

E. Glenn Lightsey

David Lewis Professor of Space Systems Technology

Education

Ph.D., Aeronautics & Astronautics, Stanford University, 1997

M.S., Electrical Engineering, The Johns Hopkins University, 1991

B.S.E., Mechanical & Aerospace Engineering, Princeton University, 1986

Academic Experience (20 years total)

Professor, School of Aerospace Engineering, Georgia Institute of Technology, 2014-present

Professor, Department of Aerospace Engineering and Engineering Mechanics, The University of Texas at Austin, 2009-2014

Associate Professor, Department of Aerospace Engineering and Engineering Mechanics, The University of Texas at Austin, 2004-2009

Assistant Professor, Department of Aerospace Engineering and Engineering Mechanics, The University of Texas at Austin, 1999-2004

Non-academic Experience

Consultant, Cornell Technical Services, 2016-present, part-time

Founder, Lightsey Space Research LLC, 2015-present, part-time

Founder, Austin Satellite Design LLC, 2008-2014, part-time

Aerospace Engineer, NASA Goddard Space Flight Center, Guidance and Control Branch, 1987-1999, full-time

Certifications or Professional Registrations

None

Current Membership in Professional Organizations

American Institute of Aeronautics & Astronautics, Fellow, 2015-present, joined 1986

American Astronautical Society, 1999-present

American Society for Engineering Education, 1999-present

Institute of Navigation, 1993-present

Sigma Xi Research Society, 1986-present

Honors and Awards

Mechanics and Control of Flight Award, American Institute of Aeronautics and Astronautics, 2019

Academy of Distinguished Teachers, The University of Texas at Austin, 2012-2014

John Leland Atwood Award, American Society for Engineering Education, 2012

William David Blunk Memorial Professorship, 2011-2012

Fellow of the W.R. Woolrich Professorship in Engineering, 2006-2014

Mrs. Pearlie Dashiell Henderson Centennial Fellowship in Engineering, 2004-2006

Tycho Brahe Award, Institute of Navigation, 2005

Big XII Faculty Fellow, 2004

Cockrell School of Engineering Award for Outstanding Engineering Teaching by an Assistant Professor, 2003

Halliburton Young Faculty Excellence Award, The University of Texas at Austin, 2000

Professional Society Service and Development Activities: 2015-present

Associate Editor, AIAA Journal of Spacecraft and Rockets, 2014–2018
Associate Editor-in-Chief, Journal of Small Satellites, 2015–present
National Co-Chair, American Astronautical Society Guidance, Navigation, and Control Conference, 2016
Technical Chair, Symposium on Space Innovations, 2018-2019

Institutional Service and Development Activities: 2015-present

Associate Director, Center for Space Technology and Research (CSTAR), 2016-2019
Director, Space Systems Design Lab, 2016-present
Faculty Advisor, Yellow Jacket Space Program, August 2018-present
Faculty Advisor, Ramblin' Rocket Club, August 2018-present
Faculty Advisor, Students for the Exploration and Development of Space (SEDS), 2017–present
Director, Center of Space Technology and Research (CSTAR), 2019-present

Selected Patents and Invention Disclosures

None

Selected Publications: 2015-present

1. Eldad, O., Lightsey, E. G., "Propellantless Attitude Control of a Nonplanar Solar Sail," AIAA Journal of Guidance, Control, and Dynamics, Vol. 38, No. 8, August 2015, pp. 1531-1534.
2. Johl, S., Lightsey, E. G., "A Reusable Command and Data Handling System for University CubeSat Missions," Journal of Small Satellites, Vol. 4, No. 2, October 2015, pp. 357-369.
3. Stevenson, T., Imken, T., Lightsey, E. G., "Design and Testing of a Cold Gas Thruster for an Interplanetary CubeSat Mission," Journal of Small Satellites, Vol. 4, No. 2, October 2015, pp. 5371-386.
4. McBryde, C. R., Lightsey, E. G., "End-to-End Testing of a Dual Use Imaging Sensor for Small Satellites," Journal of Small Satellites, Vol. 5, No. 1, February 2016, pp. 435-448.
5. Kjellberg, H. C., Lightsey, E. G., "Discretized Quaternion Constrained Attitude Pathfinding," AIAA Journal of Guidance, Control, and Dynamics, Vol. 39, No. 3, March 2016, pp. 713-718.
6. Gamble, K., Lightsey, E. G., "Decision Advisor Tool for Small Satellite Risk Management," AIAA Journal of Spacecraft and Rockets, Vol. 53, No. 3, May 2016, pp. 420-432.
7. Tam, M., Lightsey, E. G., "Constrained Spacecraft Reorientation Using Mixed Integer Convex Programming," Acta Astronautica, Vol. 127, October 2016, pp. 31-40.
8. Eldad, O., Lightsey, E. G., Claudel, C. C., "Minimum-Time Attitude Control of Deformable Solar Sails with Model Uncertainty," AIAA Journal of Spacecraft and Rockets, Vol. 54, No. 4, July 2017, pp. 863-870.
9. Lightsey, E. G., Stevenson, T., Sorgenfrei, M., "Development and Testing of a 3-D-Printed Cold Gas Thruster for an Interplanetary CubeSat," Proceedings of the IEEE, Vol. 106, No. 3, March 2018, pp. 379-390.
10. Stevenson, T., Lightsey, E. G., "Design and Optimization of a Multifunctional 3D-Printed Structure for an Inspector Cubesat," Acta Astronautica, Vol. 170, pp. 331-341.

Publications, 2015-present: 27

Career Publications: 141