Eduardo Escoto **July 7, 2024**

CONTACT INFORMATION

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EDUCATION

University of California, San Diego **September 2024 - June 2029 (Expected)**
Ph.D., Computer Science San Diego, CA, USA

Advisor: Prof. Julian McAuley

University of California, Santa Barbra **September 2017 - June 2020**
B.S. Mathematics and B.S. Statistics & Probability Santa Barbara, CA, USA

Organizations: Data Science Club, Association for Women in Mathematics

San Diego Miramar College **September 2014 - June 2017**
A.A. Mathematics San Diego, CA, USA

EMPLOYMENT

Associate Professor, University of Mississippi, Oxford, MS USA **July 2024–Present**

Assistant Professor, University of Mississippi, Oxford, MS USA **August 2018–June 2024**

Senior Postdoctoral Researcher, Caltech, Pasadena, CA USA **September 2015–August 2018**

NASA Einstein Fellow, Cornell, Ithaca NY, USA **September 2012–August 2015**

Research and Teaching Assistant, MIT, Cambridge MA, USA **September 2006–May 2012**

Teaching Assistant, Caltech, Pasadena, CA, USA **Fall 2004, Spring 2005**

Summer Research Fellow, Caltech, Pasadena, CA, USA **June–September 2003/2005**

RESEARCH INTERESTS

General relativity (GR), gravitation, and astrophysical phenomena which can elucidate gravity. One major theme is pushing numerical and analytical gravitational-wave (GW) predictions to the precision frontier in advance of next-generation observatories. A second major theme is using GWs to test GR against beyond-GR models, in both theory-independent and theory-dependent models. This involves numerical relativity and renormalization methods applied to specific effective field models for beyond-GR theories.

HONORS AND AWARDS

Sloan Research Fellowship, Alfred P. Sloan Foundation, **2023–2025**

CAREER Award, NSF **2021–2026**

Einstein Postdoctoral Fellow, NASA **2012–2015**

Henry Kendall Teaching Award, Massachusetts Institute of Technology **2011**

Upperclass Merit Scholarship, California Institute of Technology **2005–2006**

TEACHING EXPERIENCE

Professor, University of Mississippi

Phys. 213, General physics I **Spring 2021**
Phys. 401, Electromagnetism I **Falls 2019–2022**
Phys. 402, Electromagnetism II **Springs 2019–2021**
Phys. 436, Intro to cosmology **Fall 2023**
Phys. 463/4, Senior research project **Fall 2020, Spring 2021, Fall 2023**
Phys. 503/630, Graduate reading course **Spring 2019, Falls 2020–2021**
Phys. 709, Graduate classical dynamics I **Fall 2018**
Phys. 721, Graduate electrodynamics I **Springs 2022–2024**
Phys. 722, Graduate electrodynamics II **Falls 2022-2023**
Phys. 750, General relativity II **Spring 2020**

Guest Lecturer, California Institute of Technology
Ph236, General relativity **Fall 2017**
Ph237, Gravitational Waves **Spring 2016**

Guest Lecturer, Massachusetts Institute of Technology
8.901, Graduate Astrophysics I **Spring 2011**

Teaching Assistant, Massachusetts Institute of Technology
8.942, Cosmology **Fall 2011**
8.901, Graduate Astrophysics I **Spring 2011**
8.286, The Early Universe **Fall 2009**

Teaching Assistant, California Institute of Technology
Ph 7, Nuclear and Quantum Physics Lab **Spring 2005**
Ph 5, Analog Electronics for Physicists **Fall 2004**

Mentoring/ Supervision

Postdoctoral researchers
Károly Csukás **Fall 2021–present**
José Tomás Gálvez Ghersi **Fall 2019–Spring 2021**
Now faculty at Universidad de Ingeniería y Tecnología, Peru

Graduate students
David Bronicki, University of Mississippi **Fall 2019–Summer 2023**
Subhayu Bagchi, University of Mississippi **Fall 2019–present**
Aniket Khairnar, University of Mississippi **Fall 2019–present**
Akshay Khadse, University of Mississippi **Fall 2018–present**
Lorena Magaña Zertuche, University of Mississippi **Fall 2018–present**
Joe Rivest, University of Mississippi **Fall 2018–present**
Sashwat Tanay, University of Mississippi **Fall 2018–Summer 2022**
Now a postdoc at LUTH, Meudon, France
Maria (Masha) Okounkova, Caltech **Fall 2015–Summer 2019**
Now faculty at Pasadena City College

Baoyi Chen, Caltech **Fall 2016–Summer 2018**

Undergraduate students

Wayne Zhao, Harvard **Summer 2016**

Now a graduate student at Princeton

Professional Activities, Outreach, and Service

LISA Consortium, Full member **2020–Present**

UMiss LISA Group leader **2020–Present**

Simulating eXtreme Spacetimes collaboration **2015–Present**

Executive committee member **2018–Present**

American Physical Society, member **2010–Present**

Division of Gravitational Physics

Secretary/Treasurer **2023–2026**

Executive Committee Member-at-Large **2016–2019**

Division of Astrophysics

Conference organizer

Nonlinear Aspects of General Relativity, Princeton PCTS **October 2023**

Numerical Relativity Community Summer School, ICERM **August 2022**
Week-long international summer school, 150 participants

Workshop on New frontiers in strong gravity, Benasque **July 2022**
Two week international workshop, 100 participants

Workshop on Numerical Relativity beyond General Relativity, Benasque **June 2018**
Week-long international workshop, 59 participants

34$^{\text{th}}$ Pacific Coast Gravity Meeting (PCGM), Caltech **March 2018**
Two-day conference, $\sim$ 125 participants

Workshop on Unifying Tests of General Relativity, Caltech **July 2016**
Three day workshop, 52 participants

Seminar organizer

TAPIR seminar, Caltech **Fall 2015–Spring 2018**

General Relativity Informal Tea-Time Series (GRITTS), MIT **Fall 2011–Spring 2012**

MKI Journal Club, MIT **Fall 2007–Spring 2010**

Conference session chair; Judge for best student speaker award

April APS meeting, NY, NY **April 2022**

Midwest relativity meeting, Grand Rapids, MI **October 2019**

April APS meeting, Columbus, OH **April 2018**

34$^{\text{th}}$ Pacific Coast Gravity Meeting (PCGM), Caltech **March 2018**

33$^{\text{rd}}$ Pacific Coast Gravity Meeting (PCGM), UCSB **March 2017**

"April" APS meeting, Washington D.C. **January 2017**

32$^{\text{nd}}$ Pacific Coast Gravity Meeting (PCGM), CSU Fullerton **April 2016**

Theoretical Astrophysics in Southern California (TASC), CSU Fullerton **November 2015**

Journal referee

American Journal of Physics, Classical and Quantum Gravity, Journal of Cosmology and Astroparticle Physics, Journal of Open Source Software, General Relativity and Gravitation, Monthly Notices of the Royal Astronomical Society, Physics Letters B, Physical Review D, Physical Review Letters, Physical Review X, Reviews of Modern Physics, The Astrophysical Journal Letters, The Physics Teacher

Agency work

Reviewer for NSF, NASA

Outreach

Oxford Science Café **April 2019**
Lecture: "The truth about black holes"

Guest on the *Starts With a Bang* podcast **March 25, 2019**
Episode 42: Black holes and gravitation

Invited speaker for Latin American Webinar on Physics **March 13, 2019**
Webinar 75: "Testing Einstein with numerical relativity"

Caltech astronomy public lecture series speaker **March 2018**
Lecture: "The truth about black holes"

Astronomy on Tap public lecture series speaker and volunteer **2016–2018**
Close to a monthly basis

Caltech astronomy public lecture series panelist and emcee **2016–2018**
Approximately every three months

Invited guest lecture on black holes and gravitational waves **November 2017**
Science of Space and Time, Hampshire College

Invited video Q&A session, public high school physics class **June 2017**
The Nova Project school, Seattle

Guest on *The Titanium Physicists Podcast*
Episode 80: Picturing the Bach Hole **August 21, 2019**
Episode 64: The edges of Einstein **April 25, 2016**
Episode 62: Black Bells **February 1, 2016**

Quora Q&A Session on gravitational waves and first detection **February 17, 2016**
83.9k+ views, 20.8k+ followers

Invited guest host, public screening of *COSMOS* with Q&A, **March/June 2014**
Science Cabaret/Cornell

Invited public talk at *Frontiers of Cornell Astronomy*, **November 2013**
Cornell Friends of Astronomy

Invited video chat, *Topics in Physics* course, **July 2013**
Stanford Education Program for Gifted Youth

Computer Skills

Expert in Mathematica. Proficient in C/C++, Python, Bash, Javascript. Experience in Java, Haskell. Proficient at *nix and HPC. Markup languages: LaTeX, HTML, CSS, Markdown.

Software—Most contributions can be found at https://github.com/duetosymmetry. Member of the *Simulating eXtreme Spacetimes* (SXS) collaboration, contributor to the Spectral Einstein Code (SpEC). Member of the *Black Hole Perturbation Toolkit*. Author of `qnm` python package (https://github.com/duetosymmetry/qnm). Core collaborator on xAct (http://xact.es) abstract tensor

calculus package for MATHEMATICA. Coauthor of xTERIOR package for exterior differential geometry under xACT. Co-maintainer of community contributions at http://contrib.xact.es. Developed arXiv-keys browser extension/add-on for Chrome/Firefox. Author of orcidlink and coauthor of gridpapers packages for LaTeX.

References

Scott A. Hughes, Professor of Physics, Massachusetts Institute of Technology
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Éanna É. Flanagan, Professor of Physics and Astronomy, Cornell University
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Yanbei Chen, Professor of Physics, California Institute of Technology
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