

IEEE Transactions on Sustainable Computing Call for Papers for Special Issue on “Smart Data and Deep Learning in Sustainable Computing” (SDDL)

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Scope and Objective
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We are living in a data-driven era in which numerous infrastructure can be connected and the interconnected systems can perform “smart” when the large pool of the data are well utilized. Finding the way of well utilizing the large volume of data has an urgent demand in multiple realms, including academics, industries, and education. The force behind the data can be pushed out from a variety of data-driven techniques, such as machine learning and deep learning, which is a great potential for generating successful model, framework, and method for achieving sustainable computing. Therefore, gathering recent achievements in smart data and deep learning in sustainable computing is meaningful and valuable for powering the capability of data-driven domain and the various applications, implementations, and innovations in different disciplines and fields.

This special issue focuses on two aspects considering the perspective of sustainable computing, which include smart data and deep learning. The smart data covers all dimensions of data usage lifecycles, such as data selections and collections, data preprocessing, data mining, and data analytics, in various application scenarios. The other aspect, deep learning, emphasizes the intelligent performance of applying data-driven techniques in practices and research explorations. Thus, this special issue aims at collecting updated outstanding papers that illustrate the latest achievements and development updates concerning the smart data and deep learning solutions, issues, applications, trends, and implementations in sustainable computing. The following is a non-exhaustive list of topics in focus of this special issue:

- Deep learning algorithms and models in sustainable computing
- Smart data and deep learning applications
- Intelligent inference and optimization algorithms, model, and framework
- Unsupervised feature learning methods in sustainable computing
- Deep learning techniques in energy-aware system designs
- Application specific deep learning based sustainable computing
- Advances in deep learning technology for energy-aware optimizations
- Evaluations and comparisons of deep learning implementations in sustainable computing
- Novel approaches for applying existing deep learning algorithms in sustainable computing
- Machine learning-based methods for security and privacy awareness
- Design and analysis of intelligent data algorithms in sustainable computing
- High dimensional and non-parametric statistical inference in sustainable computing
- Intelligent cloud computing solution in sustainable computing
- Deep learning with additional or high dimensional constraints for cybersecurity

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Notes for Prospective Authors
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Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. They should be submitted via IEEE Transactions on Sustainable Computing online submission system at <https://mc.manuscriptcentral.com/tsusc>. Authors should select “SI: SDDL”.

All submitted papers will be peer reviewed according to the usual standards of this journal, and will be evaluated on the basis of originality, quality and relevance to this Special Issue and the journal, and on the basis of clarity and correct use of English. The submitted papers should be formatted according to the journal style. For more detailed information concerning the requirements for submission, please refer to the journal homepage at: <https://www.computer.org/web/tsusc>

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Important Dates
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Submission open: immediately
Submission due date: Oct. 15th, 2017
First round review notification: Nov. 15th, 2017
Notification of acceptance: Dec. 15th, 2017
Camera Ready submission due date: Feb. 15th, 2018
Publication: April-June 2018 (tentative)

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Guest Editors
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