Mathematical Structures and Their Applications

Guest Editor:

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Message from the Guest Editor

In this issue, we will be looking for the categorical version of a mathematical structure. By that, we mean a diagram in a category, consisting of objects, morphisms, 2-cells, etc., which are required to satisfy some limiting or colimiting conditions as well as identities or pseudo-identities. Examples include directed graphs, spans, cospans, reflexive graphs, internal categories, groupoids, crossed-modules, bicategories, triangulations, chain-complexes, graded algebras, n-dimensional categories, homotopy types, etc.

Each such structure can be interpreted in any category (perhaps with some additional features) and may give rise to different applications both in mathematics and other areas of study. Such areas may include physics, biology, chemistry, computer science, and several others on the verge of technology and engineering.

Papers that introduce new structures and study their properties, as well as papers that consider new applications or interpretations of known ones are welcome to this topic.

Special Issue

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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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