# Fabio Pacucci

*Curriculum Vitae & Publication List*
*Updated: June 1, 2026*

***Center for Astrophysics***
*60 Garden Street, Cambridge, MA 02138, USA*
☎ *+1 (857) 928-7612*
✉ *fabio.pacucci@cfa.harvard.edu*
*www.fabiopacucci.com*
*ORCID: 0000-0001-9879-7780*

## Academic Summary

| | | |
|---|---|---|
| **Scientific Publications** (as First Author) | 224 | (87) |
| **Citations in ADS** (Google Scholar) | 7900+ | (8000+) |
| **H-index in ADS** (Google Scholar) | 50 | (46) |
| **m-index in ADS** (Google Scholar) | 3.5 | (3.3) |
| **Talks** (Review, Invited, Contributed) | 128 | (14, 77, 37) |
| **Student Direct Supervision** (Graduate, Undergraduate) | 32 | (8, 24) |
| **Directly Supervised Student-Led Papers** | 11 | |
| **Awards and Grants** | $1.2M | |
| **Press Releases** (Major) — covering my first-author work | 6 | (2) |
| **Public Outreach Talks** — in-person and virtual | 100+ | |

## Experience

since 2025 **Staff Astrophysicist**,
*Center for Astrophysics | Harvard & Smithsonian, Cambridge (MA)*, USA.

since 2025 **Senior Member of the Institute for Theory and Computation**,
*Harvard University, Cambridge (MA)*, USA.

2019–2025 **Clay Fellow & BHI Fellow**,
*Center for Astrophysics | Harvard & Smithsonian, Cambridge (MA)*, USA.

2019 **NOVA Fellow**,
*Kapteyn Astronomical Institute*, Netherlands.

2016–2018 **Postdoctoral Research Associate**,
*Yale University — Department of Physics, New Haven (CT)*, USA.

## Education

2013–2016 **Ph.D. in Physics**, *Scuola Normale Superiore (SNS)*, Italy.
Thesis title: *The First Black Holes in the Cosmic Dark Ages*
Advisor: Prof. Andrea Ferrara, Grade: 70/70 cum laude

2011–2013 **M.S. in Astrophysics with Honors**, *University of Rome, Sapienza*, Italy.
Grade: 110/110 cum laude

2008–2011 **B.S. in Physics with Honors**, *University of Rome, Sapienza*, Italy.
Grade: 110/110 cum laude

## Biographical Information

Gender: Male
Birthplace: Taranto, Italy
Citizenship: Italy & USA

## Current Research Interests

Black hole formation and evolution — Black hole seeding — Little Red Dots — Galaxy formation and evolution — High-redshift Universe — Cosmology — Wandering black holes — Intermediate-mass black holes — Supermassive black holes — Quasars — Multi-wavelength surveys — Time-domain astronomy — Tidal disruption events — Multi-wavelength data analysis — GR(R)MHD simulations — Cosmological simulations — N-body simulations — Machine learning — Astro-statistics

## Prizes & Awards

2025 **"Anello di San Cataldo" Prize** — Awarded by the City of Taranto for outstanding contributions to the promotion and dissemination of scientific culture

2019 **Clay Fellowship (SAO)**

2019 **BHI Fellowship (Harvard University)**

2017 **Livio Gratton Prize** — Best Ph.D. Thesis in Astronomy in Italy (2014-2016)

2017 **American Astronomical Society "International Travel Grant" Award**

2016 **IAU Ph.D. Prize** — International Astronomical Union prize for Ph.D. Thesis

2016 **Yale Postdoctoral Scholars Travel Fund Award**

2012 **Enrico Persico Prize 2011-2012** — Accademia Nazionale dei Lincei prize for exceptional achievements in Physics

2012 **ASI-ISSNAF (Italian Space Agency) 2012 Internship Program Winner**

2007 — 2012 **Fellowship at the "Lamaro-Pozzani" University College in Rome**

2007 **Rotary Club Prize** — Exceptional achievements during high-school studies

## Grants, Fellowships, and Observing Programs

### Fellowships:

| Name | Years | Award |
|---|---|---|
| Clay Fellowship | 2022 — 2025 | ∼ $375,000 |
| BHI Fellowship | 2019 — 2022 | ∼ $360,000 |
| NOVA Fellowship | 2019 | ∼ $70,000 |

## Awarded Observing Programs as Principal Investigator:

| Telescope | Year | Type | Time | Target | Award |
|---|---|---|---|---|---|
| JWST | 2026 | GO | 9.3 hrs | Nearby SMBHs | $125,205 |
| Chandra | 2024 | DDT | 10 ks | Gaia BH3 | $31,790 |
| JWST | 2023 | GO | 12.38 hrs | Leo I dSph | $88,455 |
| Gemini-S | 2023 | DDT | 6.5 hrs | Leo I dSph | N/A |
| VLA | 2022 | DDT | 2 hrs | Leo I dSph | N/A |
| SMA | 2022 | DDT | 6.7 hrs | Leo I dSph | N/A |
| VLA | 2022 | DDT | 0.75 hr | Leo I dSph | N/A |
| Chandra | 2022 | DDT | 30 ks | Leo I dSph | $22,050 |
| Chandra | 2022 | GO | 250 ks | HD2 | $87,200 |
| Keck | 2018 | GO | 2 nights | CR7 | N/A |
| Chandra | 2017 | THEORY | N/A | N/A | $87,000 |

## Publication Record (Highlights)

Number of scientific publications (papers, proceedings, funded proposals): 224
Number of first-author scientific publications: 87
Number of refereed papers: 140
Number of directly supervised student-led scientific publications: 10
Number of citations (ADS): 7900+
H-index (ADS): 50
m-index (ADS): 3.5
Link to Personal ADS Library
A full publication list is reported at the end of this document.

## Teaching Recognition

May 2024 **Harvard Derek Bok Center for Teaching and Learning** recognition for exceptional teaching for the course FYSEMR 21G: Genesis of Stars and Life in the Universe, Spring 2024.

## Teaching Experience

2024 **Teaching Assistant** for the Freshman Seminar classes in Spring 2024 at Harvard University (1 semester).

2023 **Guest Lecturer** for the course "Genesis of Stars And Life In The Universe" at Harvard University, for undergraduate students majoring in Astronomy (2 classes).

2017 **Guest Lecturer** for the course "Gravity, Astrophysics, and Cosmology" at Yale University for undergraduate students majoring in Astronomy (2 classes).

2013 — 2015 **Teaching Assistant** for several undergraduate courses (SNS, Italy): classical mechanics, electromagnetism, general relativity, linear algebra.

2015 **Teaching Assistant** for the graduate course "Structure Formation in the Early Universe" (SNS, Italy).

## Experience as Research Advisor and Mentor

**Graduate Students (8)**

since 2024 Valentina La Torre, Tufts University

2024 Umasree Thekkemadam, University of Miami

since 2024 Emma Weller, Yale University

2024 Jasmine Gill, Harvard University

2024 Victoria DiTomasso, Harvard University

2023 Fabiola Cocchiararo, University of Milan-Bicocca

since 2023 Emmanuel Durodola, Dartmouth College

2023 Aurora Abbondanza, University of Rome — Sapienza

**Undergraduate Students (24)**

2026 Xavier Maple, Morgan State University

2025 Saphina Chisek-Singh, Harvard University

2024 Astrid Liu (HCRP program winner), Harvard University

2024 Sarah Pinto, Harvard University

2024 Truman Pauley Harvard University

2024 Emiliano Maldonado, Harvard University

2024 Callie Garcia, Harvard University

2024 Annika Geiersbach (HCRP program winner), Harvard University

since 2024 Cal Guia (HCRP program winner), Harvard University

since 2023 Bao (Tintin) Nguyen, University of Arizona

2023 Daria-Teodora Harabor (HCRP program winner), Harvard University

2023 Bruna Biz (PRISE program winner), Harvard University

2022 — 2023 Sofia Martinez (Senior Thesis), Harvard University

2022 Bella Tarantino, Harvard University

2022 — 2023 Rui Zhe Lee, Harvard University

2022 Rafid Quayum (PRISE program winner), Harvard University

2021 — 2023 Bryan Seepaul (PRISE program winner), Harvard University

2021 — 2023 Emma Weller (PRISE program winner), Harvard University

2020 — 2022 Lucia Gordon, Harvard University

2020 — 2022 Sarah Gardner, Ossining High School (NY)

2021 Ray Fitzgerald, Harvard University

2021 Kaylie Hausknecht, Harvard University

2021 Emmanuel Durodola, Banneker Institute Program at Harvard University and California State University

2018 Qingyuan Qian, Great Neck North High School (NY)

## Professional Service and Collaborations

### Peer-Review

- Referee: Nature, ApJ, ApJ Letters, Nature Astronomy, MNRAS, MNRAS Letters, Astronomy & Astrophysics, JCAP, Physical Review Letters
- Peer Reviewer: Chandra TAC
- Peer Reviewer: JWST TAC
- Peer Reviewer: NSF Division of Astronomical Sciences
- Peer Reviewer: NASA Astrophysics Division FINESST (multiple years)
- Peer Reviewer: AAS Chambliss award (multiple years)
- Peer Reviewer: NASA NICER GO (multiple years)

### Service & Memberships

**International Community Level**

2025 – 2028 Member of the Executive Committee of NASA PhysPAG

since 2025 Co-Chair of NASA's Habitable Worlds Observatory Science Interest Group (SIG)

2025 – 2028 Co-Chair of the X-ray Science Interest Group (SIG) of NASA Physics of the Cosmos Program

since 2025 Co-Chair of the NASA Science Analysis Group (SAG) for the conceptual development of a "Lynx2030" mission for the Astro2030 Decadal Survey

since 2024 Member of the Steering Committee of the AGN Working Group for the NASA Habitable Worlds Observatory

since 2023 Member of the AXIS X-ray Telescope Science Team (selected for Phase A)

since 2016 Full Member of the American Astronomical Society

since 2025 Full Member of the American Physical Society

since 2024 Full Member of International Astronomical Union

since 2023 Member of the JWST/CEERS Collaboration

since 2023 Member of NASA's New Great Observatories Science Analysis Group

since 2023 Member of the Scientific Advisory Council of the ATA, Associazione Tuscolana di Astronomia

2023 Member of the AAS Congressional Visit Group 2023 in Washington, DC

2018 – 2014 Junior Member of International Astronomical Union

2018 – 2019 Member of the IAU Executive Committee for Junior Members

since 2018 Associate Member of LISA Consortium

since 2016 Member of Scuola Normale Superiore Alumni Association

since 2012 Member of ISSNAF (Italian Scientists and Scholars in North America Foundation)

since 2013 Member of the Collegio Universitario "Lamaro-Pozzani" Alumni Association

**University/Department Level**

since 2023 Member of the CfA Early Career Workshop Committee.

2020 – 2024 Member of the Center for Astrophysics Postdoc Committee

2021 Member of the Postdoc Committee for the CfA Director's search

## Diversity, Equity and Inclusion Initiatives

since 2024 Member of the Working Group of the AAS on International Students and Scholars

since 2024 Participant as a mentor in the pilot edition of the "Mentoring Constellation" program at the CfA to provide support and guidance for young scientists.

2023 — 2024 Co-Organizer of the AAS 243 Meeting Special Session "International Students and Researchers in Astronomy: Issues and a Path Forward"

since 2023 Early Career Researcher representative for the "IDEAS, Education and Public Engagement" committee of the CfA 10-year Strategic Plan.

since 2021 Original promoter and co-organizer of the "Distratis Scholarship" in memory of Cosimo Distratis — teacher, amateur scientist, and long-time supporter of science education. The scholarship funds the study of undergraduate students in Physics from underprivileged rural communities in the south of Italy.

2021 Attended "Intensive Science Undergraduate Mentoring Workshop at Harvard Faculty of Arts and Science" with a particular focus on promoting DEI practices in mentoring activities.

2021 Mentor for the Banneker Institute program at Harvard, which prepares undergraduate BIPOC students for graduate programs in astronomy, focusing on research, graduate coursework, and social science education.

since 2018 Mentored a very diverse cohort of students at the high school and undergraduate levels.

## Scientific Organizing Committees

- SOC Chair of the MIT/Harvard Meeting: "BABAM! Boston-Area Blackhole Accretion Meeting" (2023)
- Co-Organizer of the AAS 243 Meeting Special Session "International Students and Researchers in Astronomy: Issues and a Path Forward" (2023)
- SOC Chair for the Annual BHI Conference (since 2020)
- SOC Member for the CfA Colloquium Series (since 2020)
- SOC Chair for the BHI Colloquium Series (since 2019)
- SOC Member for the Conference "Accretion History of AGN", Miami (FL), USA (2019)
- Session Chair for the AAS 240th Meeting (2022)
- Session Chair for the AAS 236th Meeting (2020)

## Seminars and Colloquia

## Review and Prize Talks

December 2025 **Highlighted Talk, Smithsonian Institution Advancement Event, Boston Public Library**
Upbringing of an Astronomer

October 2025 **Keynote Talk, Harvard Science Research Conference 2025**
Black Holes From the Nearby to the Faraway Universe

October 2025 **Review Talk, AAS HEAD Meeting 2025**
NASA's Lynx+ Science Analysis Group: Preparation for Astro 2030

August 2025 **Panelist, 2025 Santa Cruz Galaxy Meeting**
Blumenthal, Faber, Primack & Rees at 41: What did they get right? What did they get wrong? What are the big open questions?

December 2023 **Review Talk, "Intermediate-Mass Black Holes: The Dawn of a Revolutionary Era" Conference, Belize**
Intermediate-Mass Black Hole Seeds

September 2023 **Review Talk, ITC Discussion, Center for Astrophysics | Harvard & Smithsonian, Cambridge (MA), USA**
Overmassive Black Holes in Dwarf Galaxies: The Strange Case of Leo I

August 2023 **Talk, Copenhagen Developers Festival, Copenhagen, Denmark**
Space Awe

April 2023 **Clay Lecture, Center for Astrophysics, Cambridge (MA), USA**
Searching for Black Holes From the Nearby to the Faraway Universe

August 2022 **PAX-22 Workshop, MIT, Cambridge (MA), USA**
Observational Signatures of the First Black Holes

June 2022 **Astrophysics in the Next Decade: From the First Stars to Intelligent Life, Martha's Vineyard (MA), USA**
To the Most Distant Galaxy and Beyond: A Scientific Journey

June 2021 **Aspen Center for Physics, 2021 Summer Program, Aspen (CO), USA**
Black Hole Formation and Growth in the High Redshift Universe

August 2018 **IAU General Assembly, Vienna, Austria**
IAU Ph.D. Prize Talk: The First Black Holes in the Cosmic Dark Ages

July 2018 **The Early Growth of Supermassive Black Holes, Sexten, Italy**
A Multi-Wavelength View onto the First Black Hole Seeds

November 2017 **Workshop: "Titans of the Early Universe", Prato, Italy**
The Growth of the First Black Holes

## Invited Talks

May 2026 Colloquium, UC Irvine: "JWST's Little Red Dots: Masters of Disguise in the Early Universe", Irvine (CA)

April 2026 Colloquium, Wayne University: "JWST's Little Red Dots: Masters of Disguise in the Early Universe", Detroit (MI)

| | |
|---|---|
| March 2026 | Colloquium, UMass Amherst: "JWST's Little Red Dots: Masters of Disguise in the Early Universe", Amherst (MA) |
| March 2026 | Talk, APS 2026 Meeting: "Updates from NASA's X-Ray Science Interest Group", Denver (CO) |
| March 2026 | Talk, APS 2026 Meeting: "Updates from NASA's HWO Science Interest Group", Denver (CO) |
| January 2026 | Talk, Sesto XI: "CSI Sesto: Cosmology Scene Investigation in Sesto. Joining Efforts to Solve JWST Mysteries in the Distant Universe", Sexten (Italy) |
| January 2026 | Talk, Sesto XI: "The growth of galaxies in the Early Universe", Sexten (Italy) |
| September 2025 | Lesson Series, Cambridge Center for Adult Education, Cambridge (MA) |
| August 2025 | Talk, 2025 Santa Cruz Galaxy Meeting, Santa Cruz (CA) |
| April 2025 | Colloquium, University of Texas at San Antonio, San Antonio (TX) |
| April 2025 | Galaxy Lunch Talk, Yale University, New Haven (CT) |
| January 2025 | Talk, JWST High-z Meeting, Center for Astrophysics \| Harvard & Smithsonian, Cambridge, MA |
| January 2025 | Talk, Sexten Winter Workshop: 'The Growth of Galaxies in the Early Universe – X: the Physics of Early Galaxies", Sexten, Italy |
| January 2025 | Special Session of the Working Group on International Students and Scholars, AAS 245, National Harbor (MD), USA |
| January 2025 | PhysPAG Meeting at AAS 245, National Harbor (MD), USA |
| January 2025 | Special Session talk, AAS 245, National Harbor (MD), USA |
| December 2024 | Talk, Johns Hopkins University, Baltimore (MD) |
| December 2024 | Colloquium, Hebrew University of Jerusalem, virtual |
| October 2024 | Colloquium, Georgia Tech, Atlanta (GA) |
| October 2024 | Colloquium, University of Texas at Austin, Austin (TX) |
| October 2024 | Colloquium, NYU, New York City (NY) |
| September 2024 | Colloquium, Colby College, Waterville (ME) |
| September 2024 | Talk, NASA/Goddard Space Flight Center AGN Seminar, GSFC, Greenbelt (MD) |
| September 2024 | Discussion Leader "To B or not to B, where B=Blackhole", KITP, Santa Barbara (CA) |
| July 2024 | TANDEM Seminary w/t Erandi Chavez, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| April 2024 | Talk, NASA Habitable Worlds Observatory AGN Working Group, virtual |
| March 2024 | Astrophysics Colloquium, UCLA, Los Angeles (CA), USA |
| November 2023 | Tufts Astro Colloquium, Tufts University, Medford (MA), USA |
| October 2023 | ASD Colloquium, NASA Goddard Space Flight Center, Greenbelt (MD), USA |
| June 2023 | Colloquium, Scuola Normale Superiore, Pisa, Italy |
| June 2023 | Talk, ATA Frascati, Rome, Italy |

| | |
|---|---|
| May 2023 | Talk, MIT, Erin Kara's Group Meeting, Cambridge (MA), USA |
| April 2023 | Colloquium, KITP Stanford, Stanford (CA), USA |
| March 2023 | Special Session talk, AAS HEAD 20, Waikoloa Village (HI), USA |
| December 2022 | Talk, ITC Luncheon, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| November 2022 | Talk, Theory Seminar Series, CIERA, Northwestern University, Evanston (IL), USA |
| August 2022 | Colloquium, University of Miami, Miami (FL), USA |
| August 2022 | Talk, AXIS Seminar Series, virtual |
| June 2022 | Talk, AXIS Working Group Meeting, virtual |
| May 2022 | Speaker at the "The Night of Ideas", Boston (MA), USA |
| March 2022 | Special Session talk, AAS HEAD 19, Pittsburgh (VA), USA |
| November 2021 | Talk, UConn, Storrs (CT), USA |
| October 2021 | Talk, Institute for Advanced Studies, Princeton (NJ), USA |
| September 2021 | Speaker at the "Futurological Congress", Bolzano, Italy |
| September 2021 | Colloquium, INAF Brera, Milan, Italy |
| November 2020 | Colloquium, SISSA, Trieste, Italy |
| October 2020 | AAS HEAD division talk, virtual |
| October 2020 | HEAD Talk, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| September 2020 | Colloquium, NRC Herzberg Astronomy & Astrophysics, virtual |
| September 2020 | Colloquium, University of British Columbia, virtual |
| September 2020 | Talk, "Origin, growth, and feedback of black holes in dwarf galaxies", virtual conference |
| June 2020 | Press conference and Science talk, AAS 236th meeting, virtual |
| January 2020 | Colloquium, ITC, Harvard University, Cambridge (MA), USA |
| October 2019 | Talk, AHA Workshop, University of Miami, Miami (FL), USA |
| March 2019 | Colloquium, University of Connecticut, Storrs, (CT), USA |
| March 2019 | Colloquium, Black Hole Initiative (Harvard University), Cambridge (MA), USA |
| March 2019 | HEAD Talk, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| November 2018 | Talk, ITC, Center for Astrophysics \| Harvard & Smithsonian, Cambdridge (MA), USA |
| October 2018 | Colloquium, Dartmouth College, Hanover (NH), USA |
| March 2018 | Physics Colloquium, University of Miami, Miami (FL), USA |
| March 2018 | CosmoClub Talk, UC Santa Cruz, Santa Cruz (CA), USA |
| October 2017 | Colloquium, Yale Astronomy Department, New Haven (CT), USA |

| | |
|---|---|
| October 2017 | Colloquium, INAF - OAR, Astronomical Observatory of Rome, Italy |
| August 2017 | Talk, HEAD Meeting 2017, Sun Valley (ID), USA |
| June 2017 | Talk, Yale Society of Physics Student, New Haven (CT), USA |
| June 2017 | Talk, Elusive AGN in the Next Era, George Mason University, Fairfax (VA), USA |
| March 2017 | Talk, Science with the Hubble and James Webb Space Telescopes, Venice, Italy |
| December 2016 | Colloquium, The First Black Holes, CCA (Simons Foundation), NYC (NY), USA |
| July 2016 | Colloquium, Kapteyn Astronomical Institute, Groningen, The Netherlands |
| March 2016 | Talk, Columbia University, NYC (NY), USA |
| February 2016 | Talk, Yale University, New Haven (CT), USA |
| February 2016 | Talk, ITC, Center for Astrophysics \| Harvard & Smithsonian, Cambdridge (MA), USA |
| January 2016 | Colloquium MPA Garching, Germany |
| October 2015 | Talk, X DAVID International Workshop, Scuola Normale Superiore, Italy |
| February 2015 | Talk, IAP Paris, France |
| October 2014 | Talk, IX DAVID International Workshop, Scuola Normale Superiore, Italy |
| October 2013 | Talk, VIII DAVID International Workshop, Scuola Normale Superiore, Italy |

### Contributed Talks

| | |
|---|---|
| December 2025 | Talk, “Accretion History of AGN”, AHA conference 2025, Miami, FL, USA |
| December 2025 | Talk, “Highly Accreting Supermassive Black Holes Across all Cosmic Times” conference, Santiago, Chile |
| November 2025 | Talk, Narayan Group Meeting, Cambridge, MA, USA |
| July 2025 | Talk, “Towards the Habitable Worlds Observatory: Visionary Science and Transformational Technology” conference, Washington, DC, USA |
| June 2025 | Talk, “Vasto Accretion Meeting” conference, Vasto, Italy |
| May 2025 | Talk, “Cosmic Frontier Center” conference, UT Austin, Austin (TX), USA |
| May 2025 | Talk, “Unveiling massive black hole evolution with gravitational waves and light” conference, Paris, France |
| May 2025 | Talk, AXIS Science Team Meeting, Annapolis (MD), USA |
| January 2025 | Talk, ITC Luncheon, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| January 2025 | Talk, AAS 245, National Harbor (MD), USA |
| December 2024 | Talk, “25 Years of Science with Chandra” conference, Boston (MA), USA |
| November 2024 | Talk, JSI Meeting, Baltimore (MD), USA |
| November 2024 | Talk, AGN SWG HWO, virtual |
| September 2024 | Talk, “To B or Not to B, Where B=Blackhole", Hernquist group meeting, Cambridge (MA), USA |

| | |
|---|---|
| August 2024 | Talk, “Cosmic Dawn Revealed by JWST: The Physics of the First Stars, Galaxies, and Black Holes” Conference, KITP, Santa Barbara (CA), USA |
| June 2024 | Talk, “Celebrating 50 Years of Narayan” Conference, Boston (MA), USA |
| June 2024 | Talk, AAS 244, Madison (WI), USA |
| May 2024 | Talk, Review on Overmassive Black Holes, Hernquist group meeting, Cambridge (MA), USA |
| May 2024 | Talk, "First Stars VII in NYC" Conference, NYC (NY), USA |
| April 2024 | Talk, "Massive Black Holes in the First Billion Years" Conference, Kinsale, Ireland |
| January 2024 | Talk, AAS 243, New Orleans (LA), USA |
| December 2023 | Talk, "Accretion History of AGN (AHA)" Conference, Miami (FL), USA |
| November 2023 | Talk, ITC Luncheon, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| November 2023 | Talk, Hernquist Group, Center for Astrophysics \| Harvard & Smithsonian, Cambridge (MA), USA |
| September 2023 | Talk, "The First Year of JWST Science Conference", Baltimore (MD), USA |
| June 2023 | Talk, AAS 242, Albuquerque (NM), USA |
| May 2023 | Talk, NERQUAM Conference 2023, Kingston (RI), USA |
| March 2023 | Talk, eXtreme Black Holes, Aspen Winter Workshop, Aspen (CO), USA |
| September 2022 | Talk, VLA Sky Survey in the Multiwavelength Spotlight, Socorro (NM), USA |
| June 2022 | Talk, AAS Summer Meeting 2022, Pasadena (CA), USA |
| May 2022 | Talk, "IMBH: New Science from Stellar Evolution to Cosmology" workshop, Puerto Rico, USA |
| December 2021 | Talk, BLAST Workshop 2021, virtual |
| January 2019 | Talk, AAS Winter Meeting 2019, Seattle (WA), USA |
| March 2018 | Talk, AAS HEAD Meeting 2018, Rosemont (IL), USA |
| June 2015 | Talk, EWASS 2015 Conference, Spain |
| September 2014 | Talk, Meeting of the Italian Physical Society, Italy |
| June 2014 | Talk, Chalonge Meudon Workshop 2014 - Meudon Observatory, France |

## Public Outreach

Additional details and links about my outreach activities can be found on the Outreach page of my professional website.

since 2022 **Regular science writer for Scientific American.** "Why Do Astronomers Seek the Most Distant Galaxies?" op-ed; "How Taking Pictures of Nothing Changes Astronomy" op-ed also published in the December 2022 printed edition of Sci Am; "Invisible Numbers Are the Most Beautiful Part of Every 'Space' Image" op-ed; "JWST's Smashing Success Shifts Focus to Astronomy's Blind Spots" op-ed; "JWST Finds Strange Harmony in Early Galaxies and Black Holes" op-ed; "JWST's 'Little Red Dots' Offer Astronomers the Universe's Weirdest Puzzle" op-ed.

2024 **Writer of an invited feature article for Sky & Telescope.** Appeared in the May 2024 printed edition, it covers the first year of discoveries by JWST in the field of high-redshift black holes. Title: Distant Lights in the Darkness.

2024 **Writer for The Conversation** covering the Little Red Dots. Title: Tiny, compact galaxies are masters of disguise in the distant universe — searching for the secrets behind the Little Red Dots. At publication, it rapidly became the second most-read article of the week.

since 2018 **Educator for 11 TED-Ed videos about science, many of them related to black holes**. For each video, I directed a team of $\sim$ 10 people (animators, scriptwriters, narrators). Each video was viewed $\sim 200,000$ times on publication day, many of which have been translated into 25+ languages. Overall, the 11 published videos have 20+ million views. This effort was covered by an article on the Harvard Gazette.

2023 **Science Editor for the book "Black Hole Aesthetics"**, by Lynn Gamwell

2022 **Guest for the podcast "Masters of Scale"** with Reid Hoffman, aired December 6, 2022.

2022 **Writer contributor** for the book "Shaping the Future: Sustainability and Technology at the Crossroads of Arts and Science", published by Graffeg (2023).

2021–2022 **Science Advisor** for the Black Hole Symphony show, produced by the Boston Museum of Science.

2019–2024 **Manager of public outreach** for the Black Hole Initiative at Harvard.

2018 **Development of the Black Hole Calculator:** online tool that provides a convenient summary of the properties of a black hole given its mass and spin. The calculator is a valuable tool for research and teaching, and it is used by a daily average of $\sim$ 100 people worldwide.

2019 **Guest for a CBS/ZDNET show**: What we know about the black hole information paradox.

2019 **Writer of one essay for the "Libro dell'Anno 2019" by Treccani** about the EHT image of the black hole in M87. Treccani is among the most prestigious encyclopedic institutions worldwide.

2018 **Astronomy on Tap — New Haven** with the talk "The Hunt for the First Black Holes in the Universe".

2016–2017 **Multiple invitations as a guest for the radio program "Aula 40"** on air from the National Research Center (CNR) in Pisa.

2013–2016 **Organizer of the Cosmology outreach program** for the Scuola Normale Superiore, Italy.

2013–2017 **Co-organizer of the local astronomy outreach events** for the "Night of the Researchers" in Italy.

2011 **Science Editor for the book "Cielo Tricolore":** this book celebrated the 150th anniversary of Italy and was sent to the President of the Italian Republic.

since 2005 **Presented 100+ public outreach talks**, both in-person (Italy, USA, Netherlands, Peru, Spain) and virtual.

2005 **Author of a section of the book "Astronomia in rete: gli studenti fanno vedere le stelle"** published by the Italian Ministry of Education, University and Research. The section described a method to measure the distance of close-by astronomical objects, easily implementable in schools.

## Press Coverage

Additional details and links about the press coverage of my research can be found on the Press Coverage page of my professional website.

August 2025 **Coverage of a new model to explain the origin of the Little Red Dots**, revealed by JWST in the very distant Universe. The news was covered by many outlets, including the Harvard Gazette, ScienceDaily, Universe Today, Sky & Telescope, Phys.org.

January 2024 **Extensive coverage of the discovery that black holes detected by JWST in the faraway Universe are significantly overmassive**. Among others, it was covered by the Sky & Telescope, Big Think, and phys.org. See also the beautiful animation created for the press release.

April 2022 **Extensive coverage of the discovery of the most distant galaxy candidates ever found and their physical interpretation**. According to an analysis by the CfA press office, the news reached 1.5 billion readers worldwide. Among others, it was covered by the New York Times, Reuters, Boston Globe.

June 2020 **Coverage of a new model to describe how black holes grow across cosmic time**, which was presented at a press conference during the 236th meeting of the AAS. The news was covered by Sky & Telescope, Phys.org, Universe Today, IFLScience magazine, Cosmos Magazine, Repubblica, and Media INAF.

January 2019 **Coverage of the discovery of the first strongly lensed quasar at z > 6, for which I was a collaborator, along with its physical interpretation and consequences for the broader populations of high-z quasars**. The news was covered by Yale University, Keck Observatory, Hubble Space Telescope, and ESA press releases. Media outlets, such as USA Today, Space.com, Astronomy.com, Discover magazine, Science Daily, Sky & Telescope, Cosmos Magazine, WSHU Public Radio, Sci-News, ScienMag, EarthSky, Repubblica and Messaggero, among many other outlets.

May 2016 **Extensive coverage of the discovery of the first Direct Collapse Black Hole candidates**. The discovery was presented by a NASA press release and featured on ABC News, Daily Mail, WIRED, Space.com, CBS, ESA, Chandra website, Repubblica, Corriere della Sera, Messaggero, among many others.

since 2016 **Routinely interviewed by media outlets to comment on recent discoveries in astronomy**, mostly regarding black holes. Examples of recent interviews: Discover Magazine, Yale Daily News, Pop Sci, Zeppelin, Repubblica.

## Long-Term Visits

Jan–Mar 2016 **Yale University — Department of Astronomy**, *New Haven (CT)*, USA.
Supervisor: Prof. Priyamvada Natarajan, Research topic: Black hole outflows

Jan–Apr 2015 **Institut d'Astrophysique de Paris (IAP)**, *Paris*, France.
Supervisor: Prof. Marta Volonteri, Research topic: Black hole seeds growth

Jul–Sept 2012 **Center for Astrophysics | Harvard & Smithsonian**, *Cambridge (MA)*, USA.
Supervisor: Prof. Lars Hernquist, Research topic: Planetary dynamics

## Academic References

- Professor Abraham Loeb, Harvard University (aloeb@cfa.harvard.edu)
- Professor Lars Hernquist, Harvard University (lhernquist@cfa.harvard.edu)
- Professor Ramesh Narayan, Harvard University (rnarayan@cfa.harvard.edu)
- Professor Priyamvada Natarajan, Yale University (priyamvada.natarajan@yale.edu)
- Professor Tiziana Di Matteo, Carnegie Mellon University (tiziana@phys.cmu.edu)
- Professor Xiaohui Fan, University of Arizona (xfan@email.arizona.edu)
- Professor Nico Cappelluti, University of Miami (ncappelluti@miami.edu)
- Professor Andrea Ferrara, Scuola Normale Superiore (andrea.ferrara@sns.it)
- Professor Andrei Mesinger, Scuola Normale Superiore (andrei.mesinger@sns.it)

## Peer-Reviewed Publication List

Note: This list includes papers accepted or submitted to refereed journals. For co-authored papers, when more than 10 authors are present, only the first and the total number of authors are indicated. A star symbol (⋆) indicates directly supervised student-led papers.

1. Gupta, A. R., [...] **Pacucci F.**, et al., (26 authors) *A Rapid Evolution in the Observed Mbh/M* Relation at z > 3 Revealed via Spectro-photometric SED-Modeling*, 2026, submitted to ApJ

2. Lu, S., [...] **Pacucci F.**, et al., (16 authors) *Prevailing thermally-pulsing-asymptotic-giant branch stars in the near-infrared rest-frame spectra of distant quiescent galaxies: towards robust galaxy ages and masses*, 2026, submitted to ApJ Letters
3. Zou, F., [...] **Pacucci F.**, et al., (10 authors) *Revisiting the Claim for a Direct-Collapse Black Hole in UHZ1 at* $z = 10.05$, 2026, submitted to ApJ
4. Bulichi, T. E., [...] **Pacucci F.**, et al., (19 authors) *MEOW: The increase in the obscured AGN fraction in mid-infrared from 0 < z < 6 with JWST MIRI*, 2026, submitted to ApJ
5. Iani, E., [...] **Pacucci F.**, et al., (38 authors) *JWST Reveals Two Overmassive Black Hole Candidates in Dwarf Galaxies at z ≈ 0.7: Pushing Black Hole Searches into the Dwarf-Galaxy Regime*, 2026, submitted to ApJ
6. Davis, K., [...] **Pacucci F.**, et al., (31 authors) *Extreme Emission Line Galaxies in CEERS Are Powered by Star Formation, not AGN*, 2026, submitted to ApJ
7. McGrath, E. J., [...] **Pacucci F.**, et al., (45 authors) *A Morphology Catalog of Galaxies in CEERS: Evolution in the Size and Color Gradients of Galaxies Since Cosmic Dawn*, 2026, ApJ Letters, 999, L6
8. Han, J. J., [...] **Pacucci F.**, et al., (96 authors) *A Path to an All-Sky Survey with Roman*, 2026, white paper
9. Nguyen, D. D., [...] **Pacucci F.**, et al., (9 authors) *Dynamical Evidence for a Billion Solar Mass Black Hole in Galaxy NGC 4061 from ALMA 12CO(2-1) Kinematics*, 2026, submitted to ApJ
10. **Pacucci F.**, Ferrara A. & Kocevski, D. D. *The Little Red Dots Are Direct Collapse Black Holes*, 2026, submitted to Nature
11. ⋆ Guia C. F. & **Pacucci F.**, *Radio Constraints Disfavor Little Red Dots as Scaled-down Super-Eddington Quasars*, 2025, Research Notes of the AAS, 9 355
12. Bisigello, L., [...] **Pacucci F.**, et al., (28 authors) *HELM's deep: Highly Extincted Low-Mass galaxies seen by JWST*, 2026, A&A, Volume 706, id.A363, 17 pp.
13. LaChance, P., [...] **Pacucci F.**, et al., (11 authors) *From ASTRID to BRAHMA – The role of overmassive black holes in little red dots in cosmological simulations*, 2025, submitted to ApJ
14. Brooks, M., [...] **Pacucci F.**, et al., (22 authors) *Beyond the Monsters: A More Complete Census of Black Hole Activity at Cosmic Dawn*, 2025, submitted to ApJ
15. Scoggins, M. T., Haiman, Z., **Pacucci F.**, *Heavy black hole seed survivors in dwarf galaxies: a case study of Leo I*, 2025, submitted to MNRAS
16. Koss, M., [...] **Pacucci F.**, et al., (398 authors) *The Advanced X-ray Imaging Satellite Community Science Book*, 2025
17. Cox, I. G., [...] **Pacucci F.**, et al., (38 authors) *The CEERS Photometric and Physical Parameter Catalog*, 2025, submitted to ApJ
18. Jones, B. L., [...] **Pacucci F.**, et al., (21 authors) *The* $M_{\rm BH} - M_\star$ *Relationship at* $3 < z < 7$*: Big Black Holes in Little Red Dots*, 2025, submitted to ApJ
19. Perry, M. N., [...] **Pacucci F.**, et al., (18 authors) *The Prevalence of Bursty Star Formation in Low-Mass Galaxies at* $z = 1 - 7$ *from H*$\alpha$*-to-UV Diagnostics*, 2025, ApJ, Volume 994, Issue 1, id.14, 11 pp.
20. Merlin, E., [...] **Pacucci F.**, et al., (20 authors) *Witnessing Downsizing in the Making: Quiescent and Breathing Galaxies at the Dawn of the Universe*, 2025, The Open Journal of Astrophysics, Volume 8
21. **Pacucci F.**, Hernquist L., Fujii M. *Little Red Dots Are Nurseries of Massive Black Holes*, 2025, ApJ, Volume 994, Issue 1, id.40, 9 pp.

22. Ronayne, K., [...] **Pacucci F.**, et al., (15 authors) *MEGA: Spectrophotometric SED Fitting of Little Red Dots Detected in JWST MIRI*, 2025, submitted to ApJ
23. Gandolfi, G., [...] **Pacucci F.**, et al., (37 authors) *Mysteries of Capotauro - investigating the puzzling nature of an extreme F356W-dropout*, 2026, A&A, Volume 706, id.A364, 16 pp.
24. Ngo, H. N., [...] **Pacucci F.**, et al., (12 authors) *Revisiting the supermassive black hole mass of NGC 7052 using high spatial resolution molecular gas observed with ALMA*, 2025, ApJ, Volume 992, Issue 2, id.211, 20 pp.
25. Ighina, L., [...] **Pacucci F.**, et al., (22 authors) *X-ray Investigation of Possible Super-Eddington Accretion in a Radio-Loud Quasar at* $z = 6.13$, 2025, ApJ Letters, Volume 990, Issue 2, id.L56, 13 pp.
26. Rinaldi, P., [...] **Pacucci F.**, et al., (26 authors) *Beyond the Dot: an LRD-like nucleus at the Heart of an IR-Bright Galaxy and its implications for high-redshift LRDs*, 2025, submitted to ApJ
27. Morales, A. M., [...] **Pacucci F.**, et al., (24 authors) *Testing Photometric Techniques for Measuring the Rest-Frame UV Spectral Slope Against JWST PRISM Spectroscopy*, 2025, ApJ, Volume 994, Issue 2, id.212, 10 pp.
28. Billand, JB., [...] **Pacucci F.**, et al., (19 authors) *Investigating the Growth of Little Red Dot Descendants at z<4 with the JWST*, 2026, A&A, Volume 706, id.A29, 15 pp.
29. **Pacucci F.**, *Exploring the Quiescent Black Hole Population of Nearby Dwarf Galaxies with HWO*, 2025, to be submitted to PASP conference proceedings
30. **Pacucci F.** & Loeb A., *Cosmic Outliers: Low-Spin Halos Explain the Abundance, Compactness, and Redshift Evolution of the Little Red Dots*, 2025, ApJ Letters, Volume 989, Number 2
31. Hamblin, K., [...] **Pacucci F.**, et al., (20 authors), *AGNBoost: A Machine Learning Approach to AGN Identification with JWST/NIRCam+MIRI Colors and Photometry*, 2025, submitted to ApJ
32. LaChance, P., Croft, R.A.C., Di Matteo, T., Zhou, Y., **Pacucci, F.**, Ni, Y., Chen, N., Bird, S., *The Properties of Little Red Dots Galaxies in the Astrid Simulation*, 2026, The Open Journal of Astrophysics, Volume 9
33. Papovich, C., [...] **Pacucci F.**, et al., (30 authors), *Galaxies in the Epoch of Reionization Are All Bark and No Bite – Plenty of Ionizing Photons, Low Escape Fractions*, 2026, ApJ, Volume 1000, Issue 1, id.111, 25 pp.
34. Géron, T., [...] **Pacucci F.**, et al., (25 authors), *Galaxy Zoo CEERS: Bar fractions up to z 4*, 2025, ApJ, Volume 987, Issue 1, id.74, 19 pp.
35. Castellano, M., [...] **Pacucci F.**, et al., (48 authors), *Pushing JWST to the extremes: search and scrutiny of bright galaxy candidates at z≃15-30*, 2025, A&A, Volume 704, id.A158, 24 pp.
36. Smethurst, R. J., [...] **Pacucci F.**, et al., (24 authors), *Galaxy Zoo JWST: Up to 75% of discs are featureless at 3<z<7*, 2025, MNRAS, Volume 539, Issue 2, pp. 1359-1371, 13 pp.
37. Backhaus, Bren E., [...] **Pacucci F.**, et al., (20 authors), *Emission-Line Diagnostics at z>4: [OIII]λ4363/Hγ*, 2025, ApJ, Volume 994, Issue 1, id.125, 13 pp.
38. Huertas-Company, M., [...] **Pacucci F.**, et al., (32 authors), *COSMOS-Web: The emergence of the Hubble Sequence*, 2025, A&A, Volume 704, id.A94, 20 pp.
39. Gandolfi, G., [...] **Pacucci F.**, et al., (44 authors), *Ultra High-Redshift or Closer-by, Dust-Obscured Galaxies? Deciphering the Nature of Faint, Previously Missed F200W-Dropouts in CEERS*, 2025, submitted to A&A
40. Mallick, L., Pinto, C., Tomsick, J., Markowitz, A., Fabian, A., Safi-Harb, S., Steiner, J., **Pacucci, F.**, Alston, W, *Constraining Disk-to-Corona Power Transfer Fraction, Soft X-ray Excess Origin, and Black Hole Spin Population of Type-1 AGN across Mass Scales*, 2025, submitted to ApJS

41. Mascia, S., [...] **Pacucci F.**, et al., (31 authors), *Little impact of mergers and galaxy morphology on the production and escape of ionizing photons in the early Universe*, 2025, A&A, Volume 701, id.A122, 15 pp.
42. Finkelstein, S. L., [...] **Pacucci F.**, et al., (99 authors), *The Cosmic Evolution Early Release Science Survey (CEERS)*, 2025, ApJ Letters, Volume 983, Issue 1, id.L4, 29 pp.
43. Laha, S., [...] **Pacucci F.**, et al., (37 authors), *Multi-wavelength observations of a jet launch in real time from the post-changing-look Active Galaxy 1ES 1927+654*, 2025, ApJ, Volume 981, Issue 2, id.125, 20 pp.
44. Llerena, D., [...] **Pacucci F.**, et al., (29 authors), *The ionizing photon production efficiency of star-forming galaxies at* $z \sim 4-10$, 2025, A&A, Volume 698, id.A302, 15 pp.
45. Dottorini, D., [...] **Pacucci F.**, et al., (26 authors), *Evolution of the UV slope of galaxies at cosmic morning (z > 4): the properties of extremely blue galaxies*, 2025, A&A, Volume 698, id.A234, 13 pp.
46. Rahman, T., [...] **Pacucci F.**, et al., (7 authors), *Spatially Resolved Stellar Populations of z = 3 - 6 Lyman-alpha-emitting Galaxies with CEERS JWST NIRCam Imaging*, 2024, Research Notes of the AAS, Volume 8, Issue 12, id.297
47. Cheng, Y., [...] **Pacucci F.**, et al., (24 authors), *Unveiling the Dark Side of UV/Optical Bright Galaxies: Optically Thick Dust Absorption*, 2025, ApJ, Volume 979, Issue 1, id.71, 19 pp.
48. Bisigello, L., [...] **Pacucci F.**, et al., (27 authors), *Spectroscopic confirmation of a dust-obscured, metal-rich dwarf galaxy at* $z \sim 5$, 2025, A&A, Volume 693, id.L18, 9 pp.
49. ⋆ La Torre V. & **Pacucci F.**, *HOLESOM: Constraining the Properties of Slowly-Accreting Massive Black Holes with Self-Organizing Maps*, 2025, ApJ, Volume 986, Number 1
50. Lambrides, E., [...] **Pacucci F.**, et al., (26 authors), *The case for super-Eddington accretion in JWST broad-line active galactic nuclei during the first billion years*, 2026, Nature Astronomy
51. Taylor, A. J., [...] **Pacucci F.**, et al., (51 authors), *Broad-Line AGN at* $3.5 < z < 6$*: The Black Hole Mass Function and a Connection with Little Red Dots*, 2025, ApJ, Volume 986, Issue 2, id.165, 23 pp.
52. Guo, Y., [...] **Pacucci F.**, et al., (29 authors), *The Abundance and Properties of Barred Galaxies out to* $z \sim 4$ *Using JWST CEERS Data*, 2025, ApJ, Volume 985, Issue 2, id.181, 23 pp.
53. ⋆ Guia C. F., **Pacucci F.**, Kocevski D., *Sizes and Stellar Masses of the Little Red Dots Imply Immense Stellar Densities*, 2024, Research Notes of the AAS, 8 207
54. **Pacucci F.**, Narayan R., *Mildly Super-Eddington Accretion Onto Slowly-Spinning Black Holes Explains the X-Ray Weakness of the Little Red Dots*, 2024, ApJ, Volume 976, Number 1
55. ⋆ Durodola E., **Pacucci F.**, Hickox R. C., *Exploring the AGN Fraction of a Sample of JWST's Little Red Dots at* $5 < z < 8$*: Overmassive Black Holes Are Strongly Favored*, 2025, ApJ, Volume 985, Issue 2, id.169, 11 pp.
56. Cappelluti N., **Pacucci F.**, Hasinger G., *Constraining Wind-Driven Accretion Onto Gaia BH3 With Chandra*, 2024, ApJ, Volume 973, Issue 2, id.75, 7 pp.
57. ⋆ Weller E. J., **Pacucci F.**, Ni Y., Hernquist L., Park M., *Discrepancies Between JWST Observations and Simulations of Quenched Massive Galaxies at* $z > 3$*: A Comparative Study With IllustrisTNG and ASTRID*, 2025, ApJ, Volume 979, Issue 2, id.181, 12 pp.
58. ⋆ Guia C. F. & **Pacucci F.**, *No Significant Redshift Evolution in the Intrinsic Scatter of the* $M_\bullet - M_\star$ *Relation for Overmassive Black Holes*, 2024, Research Notes of the AAS, 8 153
59. **Pacucci F.**, Loeb A., Juodžbalis I., *The Host Galaxy of a Dormant, Overmassive Black Hole at* $z = 6.7$ *May Be Restarting Star Formation*, 2024, Research Notes of the AAS, 8 105

60. Seille, L. M., [...] **Pacucci F.**, et al., (18 authors), *Physical properties of strong 1 < z < 3 Balmer and Paschen lines emitters observed with JWST*, 2024, A&A, Volume 689, id.A102, 18 pp.
61. Mezcua M., **Pacucci F.**, Suh H., Siudek M., Natarajan P., *Overmassive black holes at cosmic noon: linking the local and the high-redshift Universe*, 2024, ApJ Letters, Volume 966, Number 2
62. Kocevski, D. D., [...] **Pacucci F.**, et al., (57 authors), *The Rise of Faint, Red AGN at $z > 4$: A Sample of Little Red Dots in the JWST Extragalactic Legacy Fields*, 2025, ApJ, Volume 986, Issue 2, id.126, 30 pp.
63. Calabrò, A., [...] **Pacucci F.**, et al., (30 authors), *The evolution of the SFR and $\Sigma_{SFR}$ of galaxies in cosmic morning ($4 < z < 10$)*, 2024, A&A, Volume 690, id.A290, 18 pp.
64. **Pacucci F.** & Loeb A., *The Redshift Evolution of the $M_\bullet - M_\star$ Relation for JWST's Supermassive Black Holes at $z > 4$*, 2024, ApJ, Volume 964, Number 2
65. Cappelluti N., Foord A., Marchesi S., **Pacucci F.**, et al., (10 authors), *Surveying the onset and evolution of supermassive black holes at high-z with AXIS*, 2023, AXIS White Paper, published in Universe
66. **Pacucci F.**, Seepaul B., Ni Y., Cappelluti N., Foord A., *Detecting Wandering Intermediate-Mass Black Holes with AXIS in the Milky Way and Local Massive Galaxies*, 2023, AXIS White Paper, published in Universe
67. Foord A., Cappelluti N., Liu T., Volonteri M., Habouzit M., **Pacucci F.**, et al., (11 authors), *Tracking SMBH mergers from kpc to sub-pc scales with AXIS*, 2023, AXIS White Paper, published in Universe
68. Gallo E., Hodges-Kluck E., Treu T., Baldassare V., Seth A., Greene J., **Pacucci F.**, et al., (10 authors), *The black hole occupation fraction of local dwarf galaxies with AXIS*, 2023, AXIS White Paper, published in Universe
69. Reynolds C. S., [...] **Pacucci F.**, et al., (43 authors), *Overview of the Advanced X-ray Imaging Satellite (AXIS)*, 2023, Published in Proceedings of SPIE Optics & Photonics 2023, San Diego
70. Fragione G. & **Pacucci F.**, *Constraining the Properties of Black Hole Seeds from the Farthest Quasars*, 2023, ApJ Letters, Volume 958, Issue 2, id.L24, 6 pp.
71. **Pacucci F.**, Nguyen B., Carniani S., Maiolino R., Fan X., *JWST CEERS & JADES Active Galaxies at $z = 4 - 7$ Violate the Local $M_\bullet - M_\star$ Relation at $> 3\sigma$: Implications for Low-Mass Black Holes and Seeding Models*, 2023, ApJ Letters, Volume 957, Number 1
72. **Pacucci F.**, Ni Y., Loeb A., *Extreme Tidal Stripping May Explain the Overmassive Black Hole in Leo I: a Proof of Concept*, 2023, ApJ Letters, Volume 956, Issue 2, id.L37, 6 pp.
73. Nabizadeh A., Zackrisson E., **Pacucci F.**, et al., (34 authors), *A search for high-redshift direct collapse black hole candidates in the PEARLS north ecliptic pole field*, 2024, Astronomy & Astrophysics, Volume 683, id.A58, 9 pp.
74. Natarajan P., **Pacucci F.**, Ricarte A., Bogdan A., Goulding A. D., Cappelluti N. *First Detection of an Over-Massive Black Hole Galaxy: UHZ1 – Evidence for Heavy Black Hole Seeds From Direct Collapse?*, 2024, ApJ Letters, Volume 960, Issue 1, id.L1, 7 pp.
75. Han J. J., [...] **Pacucci F.**, et al., (209 authors), *NANCY: Next-generation All-sky Near-infrared Community surveY*, 2023, Bulletin of the AAS
76. ⋆ Weller E. J., **Pacucci F.**, Natarajan P., Di Matteo T. *Over-massive Central Black Holes in the Cosmological Simulations ASTRID and Illustris TNG50*, 2023, MNRAS, Volume 522, Issue 4, pp.4963-4971
77. Jin X., [...] **Pacucci F.**, et al., (13 authors), *(Nearly) Model-Independent Constraints on the Neutral Hydrogen Fraction in the Intergalactic Medium at z 5-7 Using Dark Pixel Fractions in Ly-alpha*

*and Ly-beta Forests*, 2023, ApJ, Volume 942, Number 59

78. **Pacucci F.** & Loeb A., *Accretion from Winds of Red Giant Branch Stars May Reveal the Supermassive Black Hole in Leo I*, 2022, ApJ Letters, Volume 940, Number 2
79. ⋆ Weller E. J., **Pacucci F.**, Ni Y., Chen N., Di Matteo T., Siwek, M., Hernquist L., *Orbital and Radiative Properties of Wandering Intermediate-Mass Black Holes in the ASTRID Simulation*, 2022, MNRAS, Volume 520, Issue 3, pp.3955-3963
80. Di Matteo T., Ni Y., Chen N., Croft R., Bird S., **Pacucci F.**, Ricarte A., Tremmel M., *A vast population of wandering and merging IMBHs at cosmic noon*, 2023, MNRAS, Volume 525, Issue 1, pp.1479-1497
81. ⋆ Lee R. Z., **Pacucci F.**, Natarajan P., Loeb A. *The Two z 13 Galaxy Candidates HD1 and HD2 Are Likely Not Lensed*, 2023, MNRAS, Volume 519, Issue 1, pp.585-593
82. ⋆ Seepaul B., **Pacucci F.**, Narayan R., *Detectability of Wandering Intermediate-Mass Black Holes in the Milky Way Galaxy from Radio to X-rays*, 2022, MNRAS, Volume 515, Issue 2, pp.2110-2120
83. Regan J. A, **Pacucci F.**, Bustamante-Rosell M. J., *Observational Signatures of Massive Black Hole Progenitor Pathways: is Leo I a Smoking Gun?*, 2023, MNRAS, Volume 518, Issue 4, pp.5997-6003
84. **Pacucci F.**, Foord A., Gordon L., Loeb A., *Lensing in the Darkness: A Bayesian Analysis of 22 Chandra Sources at z > 6 Shows No Evidence of Lensing*, 2022, MNRAS, Volume 514, Issue 2, pp.2855-2863
85. **Pacucci F.**, Dayal P., Harikane Y., Inoue A. K., Loeb A., *Are the Newly-Discovered z 13 Drop-out Sources Starburst Galaxies or Quasars?*, 2022, MNRAS Letters, Volume 514, Issue 1, pp.L6-L10
86. Koss M. J., [...] **Pacucci F.**, et al., (35 authors), *BASS. XXII. The BASS DR2 AGN Catalog and Data*, 2022, ApJ Supplement Series, Volume 261, Issue 1, id.2, 30 pp
87. Koss M. J., [...] **Pacucci F.**, et al., (27 authors), *BASS. XXI. The Data Release 2 Overview*, 2022, ApJ Supplement Series, Volume 261, Issue 1, id.1, 17 pp
88. LISA Cosmology WG, [...] **Pacucci F.**, et al., (180 authors), *Cosmology with the Laser Interferometer Space Antenna*, 2022, published in Living Reviews In Relativity, eprint arXiv:2204.05434
89. LISA Astrophysics WG, [...] **Pacucci F.**, et al., (155 authors), *Astrophysics with the Laser Interferometer Space Antenna*, 2022, published in Living Reviews In Relativity, eprint arXiv:2203.06016
90. ⋆ Weller E. J., **Pacucci F.**, Hernquist L., Bose S., *Dynamics of Intermediate-Mass Black Holes Wandering in the Milky Way Galaxy Using the Illustris TNG50 Simulation*, 2022, MNRAS, Volume 511, Issue 2, Pages 2229–2238
91. Harikane Y., [...] **Pacucci F.**, et al., (14 authors), *A Search for H-Dropout Lyman Break Galaxies at z 12-16*, 2022, ApJ, Volume 929, Issue 1, id.1, 15 pp
92. **Pacucci F.** & Loeb A., *The Search for the Farthest Quasar: Consequences for Black Hole Growth and Seed Models*, 2022, MNRAS, Volume 509, Issue 2
93. Chen H., Ricarte A., **Pacucci F.**, *Prospects to Explore High-redshift Black Hole Formation with Multi-band Gravitational Waves Observatories*, 2022, submitted to ApJ Letters, eprint arXiv:2202.04764
94. **Pacucci F.**, Mezcua M., Regan J. A., *The Active Fraction of Massive Black Holes in Dwarf Galaxies*, 2021, ApJ, Volume 920, Issue 2, id.134, 12 pp
95. Outmezguine N. J., **Pacucci F.**, Loeb A., *Detection Prospects of Local Super-Massive Black Holes Based on the Sloan-Digital Sky Survey*, 2021, submitted to MNRAS, eprint arXiv:2108.10123
96. Vagnozzi S., **Pacucci F.**, Loeb A., *Implications for the Hubble tension from the ages of the oldest astrophysical objects*, 2022, Journal of High Energy Astrophysics, Volume 36, p. 27-35
97. Sesana A., [...] **Pacucci F.**, et al., (34 authors), *Unveiling the Gravitational Universe at $\mu$-Hz Frequencies*, 2021, Experimental Astronomy, Volume 51, Issue 3, p.1333-1383

98. Unal C., **Pacucci F.**, Loeb A., *Properties of Ultralight Bosons from Heavy Quasar Spins via Superradiance*, 2021, JCAP, Volume 2021, Issue 05, id.007, 21 pp
99. Yang J., [...] **Pacucci F.**, et al., (12 authors), *Measurements of the z 6 Intergalactic Medium Optical Depth and Transmission Spikes Using a New z > 6.3 Quasar Sample*, 2020, ApJ, Volume 904, Issue 1, id.26, 28 pp
100. Nunes R. C. & **Pacucci F.**, *Effects of the Hubble Parameter on the Cosmic Growth of the First Quasars*, 2020, MNRAS, Volume 496, Issue 1, pp.888-893
101. Whalen D. J., Surace M., Bernhardt C., Zackrisson E., **Pacucci F.**, Ziegler B., Hirschmann M., *Finding the First Quasars at Birth*, 2020, ApJ Letters, Volume 897, Issue 1, Article L16
102. **Pacucci F.** & Loeb A., *Separating Accretion and Mergers in the Cosmic Growth of Black Holes with X-ray and Gravitational Wave Observations*, 2020, ApJ, Volume 895, Issue 2, id.95, 8 pp
103. **Pacucci F.** & Loeb A., *Reality or Mirage? Observational Test and Implications for the Claimed Extremely Magnified Quasar at* $z = 6.3$, 2020, ApJ, Volume 889, Issue 1, id.52, 6 pp
104. Baer R. E., [...] **Pacucci F.**, et al., (21 authors), *BAT AGN Spectroscopic Survey – XIII. The nature of the most luminous obscured AGN in the low-redshift universe*, 2019, MNRAS, Volume 489, Issue 3, p.3073-3092
105. Li Y., Cappelluti N., Hasinger G., Arendt R. G., Kashlinsky A., **Pacucci F.**, *Spectral Properties Of Populations Behind The Coherence In Spitzer Near-Infrared And Chandra X-Ray Backgrounds*, 2019, ApJ, Volume 883, Issue 1, article id. 64, 8 pp
106. Ricarte A., **Pacucci F.**, Natarajan P., Cappelluti N., *The Clustering of Undetected High-redshift Black Holes and Their Signatures in Cosmic Backgrounds*, 2019, MNRAS, Volume 489, Issue 1, p.1006-1022
107. Haiman Z., **Pacucci F.**, et al., *Electromagnetic Window into the Dawn of Black Holes*, Astro2020, US Decadal Survey White Paper
108. Wang L., **Pacucci F.**, et al., *JWST: Probing the Epoch of Reionization with a Wide Field Time-Domain Survey*, Astro2020, US Decadal Survey White Paper
109. Fan X., **Pacucci F.**, et al., *The First Luminous Quasars and Their Host Galaxies*, Astro2020, US Decadal Survey White Paper
110. **Pacucci F.**, Baldassare V., Cappelluti N., Fan X., Ferrara A., Haiman Z., Natarajan P., Ozel F., Schneider R., Tremblay G., Urry M., Valiante R., Vikhlinin A., Volonteri M., *Detecting the Birth of Supermassive Black Holes Formed from Heavy Seeds*, Astro2020, US Decadal Survey White Paper
111. Natarajan P., **Pacucci F.**, et al., *Disentangling nature from nurture: tracing the origin of seed black holes*, Astro2020, US Decadal Survey White Paper
112. Nguyen D., [...] **Pacucci F.**, et al., (20 authors), *Improved dynamical constraints on the masses of the central black holes in nearby low-mass early-type galactic nuclei and the first black hole determination for NGC 205*, 2019, ApJ, Volume 872, Issue 1, article id. 104, 26 pp
113. **Pacucci F.** & Loeb A., *Most Lensed Quasars at* $z > 6$ *are Missed by Current Surveys*, 2019, ApJ Letters, Volume 870, Issue 2, Article L12
114. Fan X., [...] **Pacucci F.**, et al., (20 authors), *The Discovery of a Gravitationally Lensed Quasar at* $z = 6.51$, 2019, ApJ Letters, Volume 870, Issue 2, article id. L11, 6 pp
115. Shankar F., [...] **Pacucci F.**, et al., (12 authors), *Black hole scaling relations of active and quiescent galaxies: Addressing selection effects and constraining virial factors*, 2019, MNRAS, Volume 485, Issue 1, p.1278-1292
116. Woods T. E., [...] **Pacucci F.**, et al., (33 authors), *Titans of the Early Universe: the Prato Statement on the Origin of the First Super-Massive Black Holes*, 2019, PASA review, Volume 36, id. e027

117. **Pacucci F.**, Loeb A., Mezcua M., Martin-Navarro I., *Glimmering in the Dark: Modeling the Low-mass End of the $M_\bullet - \sigma$ Relation and of the Quasar Luminosity Function*, 2018, ApJ Letters, Volume 864, Issue 1, article id. L6, 6 pp
118. **Pacucci F.**, Natarajan P., Volonteri M., Cappelluti N., Urry C. M., *Conditions for Optimal Growth of Black Hole Seeds*, 2017, ApJ Letters, Volume 850, Issue 2, article id. 42
119. Dayal P., Choudhury T., Bromm V., **Pacucci F.**, *Warm dark matter constraints from high-z Direct Collapse Black Holes using the JWST*, 2017, MNRAS, Volume 472, Issue 4, p. 4414-4421
120. Wang L., [...] **Pacucci F.** et al., (46 authors), *A First Transients Survey with JWST: the FLARE project*, 2017, arXiv:1710.07005
121. **Pacucci F.**, Loeb A., Salvadori S., *Gravitational Wave Sources from Pop III Stars are Preferentially Located within the Cores of their Host Galaxies*, 2017, MNRAS Letters, Volume 471, Issue 1, p. L72-L76
122. **Pacucci F.**, Ferrara A., Pallottini A., Gallerani S., *The nature of the Lyman Alpha Emitter CR7: a Persisting Puzzle*, 2017, MNRAS Letters, Volume 468, Issue 1, p. L77-L81
123. Gallerani S., Fan X., Maiolino R., **Pacucci F.**, *Physical properties of the first quasars*, 2017, PASA review, Volume 34, id. e022, 19 pp
124. Natarajan P., **Pacucci F.**, Ferrara A., Agarwal B., Zackrisson E., Ricarte A., Cappelluti N., *Unveiling the first black holes with JWST: multi-wavelength spectral predictions*, 2017, ApJ, Volume 838, Issue 2, article id. 117
125. Yue B., Ferrara A., **Pacucci F.**, Omukai K., *Triggering the Formation of Direct Collapse Black Holes by their Congeners*, 2017, ApJ, Volume 838, Issue 2, article id. 111
126. Cappelluti N., [...] **Pacucci F.**, et al., (18 authors), *The Chandra COSMOS Legacy Survey: Energy Spectrum of the Cosmic X-Ray Background and Constraints on Undetected Populations*, 2017, ApJ, Volume 837, Issue 1, article id. 19, 8 pp
127. Dayal P., Choudhury T., Bromm V., **Pacucci F.**, *Reionization and Galaxy Formation in Warm Dark Matter Cosmologies*, 2017, ApJ, Volume 836, Issue 1, article id. 16, 13 pp
128. **Pacucci F.**, Natarajan P., Ferrara A., *Feedback Limits to Maximum Seed Masses of Black Holes*, 2017, ApJ Letters, Volume 835, Issue 2, article id. L36, 5 pp
129. **Pacucci F.**, Ferrara A., Grazian A., Fiore F., Giallongo E., *First Identification of Direct Collapse Black Hole Candidates in the Early Universe in CANDELS/GOODS-S*, 2016, MNRAS, Volume 459, Issue 2, p.1432-1439
130. Volonteri M., Habouzit M., **Pacucci F.**, Tremmel M., *The Evolution of High-Redshift Massive Black Holes*, 2015, Galaxies at High Redshift and Their Evolution over Cosmic Time, IAUS No. 319, 2015
131. Pallottini A., Ferrara A., **Pacucci F.**, Gallerani S., Salvadori S., Schneider R., Schaerer D., Sobral D., Matthee J., *The Brightest Ly$\alpha$ Emitter: Pop III or Black Hole?*, 2015, MNRAS, Volume 453, Issue 3, p. 2465-2470
132. **Pacucci F.**, Ferrara A., Volonteri M., Dubus G., *Shining in the Dark: the Spectral Evolution of the First Black Holes*, 2015, MNRAS, Volume 454, Issue 4, p. 3771-3777
133. **Pacucci F.**, Volonteri M., Ferrara A., *The Growth Efficiency of High-Redshift Black Holes*, 2015, MNRAS, Volume 452, Issue 2, p. 1922-1933
134. **Pacucci F.**, Ferrara A., Marassi S., *Gravitational Waves from Direct Collapse Black Holes Formation*, 2015, MNRAS, Volume 449, Issue 1, p. 1076-1083
135. **Pacucci F.**, Ferrara A., *Simulating the Growth of Intermediate Mass Black Holes*, 2015, MNRAS, Volume 448, Issue 1, p. 104-118

136. Dayal P., Mesinger A., **Pacucci F.**, *Early Galaxy Formation in Warm Dark Matter Cosmologies*, 2015, ApJ, Volume 806, Issue 1, article id. 67, 10 pp
137. Dayal P., Ferrara A., Dunlop J., **Pacucci F.**, *Essential Physics of Early Galaxy Formation*, 2014, MNRAS, Volume 445, Issue 3, p. 2545-2557
138. **Pacucci F.**, Mesinger A., Mineo S., Ferrara A., *The X-ray Spectra of the First Galaxies: 21 cm Signatures*, 2014, MNRAS, Volume 443, Issue 1, p. 678-686
139. **Pacucci F.**, Mesinger A., Haiman Z., *Focusing on Warm Dark Matter with Lensed High-Redshift Galaxies*, 2013, MNRAS Letters, Volume 435, Issue 1, p. L53-L57
140. **Pacucci F.**, Ferrara A., D'Onghia E., *Detectability of Free Floating Planets in Open Clusters with the James Webb Space Telescope*, 2013, ApJ Letters, Volume 778, Issue 2, article id. L42