

Fabio Pacucci

Curriculum Vitae & Publication List
Updated: December 12, 2024

Center for Astrophysics
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Academic Summary

Scientific Publications (as First Author)	167	(74)
Citations in ADS (Google Scholar)	4200+	(4500+)
H-index in ADS (Google Scholar)	36	(37)
m-index in ADS (Google Scholar)	3.3	(3.4)
Talks (Review, Invited, Contributed)	103	(10, 65, 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 seeding – 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 – Accretion – GR(R)MHD simulations – Cosmological simulations – N-body simulations – Machine learning – 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): 167

Number of first-author scientific publications: 74

Number of refereed papers: 97

Number of directly supervised student-led scientific publications: 10

Number of citations (Google Scholar): 4500+

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, Bancker 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 (multiple years)
- Peer Reviewer: AAS Chambliss award (multiple years)
- Peer Reviewer: NASA NICER GO (multiple 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 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 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 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, Seston, 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 Talk, Sexten Winter Workshop: ‘The Growth of Galaxies in the Early Universe – X: the Physics of Early Galaxies’, Sexten, Italy
- 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, Cambridge (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, Cambridge (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 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 ~ 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 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. Llerena, D., [...] **Pacucci F.**, et al., (29 authors) *The ionizing photon production efficiency of star-forming galaxies at $z \sim 4 - 10$* , 2024, submitted to A&A
2. 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*, 2024, submitted to A&A
3. Rahman, T., [...] **Pacucci F.**, et al., (7 authors) *Spatially Resolved Stellar Populations of $z = 3 - 6$ Lyman-alpha-emitting Galaxies with CEERS JWST NIRCIm Imaging*, 2024, submitted to Research Notes of the AAS
4. 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
5. 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
6. * La Torre V. & **Pacucci F.**, *HOLESON: Constraining the Properties of Slowly-Accreting Massive Black Holes with Self-Organizing Maps*, 2024, submitted to ApJ
7. 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
8. 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
9. 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
10. * 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
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