

1. Record Nr.	UNINA9910647223603321
Titolo	Quantum Darwinism and Friends // Sebastian Deffner, Raymond Laflamme, Juan Pablo Paz, editors
Pubbl/distr/stampa	[Place of publication not identified] : , : MDPI - Multidisciplinary Digital Publishing Institute, , 2023
ISBN	3-0365-6250-8
Descrizione fisica	1 online resource (384 pages)
Disciplina	621.382
Soggetti	Quantum communication
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface to "Quantum Darwinism and Friends" vii -- Quantum Theory of the Classical: Einselection, Envariance, Quantum Darwinism and Extantons 1 -- Quantum Darwinism in a Composite System: Objectivity versus Classicality 101 -- Justifying Born's Rule $P = 2$ Using Deterministic Chaos, Decoherence, and the de Broglie-Bohm Quantum Theory 115 -- Many-Body Localization and the Emergence of Quantum Darwinism 139 -- Environment-Assisted Shortcuts to Adiabaticity 153 -- Thermality versus Objectivity: Can They Peacefully Coexist? 167 -- Limits to Perception by Quantum Monitoring with Finite Efficiency 187 -- Quantifying Decoherence via Increases in Classicality 201 -- Quantum-Classical Correspondence Principle for Heat Distribution in Quantum Brownian Motion 223 -- Does Decoherence Select the Pointer Basis of a Quantum Meter? 247 -- A Classical Formulation of Quantum Theory? 257 -- Revisiting Born's Rule through Uhlhorn's and Gleason's Theorems 277 -- Emergence of Objectivity for Quantum Many-Body Systems 283 -- Equilibration and "Thermalization" in the Adapted Caldeira-Leggett Model 297 -- Non-Perfect Propagation of Information to a Noisy Environment with Self-Evolution 321 -- Quantum Coherences and Classical Inhomogeneities as Equivalent Thermodynamics Resources 341 -- Amplification, Inference, and the Manifestation of Objective Classical Information 363.
Sommario/riassunto	In honor of Wojciech Zurek's 70th birthday, this Special Issue is dedicated to recent advances in our understanding the emergence of

classical reality, 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.
