

Special Issue

Recent Advances in Differential Geometry

Message from the Guest Editor

Since Gauss introduced the fundamentals of differential geometry, this concept has been increasingly applied in physics. Riemann's developments in differential geometry overshadowed the idea of a parametric approach. As a result, describing motion through parametric time was no longer appealing. However, as the field evolved, nature increasingly necessitated advancements in differential geometry, where it was not sufficient to only describe stationary geometry, but it also became necessary to develop a theory for moving shapes. Consequently, initiated by Hadamard, the idea of creating calculus for moving surfaces emerged around the same time as the birth of general relativity (GR). Nonetheless, the rapid progress of GR overshadowed CMS, causing it to almost be forgotten, due partly to waning interest and to the incompleteness of CMS compared to the elegant Riemannian differential geometry. However, recent developments have enhanced CMS and demonstrated its value in advancing differential geometry. In this Special Issue, we aim to present a collection of papers that explore the differential geometry of moving shapes from both mathematical and physical perspectives.

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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