# F. Landis Markley

# Selected Publications In Astronautics

[1]     (a) "Modeling Sensor Electronics," (b) "Reaction Wheel Models," (c) "Parameterization of the Attitude," (d) "Response to Torques," (e) "Equations of Motion," (f) "Motion of a Rigid Spacecraft," (g) "Attitude Propagation" (with C. B. Spence, Jr.), and (h) "Matrix and Vector Algebra," in *Spacecraft Attitude Determination and Control*, James R. Wertz (ed.), New York and Berlin, Springer Scientific + Business Media, 1978.

[2]     "Orbit-Averaged Behavior of Magnetic Control Laws for Momentum Unloading," P. J. Camillo and F. Landis Markley, *Journal of Guidance and Control,* Vol. 3, No. 6, November–December 1980, pp. 563-568.

[3]     "Kalman Filtering for Spacecraft Attitude Estimation," E. J. Lefferts, F. L. Markley and M. D. Shuster, *Journal of Guidance, Control, and Dynamics*, Vol. 5, No. 5, September–October 1982, pp. 417–429.

[4]     "Attitude Determination Using Vector Observations and the Singular Value Decomposition," F. Landis Markley, *The Journal of the Astronautical Sciences* Vol. 36, No. 3, July–September 1988, pp. 245-258.

[5]     "Attitude Determination Error Analysis: General Model and Specific Application," F. Landis Markley, Ed Seidewitz and Julie Deutschmann, CNES Space Dynamics Conference, Toulouse, France, November 1989

[6]     "Minimal Parameter Solution of the Orthogonal Matrix Differential Equation," I. Y. Bar-Itzhack and F. Landis Markley, *IEEE Transactions on Automatic Control* Vol. 35, No. 3, March 1990, pp. 314–317.

[7]     "Fast Orbit Propagator for Graphical Display," F. Landis Markley and James F. Jeletic, *Journal of Guidance, Control, and Dynamics* Vol. 14, No. 2, March–April 1991, pp. 473–475.

[8]     "Attitude Determination Using Vector Observations: a Fast Optimal Matrix Algorithm," F. Landis Markley, *The Journal of the Astronautical Sciences*, Vol. 41, No. 2, April–June 1993, pp. 261-280.

[9]     "Zero-Gyro Safemode Controller for the Hubble Space Telescope," F. Landis Markley and John D. Nelson, *Journal of Guidance, Control, and Dynamics*, Vol. 17, No. 4, July–August, 1994, pp. 815-822.

[10]    "Autonomous Spacecraft Gyro Failure Detection Based on Conservation of Angular Momentum," F. Landis Markley, Kevin R. Kennedy, John D. Nelson, and Edward W. Moy, *Journal of Guidance, Control, and Dynamics*, Vol. 17, No. 6, November–December 1994, pp. 1385-1387.

[11]    "Attitude Control System Conceptual Design for the GOES-N Spacecraft Series," F. Landis Markley, F. H. Bauer, J. J. Deily, and M. D. Femiano, *Journal of Guidance, Control, and Dynamics*, Vol. 18, No. 2, March–April 1995, pp. 247-255.

[12]     "New Algorithm for Attitude Determination Using Global Positioning System Signals," John L. Crassidis and F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 20, No. 5, September–October, 1997, pp. 891-896.

[13]     "Sequential Attitude and Attitude-Rate Estimation Using Integrated-Rate Parameters," Yaakov Oshman and F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 22, No. 3, May–June 1999, pp. 385–394.

[14]     "Analytic Steady-State Accuracy of a Spacecraft Attitude Estimator," F. Landis Markley and R. G. Reynolds, *Journal of Guidance, Control, and Dynamics*, Vol. 23, No. 6, November–December 2000, pp. 1065-1067.

[15]     "Quaternion Attitude Estimation Using Vector Observations," F. Landis Markley and Daniele Mortari, *The Journal of the Astronautical Sciences*, Vol. 48, Nos. 2–3, April–September 2000, pp. 359-380.

[16]     "Fast Quaternion Attitude Estimation from Two Vector Measurements," F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 25, No. 2, March–April 2002, pp. 411-414.

[17]     "Attitude Error Representations for Kalman Filtering," F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 26, No. 2, March–April 2003, pp. 311-317.

[18]     "Unscented Filtering for Spacecraft Attitude Estimation," John L. Crassidis and F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 26, No. 4, July–August 2003, pp. 536-542.

[19]     "Generalization of the Euler Angles," Malcolm Shuster and F. Landis Markley, *The Journal of the Astronautical Sciences*, Vol. 51, No. 2, April–June 2003, pp. 123-132.

[20]     "Attitude Estimation or Quaternion Estimation?" F. Landis Markley, *The Journal of the Astronautical Sciences*, Vol. 52, Nos. 1–2, January–June 2004, pp. 221-238.

[21]     "The Attitude Control System of the Wilkinson Microwave Anisotropy Probe," F. Landis Markley, Stephen F. Andrews, James R. O'Donnell, Jr., and David K. Ward, *Journal of Guidance, Control, and Dynamics*, Vol. 28, No. 3, May–June 2005, pp. 385-397.

[22]     "Attitude Filtering on SO(3)," F. Landis Markley, *The Journal of the Astronautical Sciences*, Vol. 54, Nos. 3–4, .July–December 2006, pp. 391–413.

[23]     "Survey of Nonlinear Attitude Estimation Methods," John L. Crassidis, F. Landis Markley, and Yang Cheng, *Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 1, January–February 2007, pp. 12-28.

[24]     "Averaging Quaternions," F. Landis Markley, Yang Cheng, John L. Crassidis, and Yaakov Oshman, *Journal of Guidance, Control, and Dynamics*, Vol. 30, No. 4, July–August 2007, pp. 1193–1196.

[25]     "Unit Quaternion from Rotation Matrix," F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 31, No. 2, March-April 2008, pp. 440–442.

[26]     "Optimal Attitude Matrix from Two Vector Measurements," F. Landis Markley, *Journal of Guidance, Control, and Dynamics*, Vol. 31, No. 3, May–June 2008, pp. 765–768.

[27]     "Kalman Filter for Spinning Spacecraft Attitude Estimation," F. Landis Markley and Joseph E. Sedlak, *Journal of Guidance, Control and Dynamics* (to appear).