



Recent Advances in Differentiable Manifolds

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Message from the Guest Editor

Dear Colleagues,

In various branches of mathematics, one can find spaces that can be described locally by n -tuples of real numbers. Such objects are called manifolds, i.e., a manifold is a topological space that is locally homeomorphic to the Euclidean space \mathbb{R}^n . Thus, we can regard a manifold as being made of pieces of \mathbb{R}^n attached by homeomorphisms. If these attached homeomorphisms are taken to be differentiable, we obtain the notion of a *differentiable manifold*. In general, manifolds look similar locally but different globally. Therefore, our main purpose will be to discover the way of describing the difference between manifolds from a global point of view.

When manifolds occur naturally in a branch of mathematics, there always appears to be some extra structure. This structure is often the main object of interest; the manifold itself is merely the setting. However, many mathematicians in these areas mainly study the manifold itself; hence, the extra structures are used only as tools.

In the 21st century, manifold theory has made much progress in various context. We welcome original research and review papers on this topic.

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