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## Open Questions in Black Hole Physics

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### Message from the Collection Editors

Dear Colleagues,

Black holes are fascinating objects that hold the key to uncover the intimate relation between gravitation and the quantum, as well as a number of astrophysical phenomena. The strength of their gravitational field is responsible for extreme deformations of the causal structure of space-time, leading to intriguing thermodynamic properties and serious tensions with our understanding of the quantum world. The current picture of the Universe could hardly be explained without recurring to them, even though they are very elusive and defy direct observational detection.

The coming years are likely to witness important breakthroughs in our view of black holes and their astrophysical and quantum properties through the direct detection of gravitational waves and Hawking radiation in analogue models. A number of fundamental open questions might find an answer and new ones may emerge...

For further information, please visit [http://www.mdpi.com/journal/universe/special\\_issues/OpenQuestionsBlack\\_Hole\\_Physics](http://www.mdpi.com/journal/universe/special_issues/OpenQuestionsBlack_Hole_Physics).

Dr. Gonzalo J. Olmo  
*Collection Editor*



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## Message from the Editor-in-Chief

The multidisciplinary *Universe* journal is aiming to follow and, hopefully, to lead to the largest extent as possible the ever-self renovating threads which weave mathematical theories with our understanding of the magnificent natural world. On behalf of all the distinguished members of the editorial board, I extend my welcome to this new journal and look forward to hearing from the interested contributors and learning about their valuable research.

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