Fabio Pacucci

Curriculum Vitae & Publication List
Updated: November 14, 2024

Center for Astrophysics
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Academic Summary

Scientific Publications (as First Author)	164	(74)
Citations in ADS (Google Scholar)	4100+	(4400+)
H-index in ADS (Google Scholar)	35	(37)
m-index in ADS (Google Scholar)	3.2	(3.4)
Talks (Review, Invited, Contributed)	102	(10, 64, 28)
Student Direct Supervision (Graduate, Undergraduate)	30	(8, 22)
Directly Supervised Student-Led Papers	10	
Awards and Grants	$1.1M	
Press Releases (Major) — covering my first-author work	5	(2)
Public Outreach Talks — in person and virtual	100+	

Experience

since 2019 **Clay Fellow**,
Smithsonian Astrophysical Observatory, Cambridge (MA), USA.

since 2019 **BHI Fellow**,
Harvard University, 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 seeds — Galaxy formation and evolution — High-redshift Universe — Cosmology — Wandering black holes — Intermediate-mass black holes — Supermassive black holes — Quasars — Multi-wavelength surveys — X-ray, infrared, and radio data analysis — Accretion models — GR(R)MHD simulations — Cosmological simulations — N-body simulations — Machine learning techniques — Astro-statistics

Prizes & Awards

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
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): 164
Number of first-author scientific publications: 74
Number of refereed papers: 94
Number of directly supervised student-led scientific publications: 10
Number of citations (Google Scholar): 4400+
H-index (Google Scholar): 37
m-index (Google Scholar): 3.4
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 (22)

since 2024 Astrid Liu (HCRP program winner), Harvard University
since 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, A&A
- Peer Reviewer: Chandra TAC
- Peer Reviewer: JWST TAC
- Peer Reviewer: NSF Division of Astronomical Sciences
- Peer Reviewer: NASA Astrophysics Division FINESST (various years)
- Peer Reviewer: AAS Chambliss award (various years)
- Peer Reviewer: NASA NICER GO (various years)

Service & Memberships

International Community Level

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 2024 Full Member of International Astronomical Union

since 2023 Member of the JWST/CEERS Collaboration

since 2023 Member of the 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 Full Member of the American Astronomical Society

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 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 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

April 2025	Colloquium, University of Texas at San Antonio, San Antonio (TX)
April 2025	Galaxy Lunch Talk, Yale University, New Haven (CT)
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 World 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

January 2025 Talk, AAS 245, National Harbor (MD), USA

December 2024 Talk, “Widespread Super-Eddington Accretion in JWST’s Little Red Dots Explains the X-ray Weakness Problem", 25 Years of Science with Chandra, Boston (MA), USA

November 2024 Talk, “Widespread Super-Eddington Accretion in JWST’s Little Red Dots Explains the X-ray Weakness Problem: Prospects for AXIS", JSI Meeting, Baltimore (MD), USA

November 2024 Talk, “Detecting Local Quiescent Black Holes with the Habitable World Observatory", 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 rose to become 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 activities** for the Black Hole Initiative at Harvard University. I manage social media pages and organize special outreach events (e.g., the Quantum Supremacy public lecture by Dr. Scott Aaronson in 2020).

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 ~ 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.

January 2024 **Extensive coverage of the discovery that black holes detected by JWST in the faraway Universe are significantly overmassive**. Among many 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 many 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 ($\star$) indicates directly supervised student-led papers.

1. Cheng, Y., [...] **Pacucci F.**, et al., (24 authors) *Unveiling the Dark Side of UV/Optical Bright Galaxies: Optically Thick Dust Absorption*, 2024, submitted to ApJ
2. Bisigello, L., [...] **Pacucci F.**, et al., (27 authors) *Spectroscopic confirmation of a dust-obscured, metal-rich dwarf galaxy at* $z \sim 5$, 2024, submitted to A&A
3. $\star$ La Torre V. & **Pacucci F.**, *HOLESOM: Constraining the Properties of Slowly-Accreting Massive Black Holes with Self-Organizing Maps*, 2024, submitted to ApJ
4. Lambrides, E., [...] **Pacucci F.**, et al., (26 authors) *The Case For Super-Eddington Accretion: Connecting Weak X-ray and UV Line Emission During the First Gyr of Cosmic Time*, 2024, submitted to Nature Astronomy
5. 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*, 2024, submitted to ApJ
6. Guo, Y., [...] **Pacucci F.**, et al., (29 authors) *The Abundance and Properties of Barred Galaxies out to* $z \sim 4$ *Using JWST CEERS Data*, 2024, submitted to ApJ
7. $\star$ Guia C. F., **Pacucci F.**, Kocevski D., *Sizes and Stellar Masses of the Little Red Dots Imply Immense Stellar Densities*, 2024, Res. Notes AAS, 8 207
8. **Pacucci F.**, Narayan R., *Mildly Super-Eddington Accretion Onto Slowly-Spinning Black Holes Explains the X-Ray Weakness of the Little Red Dots*, accepted for publication on ApJ
9. $\star$ 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*, submitted to ApJ
10. Cappelluti N., **Pacucci F.**, Hasinger G., *Constraining Wind-Driven Accretion Onto Gaia BH3 With Chandra*, submitted to ApJ Letters
11. $\star$ 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*, 2024, submitted to ApJ
12. $\star$ 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, Res. Notes AAS, 8 153
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