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Quantum Darwinism and Friends

Guest Editors:

Dr. Sebastian Deffner
Department of Physics, UMBC, Baltimore, MD 21250, USA

sebastian.deffner@gmail.com

Prof. Dr. Raymond Laflamme
Institute for Quantum Computing and Department of Physics and Astronomy, University of Waterloo, Waterloo, ON N2L 3G1, Canada

laflamme@iqc.ca

Prof. Dr. Juan Pablo Paz
Departamento de Física, FCEyN, UBA, Pabellón 1, Ciudad Universitaria, 1428 Buenos Aires, Argentina

paz@df.uba.ar

Dr. Michael Zwolak
Physical Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD 20899, USA

mpzwolak@gmail.com

Message from the Guest Editors

Quantum Darwinism shows how the perception of objective classical reality arises via selective amplification and the spreading of information in our fundamentally quantum universe. Quantum Darwinism goes beyond decoherence, as it recognizes that the many copies of the system's pointer states are imprinted on the environment: agents acquire data indirectly, by intercepting environment fragments (rather than directly measuring systems of interest). The data disseminated through the environment provide us with shared information about stable, effectively classical pointer states. Humans rely primarily on the photon environment, eavesdropping on "objects of interest" by intercepting tiny fractions of photons that contributed to decoherence.

In honor of Wojciech Zurek's 70th birthday, this Special Issue is dedicated to recent advances in the field and pays tribute to Zurek's seminal contributions to our understanding of the Universe. To this end, "Quantum Darwinism and Friends" collects articles that make sense of the apparent chasm between quantum weirdness and classical perception, and provides a snapshot of this fundamental, exciting, and vivid field of theoretical physics.

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Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

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Contact Us

Entropy
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
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mdpi.com/journal/entropy
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@Entropy_MDPI