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# Fibonacci and Lucas Numbers and the Golden Ratio in Physics and Biology

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Deadline for manuscript submissions:
**closed (31 May 2024)**

## Message from the Guest Editors

Dear Colleagues,

This Special Issue intends to provide a platform for researchers in physics and biology whose work is connected to Fibonacci (and Lucas) numbers and the golden ratio. These concepts of great mathematical simplicity and beauty continue to fascinate scholars in many fields such as quantum physics, general relativity, astronomy, chemistry, biology, and architecture, to name but a few.

In quantum physics, Fibonacci numbers and the related golden ratio have appeared in recent works devoted to nonlinear photonic crystals, quasi-one-dimensional Ising ferromagnetism and non-Abelian anyons of the Fibonacci type. They also occur in atomic physics, quasicrystals, chaos, superconductivity, astrophysics, and black holes. In biology, the golden ratio was found to appear in several works about the human body, plant phyllotaxis, DNA nucleotide sequences, the genetic code, and the topology of viruses.

The scope of this Special Issue is large enough to encompass all aspects of research in physics and biology involving the golden ratio and Fibonacci and/or Lucas numbers. We strongly encourage all our interested colleagues to submit details of their latest work.

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## Editor-in-Chief

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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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