

Dr. Robert H. Bishop is the Dean of Engineering at the University of South Florida and is a full professor in the Department of Electrical Engineering. He also held the endowed position of Opus Dean of Engineering at Marquette University. Previously he was the Chairman of the Department of Aerospace Engineering and Engineering Mechanics at The University of Texas at Austin where he held the Joe J. King Professorship and was a Distinguished Teaching Professor. Prior to academia, he was a member of the technical staff at the Charles Stark Draper Laboratory. He received his Ph.D. from Rice University in Electrical and Computer Engineering and his M.S. and B.S. in aerospace engineering from Texas A&M University. Dr. Bishop is a Fellow of the American Institute of Aeronautics and Astronautics and a Fellow of the American Astronautical Association.

### **Research Interests**

Dr. Bishop is a specialist in the area of systems theory, guidance and control of aerospace vehicles, and navigation and estimation theory with applications across a broad range of global challenges. His current research interests are in the area of advanced navigation algorithm development with fast-to-flight characteristics, integrated navigation and guidance for planetary precision landing, small satellites and unmanned aerial vehicles. Dr. Bishop was selected twice as a Faculty Fellow of the NASA Jet Propulsion Laboratory and as a Welliver Fellow of the Boeing Company.

### **Recent Publications**

- DeMars, K. Bishop, R. H., and Jah, M., "Entropy-Based Approach for Uncertainty Propagation of Nonlinear Dynamical Systems," *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 36, No. 4, 2013, pp. 1047-1057.
- R. Zanetti and R. H. Bishop, "Kalman Filters with Uncompensated Biases," *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 35, No. 1, 2012, pp. 327-330.
- Zanetti, R., DeMars, K., and Bishop, R. H., "On Underweighting Nonlinear Measurements," *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 33, No. 5, 2010, pp. 1670-1675.
- Zimmer, S., Ocampo, C., and Bishop, R. H., "Reducing Orbit Covariance for Continuous Thrust Spacecraft Transfers," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 46, No. 2, 2010, pp. 771-791.
- Zanetti, R., Majji, M., Bishop, R. H., and Mortari, D., "Norm-Constrained Kalman Filtering," *AIAA Journal of Guidance, Control, and Dynamics*, Vol. 32, No. 5, 2009, pp. 1458-1465.

### **Recent Conferences**

- Greenheck, D. R., Bishop, R. H., Jonardi, E. M., and Christian, J. A., "Design and Testing of a Low-Cost MEMS IMU Cluster for SmallSat Applications," *SSC14-III-6, 28TH Annual AIAA/USU Conference on Small Satellites*, Logan, UT, 2014.
- Bittner, D. E., Christian, J. A., Bishop, R. H., and May, D., "Fault Detection, Isolation, and Recovery Techniques for Large Clusters of Inertial Measurement Units," *Position, Location and Navigation Symposium - PLANS, 2014 IEEE/ION*, 2014.

- Tapiero, J. and Bishop, R. H., "Bayesian Estimation for Tracking of Spiraling Reentry Vehicles," AIAA 2013-5126, AIAA Guidance, Navigation, and Control Conference, Boston, MA, 2013.
- Kassas, Z. M. and Bishop, R. H., "Optimal H2 and H8 Control of Extremely Large Segmented Telescopes," AIAA GN&C Conference, Minneapolis, MI, 2012.
- DeMars, K., Cheng, Y., Bishop, R. H. and Jah, M., "Methods for Splitting Gaussian Distributions and Applications within the AEGIS Filter," AAS 12-261, AAS/AIAA Space Flight Mechanics Meeting, Charleston, SC, 2012.

### **Books**

- Bishop, R. H., Learning with LabVIEW, 6th Edition, Prentice-Hall, 2014.
- Dorf, R. C., and Bishop, R. H., Modern Control Systems, 12 th Edition, Prentice-Hall, 2010.
- Bishop, R. H., (Editor-in-Chief), Mechatronics Handbook, CRC Press, 2nd Edition, 2007.
- Bishop, R. H., (Editor-in-Chief), Mechatronics: An Introduction, Taylor & Francis, 2005.
- Bishop, R. H., Modern Control Systems Analysis and Design using MATLAB and SIMULINK, Addison-Wesley, 1997.