



## Cosmological Inflation, Dark Matter and Dark Energy

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### Message from the Guest Editor

Based on the recent cosmological observations, such as Type Ia Supernovae, cosmic microwave background (CMB) radiation large scale structure, baryon acoustic oscillations (BAO) and weak lensing, the universe has experienced the accelerated phase of its expansion not only in the early universe but also in the present time. The former is called "inflation" and the latter is called "the late-time cosmic acceleration". It is also well known that the three energy components of the universe are dark energy (about 68%), dark matter (about 27%) and baryon (about 5%).

A number of studies have been executed for the origins of the field to realize inflation, dark matter and dark energy, which are most fundamental problems in modern physics and cosmology.[...]





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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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