

Special Issue

Improvement of Large Language Model with Applied Mathematics

Message from the Guest Editor

Large language models (LLMs) have developed rapidly in recent years, demonstrating significant general capabilities across various domains. For example, LLMs have become a research hotspot in the domain knowledge of question answering (QA); multimodal LLMs have shown strong ability in motion recognition. However, issues such as response instability and hallucination caused by cognitive biases and knowledge deficiencies hindering the widespread application of LLMs. Thus, this Special Issue is proposed to find a way to use applied mathematics, including probability theory, mathematical statistics, combinatorics, and set theory, which can enhance LLMs' response stability and mitigate the hallucination phenomenon, which can release LLMs' potential for future applications in industry. Therefore, this Special Issue aims to provide an opportunity for researchers to publish their gifted theoretical and technological studies on applied mathematics in LLMs, as well as novel engineering applications.

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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