

# Prof. Fiona Harrison

## Curriculum Vitæ

Cahill Center for Astronomy and Astrophysics  
California Institute of Technology  
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### Current Position

- 2015-present **Kent and Joyce Kresa Leadership Chair**, Division of Physics, Mathematics and Astronomy, California Institute of Technology.
- 2013-present **Harold A. Rosen Professor of Physics**, California Institute of Technology.

### Education

- 1993 **PhD, Physics**, University of California, Berkeley, Berkeley, CA.
- 1985 **AB, Physics, with honors, Magna cum laude**, Dartmouth College.

### Previous Positions

- 2005-2013 **Professor of Physics**, Caltech.
- 2001-2005 **Associate Professor of Physics**, Caltech.
- 1995-2001 **Assistant Professor of Physics**, Caltech.
- 1993-1995 **Robert A. Millikan Prize Research Fellow**, Caltech.
- 1988-1993 **Research Assistant**, Space Sciences Laboratory, Department of Physics, U.C. Berkeley.

### Honors and Awards

- 2022 **Mohler Prize**, University of Michigan.
- 2020 **Hans Bethe Prize**, American Physical Society.
- 2020 **Fellow**, American Astronomical Society.
- 2016 **Harrie Massey Award**, Committee on Space Research.
- 2015 **Bruno Rossi Prize**, American Astronomical Society.
- 2015 **Honorary Fellow**, Royal Astronomical Society.
- 2014 **Member**, National Academy of Sciences.
- 2014 **Fellow**, American Academy of Arts and Sciences.
- 2013 **NASA Outstanding Public Leadership Medal**.
- 2012 **Fellow**, American Physical Society.
- 2010 **Doctor Technices Honoris Causa**, Danish Technical University.
- 2008 **Named one of America's Best Leaders**, U.S. News and Kennedy School of Government.
- 2000 **Presidential Early Career Award**.
- 1989 - 1992 **NASA Graduate Student Research Fellow**.

### Presentations (selected)

#### Invited Prize Positions and Named Lectures

- 2023 **Pappalardo Distinguished Lecture**, Massachusetts Institute of Technology.

- 2019 **Manne Siegbahn Memorial Lecture**, Stockholm University.
- 2016 **Edwin Salpeter Lecturer**, Cornell University.
- 2015 **Celia Payne-Gaposchkin Lecture**, Harvard-Smithsonian Center for Astrophysics.
- 2014 **Lyman Spitzer Lecturer**, Princeton University.
- 2014 **International Senior Research Fellowship**, Durham University.
- 2014 **Sackler Distinguished Visitor**, Institute of Astronomy, Cambridge UK.
- 2013 **John Bahcall Memorial Colloquium**, Weizmann Institute, Israel.

#### Public Lectures

- 2022 **Mohler Prize Lecture**, University of Michigan.
- 2019 **U.C. Berkeley Astronomy Distinguished Public Lecture**.
- 2017 **Helen Sawyer Hogg Lecture**, Canadian Astronomical Society.
- 2014 **Watson Lecture**, Caltech.
- 2012 **von Kármán Lecture**, Pasadena Community College Auditorium, Sponsored by JPL.

#### Leadership and National Service (Selected)

- 2020-2022 **Chair**, *High Energy Astrophysics Division of the AAS*.
- 2019-2021 **Co-Chair**, Decadal Survey on Astronomy and Astrophysics.
- 2019 **Member**, *James Webb Space Telescope Independent Review Board*.
- 2017-2019 **Chair**, *Space Studies Board of the National Academy of Sciences*.
- 2017 **Chair**, *Division of Astrophysics, American Physical Society*.
- 2009-2010 **Member**, *Decadal Survey on Astronomy and Astrophysics Steering Committee*.

#### Current Research Interests

- PI, UVEX NASA Medium Class Explorer Mission elected for competitive Phase A study, 2022
- PI, NuSTAR NASA Small Explorer Mission. I led the technology, development, launch and prime mission of this NASA Small Explorer. The extended mission is now serving the community through a GO Program
- Observational Interests Studies of accreting black holes, neutron stars, and ultraluminous X-ray sources, explosive astrophysical transients, supernova remnants in high-energy X-rays and radioactivity, the evolution of supermassive black holes.
- Technology Development I am leading technology programs aimed at developing next-generation imaging and spectroscopic detectors for X-ray missions, and advancing the use of CMOS detectors for UV ground and space astrophysics applications

#### Mentorship

- Graduate Students Peter Mao (PhD 2002), Sarah Yost (2004), Megan Eckart (2006), Hubert Chen (2008), Brad Cenko (2008), Varun Bhalerao (2012), Mislav Boloković (2017), Yanjun Xu (2021), Nikita Kamraj (2021), Sean Pike (2022), Yuhan Yao (2023), Yuanze Ding.

Postdocs Aleksey Bolotnikov, Steve Boggs (Millikan Fellow), Wayne Baumgartner, Kristin Madsen, Brian Grefenstette, Dominic Walton, Felix Fuerst, Liz Rivers, Murray Brightman, Hannah Earnshaw, Javier Garcia, Marianne Heide, Renee Ludlam (HST Fellow), Amruta Jaodad, Riley Connors, Margaret Lazzarini (NSF Fellow).

Undergraduate Research Students More than 75 summer undergraduate researchers have completed projects in my group, including 17 WAVE Fellows (providing opportunities for URM students in STEM).

## Ten Most Significant Publications (as if 9/2021, time-ordered after most cited)

- 1 **Harrison et al.** 2013, "*The Nuclear Spectroscopic Telescope Array*", ApJ, 770, 103, (1192 citations).
- 2 **Evans et al.** 2017, "*Swift and NuSTAR observations of GW170817: Detection of a blue kilonova*", Science, 358, 1565, (299 citations).
- 3 **Boggs, Harrison et al.** 2015, "*44-Ti gamma-ray emission lines from SN1987A reveal an asymmetric explosion*", Nature, 348, 670, (82 citations).
- 4 **Harrison et al.** 2015, "*The NuSTAR extragalactic surveys: The number counts of active galactic nuclei and the resolved fraction of the cosmic X-ray background*", ApJ, 831, 185, (52 citations).
- 5 **Bachetti, Harrison et al.** 2014, "*An ultraluminous x-ray source powered by an accreting neutron star*", Nature, 514, 7521, (454 citations).
- 6 **Grefenstette, Harrison et al.** 2014, "*Asymmetries in core-collapse supernovae from maps of radioactive Ti-44 in Cassiopeia A*", Nature, 506, 339, (161 citations).
- 7 **Risaliti, Harrison et al.** 2013, "*A rapidly spinning black hole at the centre of NGC1365*", Nature, 494, 449, (221 citations).
- 9 **Yost, Harrison et al.** 2003, "*A study of the afterglows of four gamma-ray bursts: Constraining the explosion and fireball model*", ApJ, 59, (213 citations).
- 8 **Harrison et al.** 2001, "*Broadband observations of the afterglow of GRB 000926: Observing the effect of inverse Compton scattering*", ApJ, 559, 123, (122 citations).
- 10 **Harrison et al.** 1999, "*Optical and radio observations of the afterglow from GRB 990510: Evidence for a jet*", ApJ, 523, 2, (256 citations).

369 refereed publications, h-index = 69