Special Issue of Applied Soft Computing (Elsevier) (Impact Factor: 2.8)

Submission is open now

Special Issue on

Non-iterative Approaches in Learning

(Includes comparative studies with iterative methods)

Call for Papers

Optimization, which plays a central role in learning, has received considerable attention from academics, researchers, and domain workers. Many optimization problems in machine learning are solved by iterative methods which generate a sequence of improving approximated solutions with some termination criteria. These methods usually suffer from low convergence rate and are sensitive to parameter settings (such as learning rate/step size, maximum number of iterations). On the other hand, non-iterative solutions, which are usually presented in closed-form manner, are in general computationally faster than iterative solutions. However, comparative studies with iterative methods are also welcome.

The main focus of this special issue is to present the recent advances in non-iterative solutions in learning. Original contributions and surveys are welcome. The special issue aims to promote non-iterative concepts in the field of learning. Even though non-iterative methods have attracted much attention in recent years, there exists a performance gap when compared with older methods and other competing paradigms. This special issue aims to bridge this gap. Besides the dissemination of the latest research results on non-iterative algorithms, it is also expected that this special issue will cover some industrial applications, present some new ideas and identify directions for future studies. The topics of the special issue include, but are not limited to:

- Methods with and without randomization
- Regression, classification and time series
- Kernel methods such as kernel ridge regression, kernel adaptive filters, etc.
- Feedforward, recurrent, multilayer, deep and other structures.
- Ensemble learning
- Moore-Penrose pseudo inverse, SVD and other solution procedures.
- Non-iterative methods for large-scale problems with and without kernels
- Theoretical analysis of non-iterative methods
- Comparative studies with competing iterative methods
- Applications of non-iterative solutions in domains such as power systems, biomedical, finance, signal processing, big data and all other areas

Submission format and Guidelines

Papers will be evaluated based on their originality, presentation, relevance and contribution to the development of non-iterative methods, as well as their suitability and the quality in terms of both technical contribution and writing. The submitted papers must be written in good English and describe original research which has not been published nor is currently under review by other journals or conferences. If used, the previously published conference papers should be clearly identified by the authors (at the submission stage) and an explanation should be provided how such papers have been extended to be considered for this special issue. Guest Editors will make an initial determination on the suitability and scope of all submissions. Papers that either lack originality, clarity in presentation or fall outside the scope of the special issue will not be sent for review and the authors will be promptly informed of such cases. Author guidelines for preparation of manuscript can be found at http://www.journals.elsevier.com/applied-soft-computing/ Manuscripts should be submitted online at: http://**ees**.elsevier.com/**asoc**/

Applied Soft Computing Journal is well indexed. Its impact factors are 2.8 (2 years) and 3.2 (5 years).

Important dates

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