

Special Issue on
Recent Trends in Submanifold Theory in Riemannian and Lorentzian Geometry

CALL FOR PAPERS

Submanifold theory is one of the major subjects in classical and modern differential geometry. It consists in the study of local and global aspects of submanifolds in a given ambient space. The contents of this special issue cover a wide range of topics, from the classical theory of curves and surfaces in the Euclidean space to the most recent advances in the geometry of submanifolds in ambient spaces of special geometries. Among these ambient spaces, Lorentzian manifolds have acquired an important relevance during the last decades, since they are considered as the most convenient mathematical models for the theoretical aspects of general relativity and other aspects of cosmology. Some of the most relevant and current research topics in the context of Riemannian geometry involve the study of constant mean curvature surfaces and hypersurfaces, including the minimal case, in homogeneous Riemannian manifolds with nice symmetry properties. In the Lorentzian context, the study of maximal hypersurfaces (analogous to minimal ones in the Riemannian context) or the study of trapped surfaces is remarkable.

The main goal of this issue is to collect high-quality original manuscripts, as well as review articles addressing recent developments on the study of submanifolds in Riemannian and Lorentzian spaces. Submitted manuscripts for their publication in this issue will be selected through blind peer-reviewed process, to ensure the required high level in all the accepted contributions.

Potential topics include but are not limited to the following:

- ▶ Constant mean curvature hypersurfaces
- ▶ Minimal and maximal hypersurfaces in Riemannian and Lorentzian spaces
- ▶ Constant sectional curvature submanifolds
- ▶ Submanifolds with nonpositive curvature
- ▶ Isometric rigidity of submanifolds
- ▶ Low codimension submanifolds
- ▶ Real, Lagrangian, CR submanifolds, and so forth in complex, almost complex, Kähler manifolds, and so forth
- ▶ Trapped and marginally trapped submanifolds in Lorentzian spaces
- ▶ Timelike and light-like submanifolds in Lorentzian spaces
- ▶ Conformal submanifold geometry

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jmath/geometry/rtstr/>.

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First Round of Reviews

Friday, 7 July 2017

Publication Date

Friday, 1 September 2017