

## Special Issue

# Brain-Inspired Hyperdimensional Computing: Theoretical Perspectives and Real-World Applications

### Message from the Guest Editors

This Special Issue aims to explore the emerging field of hyperdimensional computing (HDC, a.k.a. vector-symbolic architectures), inspired by the way in which the human brain remembers and processes information, leveraging vectors in a high-dimensional space and a set of arithmetic operations. This publication will delve into the theoretical foundations, methodologies, algorithms, and practical applications of hyperdimensional computing, fostering a deeper understanding of its potential impact in the management of big data and cognitive computing. This Special Issue seeks to encompass a wide array of topics related to HDC, with the objective of providing a comprehensive overview of the theoretical underpinnings and practical applications of this novel computational paradigm. We invite researchers worldwide to share their latest research on HDC. We are particularly interested in papers that present new theoretical insights, innovative algorithms, and real-world applications.

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#### Guest Editors

Dr. Fabio Cumbo

Dr. Jayadev Joshi

Dr. Bryan Raubenolt

Dr. Rahul Shubhra Mandal

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#### Deadline for manuscript submissions

closed (31 October 2024)



## Big Data and Cognitive Computing

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Impact Factor 4.4  
CiteScore 9.8



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## About the Journal

### Message from the Editor-in-Chief

*Big Data and Cognitive Computing (BDCC)* is a scholarly online journal which provides a platform for big data theories with emerging technologies on smart clouds and exploring supercomputers with new cognitive applications. It is a peer-reviewed, open access journal that publishes high quality original articles, reviews and short communications. The primary aims of this journal are to encourage contributions of high quality scientific papers relating to data management and analytics in industry, such as manufacturing, healthcare, education, media and business, data mining, and cognitive science. There is no restriction on the maximum length of the papers.

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### Editor-in-Chief

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