

## Paul G. Savage Publications

- “High-Speed Outputs From A Strapdown IMU For Two-Speed Attitude/Velocity Updating In A Central Computer”, SAI WBN-14033, [www.strapdownassociates.com](http://www.strapdownassociates.com), April 1, 2023
- “Inertial Sensor Stability Evaluation By Dual Sensor Testing”, SAI WBN-14032, [www.strapdownassociates.com](http://www.strapdownassociates.com), January 23, 2023
- “Why Optical And Mechanical Gyros Measure The Same Angular Rate Relative To Non-Rotating Inertial Space”, SAI WBN-14031, [www.strapdownassociates.com](http://www.strapdownassociates.com), December 21, 2022
- “Blazing Gyros – The Presentation”, SAI WBN-14030, [www.strapdownassociates.com](http://www.strapdownassociates.com), December 14, 2022
- “Simplified Description of Optical Gyros – A Rigorous Analytical Development Without Vector Calculus”, SAI WBN-14027, [www.strapdownassociates.com](http://www.strapdownassociates.com), May 23, 2020.
- “Generating Strapdown Specific-Force/Angular-Rate For Specified Attitude/Position Variation From A Reference Trajectory”, SAI WBN-14026, [www.strapdownassociates.com](http://www.strapdownassociates.com), April 21, 2020.
- “Appendices F, G, And H to Generating Strapdown Specific-Force/Angular-Rate For Specified Attitude/Position Variation From A Reference Trajectory”, SAI WBN-14026a, [www.strapdownassociates.com](http://www.strapdownassociates.com), April 21, 2020.
- “Modern Strapdown Attitude Algorithms And Their Accuracy, Versus Accuracy Requirements For Unaided Strapdown Inertial Navigation”, SAI WBN-14025, [www.strapdownassociates.com](http://www.strapdownassociates.com), February 9, 2020.
- “Analytical Description Of Optical Gyros”, SAI WBN-14024, [www.strapdownassociates.com](http://www.strapdownassociates.com), April 3, 2019 (Updated May 23, 2020).
- “Analytically Deriving How Ring Laser And Fiber Optic Gyros Measure Angular Rotation”, SAI WBN-14023, [www.strapdownassociates.com](http://www.strapdownassociates.com), November 1, 2018 (Updated March 31, 2019).
- “Differential Point-To-Point Relativity In Rotating Coordinates”, SAI WBN-14022, [www.strapdownassociates.com](http://www.strapdownassociates.com), May 28, 2018.
- “Improved Strapdown Inertial Measurement Unit Calibration Procedures”, IEEE/ION Position Location and Navigation Symposium (PLANS), Monterey, California, Apr 23-26, 2018

- “Differential Kinematics Of Point-To-Point Relativity”, SAI WBN-14021, [www.strapdownassociates.com](http://www.strapdownassociates.com), March 11, 2018.
- “Improved Strapdown Inertial System Calibration Procedures, Part 1, Procedures And Accuracy Analysis”, SAI WBN-14020-1, [www.strapdownassociates.com](http://www.strapdownassociates.com), October 20, 2017 (Updated January 11, 2018).
- “Improved Strapdown Inertial System Calibration Procedures, Part 2, Analytical Derivations”, SAI WBN-14020-2, [www.strapdownassociates.com](http://www.strapdownassociates.com), October 20, 2017 (Updated January 11, 2018).
- “Improved Strapdown Inertial System Calibration Procedures, Part 3, Numerical Examples”, SAI WBN-14020-3, [www.strapdownassociates.com](http://www.strapdownassociates.com), November 10, 2017, (Updated January 11, 2018).
- “Down-Summing Rotation Vectors For Strapdown Attitude Updating”, SAI WBN-14019, [www.strapdownassociates.com](http://www.strapdownassociates.com), July 16, 2017.
- “Digital Integration Algorithm Error For Band-Limited Random Process Inputs”, SAI WBN-14018, [www.strapdownassociates.com](http://www.strapdownassociates.com), June 26, 2017.
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- “Geordie’s Quaternion Decision”, SAI WBN-14014, [www.strapdownassociates.com](http://www.strapdownassociates.com), February 17, 2016.
- “Program Management”, SAI WBN-14013, [www.strapdownassociates.com](http://www.strapdownassociates.com), January 18, 2016.
- “Designing An Extended Kalman Filter For A Stellar Aided Strapdown Inertial Navigation System”, SAI WBN-14012, [www.strapdownassociates.com](http://www.strapdownassociates.com), January 16, 2016.
- “Performance Analysis Of Strapdown Systems”, SAI WBN-14011, [www.strapdownassociates.com](http://www.strapdownassociates.com), June 2, 2016.
- “Computational Elements For Strapdown Systems”, SAI WBN-14010, [www.strapdownassociates.com](http://www.strapdownassociates.com), May 31, 2015.
- “Blazing Gyros - The Evolution Of Strapdown Inertial Navigation Technology For Aircraft - Web Version”, SAI WBN-14009, [www.strapdownassociates.com](http://www.strapdownassociates.com), May 29, 2015.

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