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## Cloud Computing and Symmetry: Latest Advances and Prospects

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### Message from the Guest Editor

Dear Colleagues,

Cloud Computing has been regarded as a new paradigm in the IT industry. One of the key research topics in the cloud computing area is optimizing the resource allocation in the cloud computing environment. This key topic can be addressed by taking advantage of some sort of symmetry, which can achieve better resource optimization, such as load balancing and energy efficiency. A set of approaches have been proposed to improve the system performance by optimizing resource usage, while the symmetry-based approaches have seldom been investigated. Given the success of cloud computing technology, it is expected that symmetry will be leveraged to achieve better performance in the area of cloud computing.

Given this, in this Special Issue we aim to observe academic advancements and industry practices in the area of cloud computing by exploiting the power of symmetry, including its contribution to cloud applications. The symmetry can be utilized in workload prediction for cloud computing, virtual machine allocation, microservice management, resource provisioning in terms of symmetry, etc.



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# Special Issue



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## Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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