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Rotation Rate Sensors and Their Applications

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Message from the Guest Editors

Rotation rate sensors are finding more and more applications in science and engineering, most prominently by serving for the control of vehicle or airplane motion. Functions in consumer electronics, such as smartphones and smartwatches are controlled with respect to their tilt. In modern seismology, the measurement of rotations about the vertical and horizontal axes is combined with classic displacement records, which has demonstrated many powerful applications. Even a small rocking motion of the foundations of tall buildings translates into substantial tip displacements. Furthermore, we are now in the position to obtain torsional motion from tall structures reliably. All these applications require various types of rotation rate sensors. From small MEMS gyros, over fiber-optic gyros and electrochemical devices to high resolution, large ring lasers. This Special Issue will collect papers on (inertial) rotation rate sensors and their applications, with particular attention paid to the novel areas of application in modern geophysics, civil and seismic engineering, as well as mechanical engineering and modern geodesy, including structural health monitoring.



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Special Issue



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Message from the Editor-in-Chief

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