

1. Record Nr.	UNINA9910782394103321
Autore	Noyes H. Pierre
Titolo	Bit-string physics [[electronic resource] ] : a finite and discrete approach to natural philosophy / / H. Pierre Noyes ; edited by J.C. van den Berg
Pubbl/distr/stampa	Singapore ; ; River Edge, N.J., : World Scientific, 2001
ISBN	1-281-95163-3 9786611951634 981-281-009-9
Descrizione fisica	1 online resource (588 p.)
Collana	K & E series on knots and everything ; ; 27
Altri autori (Persone)	BergJ. C. van den <1944->
Disciplina	530.1
Soggetti	Physics - Philosophy Physical sciences - Philosophy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents; Introduction; 1. Non-Locality in Particle Physics; I. Introduction; II. The Eternal Triangle Effect; III. Fixed Past And Uncertain Future; IV. The Primacy Of Particle Number; V. Atoms And The Void Suffice; Comment on ""Non-Locality in Particle Physics"" H. Pierre Noyes (2000); 2. On the Physical Interpretation and the Mathematical Structure of the Combinatorial Hierarchy; 1. Introduction: General Principles Of The Combinatorial Hierarchy; 2. Construction Of The Hierarchy; 3. Levels 0 I II and III: Baryons Mesons Leptons And Photons; 4. Level IV: Weak Interactions And Cosmology 5. ConclusionAppendix: Mathematical Structure Of The Hierarchy; Comment on ""On the Physical Interpretation and Mathematical Structure of the Combinatorial Hierarchy"" Ted Bastin (1999); Comment on ""On the Physical Interpretation and Mathematical Structure of the Combinatorial Hierarchy"" Clive Kilmister (1999); Comment on ""On the Physical Interpretation and Mathematical Structure of the Combinatorial Hierarchy"" Pierre Noyes (1999); Comment on ""On the Physical Interpretation and Mathematical Structure of the Combinatorial Hierarchy"" John Amson (2000) 3. On the Construction of Relativistic Quantum Theory: A Progress Report1. Introduction; 2. Generating And Discriminating Basis States;

Events; 3. The Counter Paradigm; The Cosmic Frame; 4. Scattering Theory; Conservation Laws; 5. The Standard Model Of Quarks And Leptons; Cosmology; 6. The Mass Scale; 7. Conclusions; Comment on "On the Construction of Relativistic Quantum Theory: A Progress Report" H. Pierre Noyes (2000); 4. Foundations of a Discrete Physics; 1. Introduction; 2. Mathematical Foundations I; 3. Mathematical Foundations II: Attribute Space  
 4. Mathematical Foundations III: Coordinate Transformations  
 5. A Discrete Constructive Modeling Methodology; 6. An Interpretation: Laboratory Physics; Conclusions; 5. An Essay on Discrete Foundations for Physics; 1. Introduction; 2. The Historical Practice Of Physics; 3. Contemporary Particle Physics; 4. An Alternative Starting Point?; 5. Events Conservation Laws And "(Anti-) Particles"; 6. Comparison With Experiment; 6. On the Fine-Structure Spectrum of Hydrogen; Comment on "Our Joint Work" David McGoveran (2000); Other Second Order Corrections; Some Further Speculations  
 The Electron-Proton Mass Ratio Adding in Quadrature: Why?; 7. Comment on "Statistical Mechanical Origin of the Entropy of a Rotating Charged Black Hole"; Comment on This Comment - H. Pierre Noyes (2000); 8. Anti-Gravity: The Key to 21st Century Physics; 1. We Need A New Strategy; 2. Bohr-Rosenfeld Revisited; 3. Proof Of The Maxwell Equations; 4. Quantized Conic Sections; 5. Crossing Symmetry Predicts Antigravity; 6. The Conventional Wisdom; 7. Quantum Considerations; 8. Principles And Results Of My Approach; 9. Conclusion  
 Comment on "Anti-Gravity: The Key to 21st Century Physics" H. Pierre Noyes (2000)

---

Sommario/riassunto

We could be on the threshold of a scientific revolution. Quantum mechanics is based on unique, finite, and discrete events. General relativity assumes a continuous, curved space-time. Reconciling the two remains the most fundamental unsolved scientific problem left over from the last century. The papers of H Pierre Noyes collected in this volume reflect one attempt to achieve that unification by replacing the continuum with the bit-string events of computer science. Three principles are used: physics can determine whether two quantities are the same or different; measurement can tell something

---