**Theme:** Vast amounts of data about healthcare industry and patient outcomes are generated by healthcare providers. Complex and large databases include routine electronic health records, clinical data from trials and decision support systems (e.g., doctor’s notes, laboratory tests), medical images, biological data, and social media data. Making use of these strategic resources will contribute significantly to improving the care of the patients and the public. However, big databases in healthcare present many methodological challenges in terms of volume, variety, velocity, and veracity of data that must be considered within an environment of patient privacy. Data-driven techniques, in particular, machine learning, predictive analytics, data mining, artificial intelligence, intelligent computing etc. provide promising approaches for solving many interesting and complex challenges associated with big data for improving patient care and outcomes.

The primary goals of this Special Section are to explore methodological advances in big data analytics for healthcare.

**Topics include, but are not limited to, the following research topics and technologies:**

- Advanced analytics for patient and disease profiling.
- Personalization and adaptation of e-health information systems.
- Data driven approaches to optimize evidence-based decision making.
- Knowledge induction and mining electronic health data.
- Predictive modelling of large healthcare databases.
- Disease phenotyping using electronic health records.
- Integrative –omics for precise disease monitoring.
- Body sensor data analytics.
- Multi-level intervention models.

**Manuscript Preparation and Submission**

Follow the guidelines in “Information for Authors” in the IEEE-IES website: [http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics](http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics). Please submit your manuscript in electronic form through Manuscript Central web site: [https://mc.manuscriptcentral.com/tii](https://mc.manuscriptcentral.com/tii). On the submitting page #1 in popup menu of manuscript type, select: SS on **Big Data Analytics in Healthcare**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages, additional 4 pages may be allowed for a fee.

**Note:** The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

**Timetable:**

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