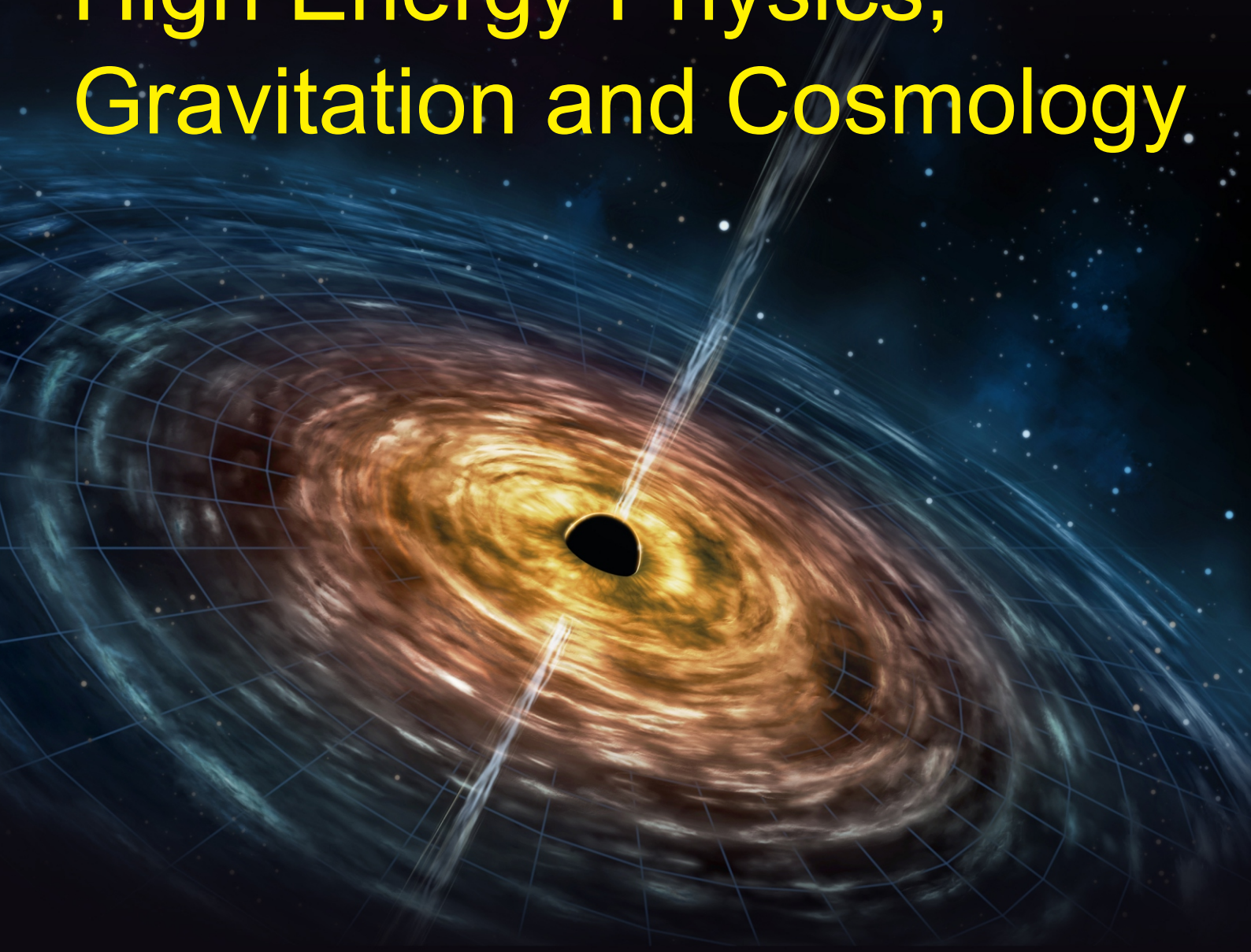


ISSN: 2380-4327 Volume 12, Number 2, April 2026



Journal of High Energy Physics, Gravitation and Cosmology



ISSN: 2380-4327



<https://www.scirp.org/journal/jhepgc>

Journal Editorial Board

ISSN 2380-4327 (Print) ISSN 2380-4335 (Online)

<https://www.scirp.org/journal/jhepgc>

Editor-in-Chief

Prof. Christian Corda

SUNY Polytechnic Institute, Italy

Editorial Board

Prof. Mohamed Assaad Abdel-Raouf

Ain Shams University, Egypt

Dr. Kazuharu Bamba

Fukushima University, Japan

Prof. Elmo Benedetto

University of Salerno, Italy

Prof. Alexander Burinskii

Laboratory of Theoretical Physics in Nuclear Safety, Institute of the
Russian Academy of Sciences, Russia

Prof. Farhad Darabi

Azarbaijan Shahid Madani University, Iran

Prof. Octavio José Obregón Díaz

Universidad de Guanajuato, Mexico

Prof. Shihai Dong

Instituto Politécnico Nacional, Mexico

Dr. Luca Fabbri

University of Genova, Italy

Dr. Maria Emília Xavier Guimarães

Fluminense Federal University, Brazil

Prof. Seyed Hossein Hendi

Shiraz University, Iran

Dr. Huda E. Khalid

Telafer University, Iraq

Prof. Maria Paola Lombardo

Istituto Nazionale di Fisica Nucleare, Italy

Prof. Lino Miramonti

Università degli Studi di Milano, Italy

Dr. Hooman Moradpour

Research Institute for Astronomy and Astrophysics of Maragha
(RIAAM), Iran

Prof. Jean Perron

University of Québec in Chicoutimi, Canada

Prof. Christopher Pilot

Gonzaga University, USA

Prof. Waldyr A. Rodrigues Jr.

Institute of Mathematics, Statistics and Scientific Computation, State
University of Campinas (UNICAMP), Brazil

Dr. Matteo Luca Ruggiero

Università degli Studi di Torino, Italy

Prof. Jafar Sadeghi

University of Mazandaran, Iran

Dr. Burra Gautam Sidharth

International Institute of Applicable Mathematics & Information
Sciences, India

Dr. Anirvan Sircar

Intel Corporation, USA

Prof. Abdel Nasser Tawfik

Egyptian Center for Theoretical Physics (ECTP), Egypt

Dr. Andrew Walcott Beckwith

Chongqing University, China

Dr. Lorenzo Zaninetti

University of Turin, Italy

Table of Contents

Volume 12 Number 2

April 2026

General Maxwell Theory of Fields (3): Lorentz Covariance, Quantization and Gauge Transformation

Y. G. Feng.....683

Maxwell's Equations for the Electromagnetic Dynamic Dyon

V. Krasnolovets695

Quantum Wave Probability Derive Thermodynamic Distribution

X. L. Li716

Searching for Neutral State in the Rare Decay $J/\psi \rightarrow e^+ e^- \phi$

A. Rashed735

Vacuum Localized Structures: Nonsingular Black Holes and Dark-Matter Candidates

R. Van Nieuwenhove747

Formation of Craters

M. Linick757

Constraints on Dark Photon and Dark Z Model Parameters in the B and K Meson Decays

A. Rashed762

Flavour-Changing Weak Interactions of Neutrinos and Quarks from SST

S. Kornowski.....782

A 5D Scalar Field Integrated with General Relativity and Photonic Contributions: A Dark Matter-Free Explanation for Gravitational Lensing and Cosmological Observations

B. Masarratbakhsh.....809

New Method for Extracting the Mass of Valence Quarks in Protons

J. M. Wang817

Crystalline Time: A Model of Cosmogenesis from Logical Asymmetry

P. D. Swartz.....823

Beyond the Causal Diamond: A Probabilistic Model of Cyclical Quantum Gravity

G. Davey.....839

Approximation of the Viswanath's Constant in Closed Form

M. Súkeník, M. Súkeníková.....857

Hubble Tension: Evidence for Patchwork Quilt Structure of Visible World in World-Universe Cosmology

V. S. Netchitailo.....866

A Solution of the Cosmological Constant, Using Multiverse Version of Penrose CCC Cosmology, and Klauder Enhanced Quantization for Obtaining a Cosmological Constant Compared

A. Beckwith.....886

A Dark Energy Hypothesis IX

J. Togeas901

Coupled Fields and Gravitation: A Deterministic Real-Field Theory of Quantum Gravity without Singularities

D. Kwiat.....913

Cosmic Filaments without Dark Matter: Cylindrical Vacuum Localized Structures as Exact Relativistic Solutions

R. Van Nieuwenhove935

The Zitterbewegung, Such as It Is, and Etiology of the Corpuscular Speed

R. Cañete Mesa945

A Vortex-Based Geometric Interpretation of Atomic Shells and Periodicity

N. Butto984

Informational Gravity—Derived within the NMSI Framework: Complete Mathematical Formalism, Falsifiable Predictions, and Experimental Validation—V.2

S. V. Lazarev.....1010

Wave Mechanics under the Extreme Conditions of Ultra-High Gravity

S. Tüzemen.....1035

Demonstrating the Inconsistency of Dark Matter Theory within the NMSI Framework

S. V. Lazarev.....1053

Effective Age of the Universe: A Relativistic Reformulation of Cosmological Dynamics

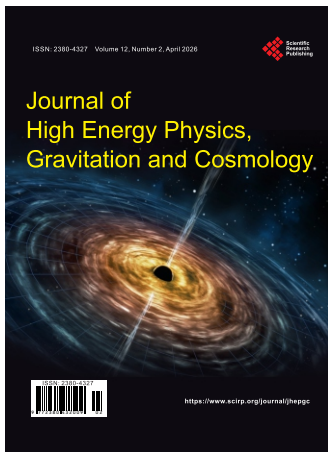
J. Hossain.....1075

A Dark Energy Hypothesis X

J. Togeas1131

Tripole Model for the Electron

H. Kakinuma.....1142



Journal of High Energy Physics, Gravitation and Cosmology

ISSN Print: 2380-4327 ISSN Online: 2380-4335
<https://www.scirp.org/journal/jhepgc>

Journal of High Energy Physics, Gravitation and Cosmology (JHEPGC) is a cutting edge research periodical aimed to be forward looking and innovative and, at the same time, remaining in the mainstream. In other words, we are all in favor of being open minded about alternatives to mainstream, but they must be properly formulated and plausible scientific proposals, supported by mathematical rigor. In fact, being open mind in Science is a good thing and we encourage mainstream as well as avant-garde research papers but they must be grounded in real science and of course meet with our refereeing standards.

The need for such a journal has become more than apparent when recent cosmological observation and measurement has made it clear that new discoveries (particularly the discovery of Dark Energy), the accelerated cosmic expansion and gravitational waves have shaken the very foundation of High Energy Physics, Gravitation and Cosmology. Thus we, on the one hand, need to be truly open minded, i.e. in the sense clarified above. On the other hand, we have to adhere as much as possible to our time tested theories and be guided even more than before by observations and experiments.

The Journal is intended to fulfill this double edge philosophy religiously. It goes without saying that the refereeing of submitted papers will be also both rigorous and swift. Following what we have said, the Journal will predictably cover, but will not be restricted only to, the following subjects:

Subject Coverage

- Accelerated Cosmic Expansion
- Advances in Mathematical Methods
- Astronomy and Astrophysics
- Black Holes
- Cosmic Quantum Entanglement
- Cosmic-Ray Physics
- Dark Energy
- Dark Matter
- Dimensional Regularization
- Extended Theories of Gravity
- Fractal Models of Space Time
- Gravitational Waves
- K-Theory
- Loop Quantum Gravity
- M-Theory
- N-Category Theory Applied to Physics and Cosmology
- Non-Commutative Geometry
- Non-Demolition Quantum Measurement
- Observational Techniques
- Phenomenological Oriented Theories of Particles and Field String Theories
- Quantum Field Theories in Curved Space Time
- Quantum Teleportation
- Renormalization
- Scale Relativity
- Theoretical and Experimental High Energy Physics
- Topological Defects
- Unification of Fundamental Interactions
- Varying Speed of Light

Website and E-Mail

<https://www.scirp.org/journal/jhepgc> E-mail: jhepgc@scirp.org