

Special Issue

Advances in Functional Analysis and Approximation Theory

Message from the Guest Editor

Banach space theory has been a central area in functional analysis since Stefan Banach's work in the 1930s. One key property in this theory is the approximation property, systematically studied by Grothendieck in the 1950s. It has been examined both independently and in relation to tensor norms and operator ideals. Recent research has focused on questions like whether the metric approximation property and the approximation property are equivalent for dual spaces. Approximate identities in Banach algebra theory, developed since the 1970s, are also closely related to approximation properties. For example, the Banach algebra $K(X)$ of compact operators on a Banach space X has a bounded left approximate identity if and only if X has the bounded compact approximation property. However, the unbounded version of this relationship remains open. This Special Issue aims to collect recent research on approximation properties, approximate identities, and related areas of Banach space theory, and invites papers addressing these topics.

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Deadline for manuscript submissions

30 September 2026



Mathematics

an Open Access Journal
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Impact Factor 2.2
CiteScore 4.6



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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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