



GRAVITY RESEARCH FOUNDATION

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The trustees are pleased to announce the Awards for Essays for 2023.

1. \$4,000 - **Equivalence principle, de-Sitter space, and cosmological twistors** by Maciej Dunajski, Department of Applied Mathematics and Theoretical Physics, University of Cambridge, Wilberforce Road, Cambridge CB3 0WA, U.K.; email: M.Dunajski@damtp.cam.ac.uk
2. \$700 - **Emergence of Quantum Field Theory in Causal Diamonds** by Tom Banks, NHETC and Department of Physics, Rutgers University, Piscataway, NJ 08854-8019; email: tibanks@ucsc.edu
3. \$600 - **The universality of black hole thermodynamics** by Samir D. Mathur and Madhur Mehta, Department of Physics, The Ohio State University, Columbus, OH 43210, USA; email: mathur.16@osu.edu, mehta.493@osu.edu
4. \$500 - **Black holes that are too cold to respect cosmic censorship** by Shahar Hod, The Ruppin Academic Center, Emeq Hefer 40250, Israel and The Hadassah Institute, Jerusalem 91010, Israel; email: shaharhod@gmail.com
5. \$400 - **What are neutron stars made of? Gravitational waves may reveal the answer** by Neil Lu, Susan M. Scott, and Karl Wette, Centre for Gravitational Astrophysics, The Australian National University, Canberra ACT 2601, Australia, Australian Research Council Centre of Excellence for Gravitational Wave Discovery (OzGrav); email: Neil.Lu@anu.edu.au, Susan.Scott@anu.edu.au, Karl.Wette@anu.edu.au

Selected for Honorable Mention this year were (listed in alphabetical order): Akindele Adegugbe-Joseph; Emily Adlam; Shraddha Agrawal; Ahmed Farag Ali and Nader Inan; Ana Alonso-Serrano and Marek Liška; Sudarshan Ananth and Sucheta Majumdar; Julio Arrechea and Carlos Barceló; Tjarda C. N. Boekholt, Simon F. Portegies Zwart, and Douglas C. Heggie; Jens Boos; Suddhasattwa Brahma and Abhinove Nagarajan Seenivasan; John Bruce Davies; L.H.A. de Lange; Mir Faizal; Arthur E. Fischer; Joshua Foo, Robert B. Mann, and Magdalena Zych; Laurent Freidel, Jerzy Kowalski-Glikman, Robert G. Leigh, and Djordje Minic; René Friedrich; Daniele Funaro; Abhishek Goswami; Johan Hansson; Gustavo O. Heymans, Gastão Krein, and Nami F. Svaiter; Vu B Ho; José Luis Jaramillo, Badri Krishnan, and Carlos F. Sopena; Vaibhav Kalvakota; Bernard S. Kay; Arno Keppens; R. A. Konoplya; Dawood Kothawala; Musfar Muhamed Kozhikkal and Shafeeq Rahman Thottoli; Ashu Kushwaha, Sunil Malik, and S. Shankaranarayanan; Carlos O. Lousto and James Healy; Morgan Henry Lynch; Tyler McMaken; Sebastian Murk; Hoang Ky Nguyen; Jonathan Oppenheim; Geovanny A. Rave-Franco and Celia Escamilla-Rivera; Fil Simovic; Javad Tabatabaei, Abdolali Banihashemi, Shant Baghram, and Bahram Mashhoon; Asher Yahalom.

This announcement and abstracts of award-winning and honorable mention essays are posted on our web site, <http://www.gravityresearchfoundation.org>. The five award-winning essays are also posted on our website and will be published in the October 2023 SPECIAL ISSUE of the International Journal of Modern Physics D (IJMPD).