 10.1109/ISIE.2014.6864607.

[49] D. Zhao and **M. Reyhanoglu**, "Feedback Control of Transient Growth of Thermoacoustic Oscillations," *Proc. 20th AIAA/CEAS Aeroacoustics Conference, AIAA Aviation and Aeronautics Forum and Exposition 2014*, AIAA-2014-3183.

[50] J. R. Hervas, E. Kayacan, **M. Reyhanoglu**, and H. Tang, "Sliding Mode Control of Fixed-Wing UAVs in the Presence of Stochastic Wind," *Proc. Int. Conf. Control, Automation, Robotics and Vision*, 2014, pp. 986-991, DOI: 10.1109/ICARCV.2014.7064440.

[51] J. R. Hervas, D. Zhao, and **M. Reyhanoglu**, "Observer-Based Control of Rijke-type Combustion Instability," *AIP Proceedings,* Vol. 1637*,* 2014, pp. 899-906.

[52] J. R. Hervas, **M. Reyhanoglu**, and H. Tang, "Nonlinear Automatic Landing Control of Unmanned Aerial Vehicles on Moving Platforms via a 3D Laser Radar," *AIP Proceedings,* Vol. 1637*,* 2014, pp. 907-917.

2013

[53] **M. Reyhanoglu** and J. R. Hervas, "Robotically Controlled Sloshing Suppression in Point-to-Point Liquid Container Transfer," *Journal of Vibration and Control*, Vol. 19, No. 14, 2013, pp. 2137-2144.

[54] **M. Reyhanoglu** and J. Alvarado, "Estimation of Debris Dispersion due to a Space Vehicle Breakup during Reentry," *Acta Astronautica*, Vol. 86, 2013, pp. 211-218.

[55] **M. Reyhanoglu** and J. R. Hervas, "Nonlinear Modeling and Control of Slosh in Liquid Container Transfer via a PPR Robot," *Communications in Nonlinear Science and Numerical Simulation*, Vol. 18, 2013, pp. 1481-1490.

[56] J. R. Hervas and **M. Reyhanoglu**, "Controllability and Stabilizability of Higher-Order Nonholonomic Systems,'' *Proc. Asian Control Conf.,* 2013, pp. 1-5.

[57] **M. Reyhanoglu**, J. Alvarado, and A. Carmi, "Estimation of Debris Hazard Areas due to a Space Vehicle Breakup at High Altitudes," *Proc. Asian Control Conf.,* 2013, pp. 1-6.

[58] W. MacKunis, S. Subramanian, S. Mehta, C. Ton, J.W. Curtis, and **M. Reyhanoglu**, "Robust Nonlinear Aircraft Tracking Control Using Synthetic Jet Actuators," *Proc. IEEE Conf. Decision and Control,* 2013, pp. 220-225.

[59] J. R. Hervas and **M. Reyhanoglu**, "On the Nonlinear Modeling of Systems with Higher-Order Nonholonomic Constraints," *Proc. Int. Conf. Control, Automation and Systems,* 2013, pp. 1009-1013.

[60] J. R. Hervas and **M. Reyhanoglu**, "Nonlinear Control of a Third Order Nonholonomic System,'' *Proc. Int. Conf. Control, Automation and Systems,* 2013, pp. 17-22.

[61] J. R. Hervas and **M. Reyhanoglu**, "Observer-Based Nonlinear Control of Slosh in Liquid Container Transfer via a PPR Robot," *Proc. Int. Conf. Control, Automation and Systems,* 2013, pp. 777-782.

[62] J. R. Hervas and **M. Reyhanoglu**, "Thrust-Vector Control of a Three-Axis Stabilized Spacecraft with Fuel Slosh Dynamics," *Proc. Int. Conf. Control, Automation and Systems,* 2013, pp. 761-766.

2012

[63] **M. Reyhanoglu** and J. R. Hervas, "Nonlinear Dynamics and Control of Space Vehicles with Multiple Fuel Slosh Modes," *IFAC Journal Control Engineering Practice*, Vol. 20, 2012, pp. 912-918.

[64] J. R. Hervas and **M. Reyhanoglu**, "Thrust Vector Control of an Upper-Stage Rocket with Multiple Fuel Slosh Modes," *Mathematical Problems in Engineering*, Vol. 2012, Article ID 848741, 18 pages, 2012.

[65] W. MacKunis, **M. Reyhanoglu**, and S. Drakunov, "Robust and Adaptive Maximum Power Point Tracking for Standalone Photovoltaic Systems Using a Sliding Mode Control Approach," *Proc. IEEE Conf. Industrial Electronics and Applications*, 2012, pp. 1156-1160.

[66] **M. Reyhanoglu** and J. R. Hervas, "Point-to-Point Liquid Container Transfer via a PPR Robot with Sloshing Suppression," *Proc. American Control Conf.*, 2012, pp. 5490-5494.

[67] J. R. Hervas, **M. Reyhanoglu**, and S. Drakunov, "Three-Axis Magnetic Attitude Control Algorithms for Small Satellites in the Presence of Noise," *Proc. Int. Conf. Control, Automation and Systems,* 2012, pp. 1342-1347.

[68] J. R. Hervas and **M. Reyhanoglu**, "Control of a Spacecraft with Time-Varying Propellant Slosh Parameters," *Proc. Int. Conf. Control, Automation and Systems,* 2012, pp. 1621-1626.

[69] **M. Reyhanoglu**, N. Kamran, and T. Kuhara, "Orbital and Attitude Control of a Spacecraft Arou0nd an Asteroid," *Proc. Int. Conf. Control, Automation and Systems,* 2012, pp. 1627-1632.

[70] **M. Reyhanoglu** and J. R. Hervas, "Magnetic Attitude Control Design for Small Satellites via Slowly-Varying Systems Theory," *Proc. IEEE Industrial Electronics Society*, 2012, pp. 2313-2318.

[71] **M. Reyhanoglu** and J. R. Hervas, "Partial-State Feedback Control Design for Liquid Container Transfer with Sloshing Suppression," *Proc. IEEE Industrial Electronics Society*, 2012, pp. 2377-2381.

2011

[72] S. Drakunov and **M. Reyhanoglu**, "Hierarchical Sliding Mode Observers for Distributed Parameter Systems," *Journal of Vibration and Control*, Vol.17, No. 10, 2011, pp. 1441-1453.

[73] **M. Reyhanoglu** and J. R. Hervas, "Nonlinear Control of Space Vehicles with Multi-Mass Fuel Slosh Dynamics," *Proc. Int. Conf. Recent Advances in Space Technologies*, 2011, pp. 247-252.

[74] **M. Reyhanoglu** and J. R. Hervas, "Three-Axis Magnetic Attitude Control Algorithms for Small Satellites," *Proc. Int. Conf. Recent Advances in Space Technologies*, 2011, pp. 897-902.

[75] **M. Reyhanoglu** and J. R. Hervas, "Nonlinear Control of a Spacecraft with Multiple Fuel Slosh Modes," *Proc. IEEE Conf. Decision and Control*, 2011, pp. 6192-6197.

[76] W. MacKunis, S. V. Drakunov, **M. Reyhanoglu,** and L. Ukeiley, "Nonlinear Estimation of Fluid Flow Velocity Fields," *Proc. IEEE Conf. Decision and Control*, 2011, pp. 6931-6935.

[77] S. Armstrong, S. Drakunov, and **M. Reyhanoglu,** "Feedback Control of a Nonholonomic Vehicle Among Moving Obstacles Using Variable Structure Observer," *2011 AIAA Infotech@Aerospace Conference*, AIAA-2011-1586, pp. 1-5.

[78] **M. Reyhanoglu,** S. Drakunov, and J. Alvarado, "Feasibility Study of Space Vehicle Debris Hazard Airspace Stratification," *Proc. AIAA Space 2011,* AIAA-2011-7182, pp. 1-9.

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Courses Taught/Teaching

Robotics and Autonomous Systems	Engineering Research Projects
Mechatronics Systems Modeling	Intro to Space Systems Design
Senior Design in Mechatronics I	Space Systems Design I
Senior Design in Mechatronics II	Space Systems Design II
Unmanned Aerial Vehicles	Special Topics in Engineering Physics
Aerospace Control Theory	Technical Physics I
Aircraft Electrical & Electronics Circuits	Technical Physics II
Electrical Engineering	Advanced Dynamics*
Flight Performance	Advanced Numerical Analysis*
Space Mechanics	Nonlinear Vibrations*
Airplane Stability & Control	Optimal Dynamical Systems*
Spacecraft Attitude Dynamics	Nonlinear Control Theory & Applications*
Control Systems Analysis & Design	Analytical Techniques in Engineering Physics*
Flight Dynamics & Control	Numerical Methods for Engineers & Scientists*
Spacecraft Control	Airplane Dynamic Stability*
Space Systems Engineering	Advanced Spacecraft Dynamics & Control*
Classical Mechanics	Spacecraft Power & Thermal Design*
System Dynamics & Control	Theoretical Mechanics & Astrodynamics*
Mechanics of Machines	Special Topics in Engineering Physics*
Physics for Engineers I	Thesis Research*
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