Scientific Programming

Special Issue on
Novel Advances in the Development of Machine Learning Solutions for Scientific Programming

CALL FOR PAPERS

Scientific programming is a multidisciplinary field that uses advanced methods to understand and solve complex problems. Meanwhile, machine learning is the field that uses statistical techniques to give computer systems the ability to learn and extract knowledge from data, answering questions and solving problems in various application domains, without the need of being explicitly programmed. Both are exciting, complex, and interrelated fields in which advances are taking place at a great pace.

We are interested in novel research papers on machine learning based solutions in the context of scientific programming, particularly, in the use and development of models, programming languages, scientific programming libraries, simulations, environments, platforms, and software tools. The focus is on supporting and improving scientific and engineering computing when machine learning methods and techniques are used.

The submission of papers making practical contributions is encouraged. Review articles which describe the current state of the art for specific knowledge domains are also welcome.

Potential topics include but are not limited to the following:

- ▶ Machine learning models in the context of scientific computing

- ▶ Domain-specific languages for any machine learning related aspect to facilitate solving scientific problems

- ▶ Software libraries for machine learning to be applied in scientific environments

- ▶ Novel uses of machine learning algorithms for scientific programming

- ▶ Machine learning related software design patterns for scientific computing

- ▶ Machine learning related software infrastructures, architectures and platforms for scientific computing

- ▶ Simulations covering aspects of machine learning to solve scientific programming problems

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/sp/adsm/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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