europass Curriculum vitae

PERSONAL INFORMATION

Francesco Ubertosi

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Date of birth 28 January 1996 | Nationality Italian

WORK EXPERIENCE

November 2023 – Present — Postdoctoral Researcher

Institution: Department of Physics and Astronomy – University of Bologna

Project: AGN-sCAN: zooming-in on the AGN-galaxy connection since the cosmic noon

1 May 2025 – 30 June 2025 — Visiting Researcher

Project Title: "High resolution study of AGN feeding and feedback in galaxy groups and clusters"

Institution: Harvard & Smithsonian Center for Astrophysics, Cambridge (MA)

Supervisor: Dr. Ewan O'Sullivan, Dr. Gerrit Schellenberger

8 Jan 2024 – 23 Feb 2024 — Visiting Researcher

Project Title: "Disrupting the AGN feedback cycle in galaxy groups and clusters"

Institution: Harvard & Smithsonian Center for Astrophysics, Cambridge (MA)

Supervisor: Dr. Ewan O'Sullivan, Dr. Gerrit Schellenberger

15 Aug 2022 – 15 Dec 2022 — Visiting Researcher

Project Title: "Jet reorientation events in the central galaxies of clusters and groups: insights from *Chandra* and VLBA data"

Institution: Harvard & Smithsonian Center for Astrophysics, Cambridge (MA)

Supervisor: Dr. Ewan O'Sullivan, Dr. Gerrit Schellenberger

EDUCATION AND TRAINING

31 Oct 2020 – 31 Oct 2023 — PhD in Astrophysics

Thesis Title: "A comprehensive study of the AGN feedback cycle in galaxy clusters from high resolution X-ray and radio observations"

Institution: Department of Physics and Astronomy – University of Bologna, Italy (Defense: April 9, 2024)

Supervisor: Prof. Myriam Gitti, Prof. Fabrizio Brighenti

17 Sep 2018 – 9 Oct 2020 — Master's degree in Astrophysics and Cosmology (LM – 58)

Final grade: Magna cum laude

Institution: Department of Physics and Astronomy – University of Bologna, Italy

Thesis Title: "The first *Chandra* study of Abell 795: a FR0 radio galaxy at the center of a sloshing cluster"

Thesis Supervisor: Prof. Myriam Gitti, Prof. Fabrizio Brighenti, Dr. Eleonora Torresi, Dr. Paola Grandi

21 Sep 2015 – 19 Jul 2018 — Bachelor's degree in Astronomy (L – 30)

Final grade: Magna cum laude

Institution: Department of Physics and Astronomy – University of Bologna, Italy

Thesis Title: "Scattering processes in Astrophysics - the quasar PKS 0637-752"

Thesis Supervisor: Prof. Daniele Dallacasa

TEACHING ACTIVITIES

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Laboratory Tutor	AY 2025/2026: Master's course on VLA data reduction and analysis - University of Bologna.
	School of Radioastronomy (Catania, 29 Sep. - 3 Oct. 2025), VLBI data reduction and analysis.
	AY 2024/2025: Master's course on ALMA data reduction and analysis - University of Bologna.
Co-supervision of Master's degree students	L. Rosignoli, Thesis title: *Detailed analysis of a deep Chandra observation of the galaxy cluster Abell 2495* - University of Bologna, AY 2021/2022 (supervisor: Prof. M. Gitti).
	I. Fornasiero, Thesis title: *Investigating AGN feedback in Hα-luminous galaxy clusters: a Chandra X-ray Analysis of Abell 2009*- University of Bologna, 2023/2024 (supervisor: Prof. M. Gitti).
	N. Rotella, Thesis title: *A combined JVLA, GMRT and XMM study of Abell 795: a candidate radio phoenix?*- University of Bologna, AY 2023/2024 (supervisor: Prof. M. Gitti).
	A. Barba, Thesis title: *New JVLA observations of a shocked radio mini-halo* - University of Bologna, in progress (supervisor: Prof. A. Bonafede).
Co-supervision of Bachelor's degree students	A. Coppola, Thesis title: *Synchrotron emission and application to a radio galaxy in the cluster RBS 797* - University of Bologna, AY 2024/2025 (supervisor: Prof. M. Gitti).

ATTENDANCE AT NATIONAL AND INTERNATIONAL MEETINGS

Conferences and Workshops

- 24-28 November 2025: The Fifth National Workshop on the SKA Project , Bologna (Italy), Contributed Talk on radio AGN jet feedback in groups and clusters.
- 6-10 October 2025: MMC 2025, Olbia (Italy), Contributed Talk on multiphase gas and supermassive black hole activation.
- 14-18 June 2025: Jets on the rocks, Sesto (BZ, Italy), **Invited Review Talk** on jet feedback and duty cycle.
- 23 April 2025: AXIS Online Workshop, Contributed Talk.
- 04 April 2025: ALMA proposal preparation day, Bologna (IT), **Invited Talk** on joint ALMA/VLA proposals.
- 03 - 06 December 2024: 25 Years of Chandra Science, Boston (US), Contributed Talk.
- 23 - 27 September 2024: AGN XV: from the present-day Universe to the Dark Ages, Padova (Italy), Contributed Talk.
- 10 - 13 September 2024: CLUSTER4: A view from Italy on galaxy clusters & groups in the 21st century, Trieste (Italy), Contributed Talk.
- 2 - 6 September 2024: AGN feedback and star formation across cosmic scales and time, Sirolo (AN, Italy), Flash Talk.
- 1 - 5 July 2024: Galaxy groups in the era of eROSITA and Euclid, Sesto (BZ, Italy), Contributed Talk.
- 6 - 10 May 2024: SPARCS XII: Pushing towards the final frontier, Bologna (BO, Italy), Contributed Talk.
- 24 - 29 Sep 2023: A journey through galactic environments, Porto Ercole (GR, Italy), Contributed Talk.
- 10 - 15 Sep 2023: AGN on the Beach, Tropea (VV, Italy), Contributed Talk.
- 22 - 25 May 2023: High-resolution X-ray spectroscopy school, Alicante (Spain).
- 1 - 2 March 2023: Radio galaxies (Bologna & Friends), Bologna (BO, Italy), **Invited Talk**.
- 16 - 24 Jul 2022: 44th COSPAR Scientific Assembly, Athens (Greece), Contributed Talk.
- 20 - 24 June 2022: Sexten Center, Multiphase AGN feeding & feedback II, Sesto (BZ, Italy), **Invited Talk** and Poster.
- 23 Nov - 1 Dec 2021: Canary Islands XXXII Winter School of Astrophysics Tenerife (Spain), Poster.
- 17 - 26 Aug 2021: Chandra Data Workshop, online, Flash Talk.
- 14 - 18 Jun 2021: Extragalactic jets on all scales, online, Poster.
- 10 - 14 May 2021: 6th Workshop on CSS and GPS radio sources, online, Contributed Talk.
- 8 - 11 Mar 2021: A new window on the radio emission from galaxies, clusters and cosmic web, online, Flash Talk.

Seminar Talks

I have shared my scientific results by giving multiple seminar talks at the IRA-INAF, OAS-INAF, University of Bologna, Center for Astrophysics (CfA), U.S. Naval Research Laboratory, and Heidelberg MPIA research institutes.

ASSIGNED POSITIONS

Referee activity: Nature Astronomy, MNRAS, A&A, ApJ, Astrophysics and Space Science, MemSAIt, New Astronomy.

Collaborations and Working groups:
- Member of the Athena/NewAthena Science Working Group 1.3 “AGN feedback in galaxy clusters and groups” (January 2023 - Current).
- Member of the AXIS Science Working Group “Galaxy evolution: feedback in galaxies and clusters” (April 2022 - Current).
- Member of the SKA Working Groups “SKA-VLBI” and “Extragalactic Continuum” (September 2024 - Current).
- Member of the Cosmic Evolution Survey “COSMOS” (November 2024 – Current).

COMPETITIVE TELESCOPE TIME ALLOCATIONS AS PI

Facility: XRISM (total time approved: 200 ks)
Proposal title: “A Resolve(d) view of the cocoon shock around the iconic Hercules A”
Time awarded: 200 ks in Cycle 2.

Facility: MeerKAT (total time approved: 49 hours)
Proposal title: “MIMIC: MIni-halos in MIni Clusters - a MeerKAT Survey”
Time awarded: 40 hours in 2026.
Proposal title: “Searching for a radio minihalo in the vigorously sloshing, but low-mass, galaxy cluster A496”
Time awarded: 9 hours in 2025.

Facility: Chandra (total time approved: 1.02 Ms)
Proposal title: “Save the best for last: a deep Chandra view of a rare pre-feedback galaxy cluster”
Time awarded: 240 ks in Cycle 27.

Proposal title: “Dissecting the physics of the most pristine cool core cluster”
Time awarded: 306 ks in Cycle 26, see Abstract.

Proposal title: “A pilot quest for feedback from a FR0 radio galaxy”
Time awarded: 270 ks in Cycle 26, see Abstract.

Proposal title: “A pilot study on the onset of AGN feedback in cool cores hosting young central radio galaxies”
Time awarded: 200 ks in Cycle 25, see Abstract.

Facility: VLBA (total time approved: 102 hours)
Proposal title: “A VLBA study of the closest binary SMBHs”
Time awarded: 9 hours in semester 2026A

Proposal title: “Confirming the nature of the most compact binary AGN beyond the local Universe”
Time awarded: 22 hours in semester 2025A, see Abstract.

Proposal title: “Is the AGN in NGC5044 alive and kicking? A kinematic-polarimetric VLBA study”
Time awarded: 14 hours in semester 2024B, see Abstract.

Proposal title: “AGN feeding at the parsec scale: tracking HI absorption in NGC5044 with the VLBA”
Time awarded: 18 hours in semester 2024B, see Abstract.

Proposal title: “A JVLA and VLBA study of feedback in a rapidly cooling, yet perturbed cluster”
Time awarded: 8 hours in semester 2024B, see Abstract.

Proposal title "Dramatic misalignment of jets and X-ray cavities in galaxy clusters and groups"
Time awarded 30 hours in semester 2023A, see Abstract.

Facility JVLA (total time approved: 46 hours)
Proposal title "Measuring the mass ratio of the binary SMBHs in 4C+37.11 from jet precession"
Time awarded 6.5 hours in semester 2025B, see Abstract.

Proposal title "Searching for a minihalo in the vigorously sloshing, but low mass, cluster A496"
Time awarded 7 hours in semester 2025A, see Abstract.

Proposal title "Measuring the mass ratio of the binary SMBHs in 4C+37.11 from jet precession"
Time awarded 1.5 hours in semester 2025A, see Abstract.

Proposal title "A JVLA and VLBA study of feedback in a rapidly cooling, yet perturbed cluster"
Time awarded 10 hours in semester 2024B, see Abstract.

Proposal title "The JVLA view of a shocked radio mini-halo"
Time awarded 6 hours in semester 2023B, see Abstract.

Proposal title "A quest for feedback from a cluster central FR0 radio galaxy"
Time awarded 7 hours in semester 2023A, see Abstract.

Proposal title "Mini-halo or radio phoenix? The diffuse source in the galaxy cluster Abell 795"
Time awarded 1 hour in semester 2022B, see Abstract.

Proposal title "Are the perpendicular outbursts in RBS 797 hiding a dual AGN? A new JVLA study"
Time awarded 7.2 hours in semester 2022A, see Abstract.

Facility uGMRT (total time approved: 8 hours)
Proposal title "Mini-halos in mini-clusters: a uGMRT view of ZwCl 235"
Time awarded 8 hours in Cycle 48.

Facility e-MERLIN (total time approved: 12 hours)
Proposal title "An e-MERLIN view of the misaligned jet outbursts in NGC 5044"
Time awarded 12 hours in Cycle 20

Facility EVN (total time approved: 12 hours)
Proposal title "An EVN study of the closest binary SMBHs"
Time awarded 12 hours in semester 2025C

Facility VLT/MUSE (total time approved: 1 hour)
Proposal title "The multi-component gaseous medium of ZwCl235: what is the origin of the warm gas?"
Time awarded 1 hour in 2025.

COMPETITIVE TELESCOPE TIME ALLOCATIONS AS CO-I

Facility MeerKAT
Proposal title "Magnetic field and spectral ageing in the X-shaped radio galaxy in Abell 3670", PI: L. Bruno
Time awarded 5 hours in 2026.

Proposal title "A MeerKAT view of the archetypal ultra-steep spectrum radio halo in A521", PI: K. Kolokythas

Time awarded 16.5 hours in 2025.

Facility **Chandra**

Proposal title "Breaking up a cooling flow: is ICM cooling still fuelling the AGN in A1668?", PI: M. Gitti

Time awarded 188 ks in Cycle 27.

Proposal title "Galaxy clusters with misaligned jets and cavities", PI: G. Schellenberger

Time awarded Archival proposal in Cycle 25.

Facility **ALMA**

Proposal title "A study of two cool-core clusters with similar ICM properties but vastly different feedback energy and multi-phase gas", PI: M. Gitti

Time awarded 9.2 hours in cycle 11.

Proposal title "The complex feeding-feedback cycle of Abell 2495: where is the molecular gas?", PI: M. Gitti

Time awarded 9.5 hours in cycle 10.

Facility **GMRT**

Proposal title "Understanding the impact of AGN feedback in the hot-core group NGC 777", PI: E. O'Sullivan

Time awarded 8 hours in cycle 44.

Facility **JVLA**

Proposal title "Studying the youngest phase of AGN activity in the cluster MS 0735.6+7421", PI: N. Biava

Time awarded 9 hours in semester 2024B.

Facility **XMM-Newton**

Proposal title "Decoding AGN Winds and Collimated Radio Emission in HE 0412-0803", PI: M. Singha

Time awarded 110 ks in Cycle AO-24.

Proposal title "Giant Radio Galaxies: Testing the Extremes of AGN Feedback", PI: E. O'Sullivan

Time awarded 187 ks in Cycle AO-22.

Facility **VLBA**

Proposal title "Confirming the radio nature of the first high-z wandering AGN candidate", PI: I. Delvecchio

Time awarded 15 hours in semester 2026A.

Proposal title "Confirming the AGN nature of the first radio-detected "Little Red Dot"", PI: I. Delvecchio

Time awarded 20 hours in semester 2025B.

Proposal title "Deciphering the puzzling nature of a sub-kpc dual AGN candidate", PI: I. Delvecchio

Time awarded 6 hours in semester 2025A.

Facility **JWST**

Proposal title "Understanding the nature of the first wandering AGN candidate in a clump", PI: I. Delvecchio

Time awarded 8.8 hours in Cycle 4.

Facility **e-MERLIN**

Proposal title "The e-MERLIN view of a unique candidate direct collapse black hole at z=1.14 ", PI: I. Delvecchio

Time awarded 12 hours in Cycle 21.

GRANTS & AWARDS

Date November 2025
Type: Grant PI of 1 Chandra proposal with grant funding (cost PI: E. O'Sullivan).

Date January 2025
Type: Grant co-I of 1 INAF Fundamental Research Grant (PI: I. Delvecchio, 48 k€).

Date November 2024
Type: Grant PI of 1 Chandra proposal with grant funding (cost PI: E. O'Sullivan).

Date November 2023
Type: Grant PI of 1 Chandra proposal with grant funding (cost PI: E. O'Sullivan).

Date August 2022
Type: Award Recipient of the PhD mobility grant *Marco Polo* (4.0 k€) from the Alma Mater Studiorum Università di Bologna.

Date November 2021
Type: Award Best 12 Master's degree thesis in 2019 – 2021 (1.0 k€) at the Department of Physics and Astronomy from the Alma Mater Studiorum Università di Bologna.

REFEREED PUBLICATIONS

[1] **F. Ubertosi**, F. Brighenti, E. O'Sullivan, G. Schellenberger, M. Gitti, S. Giacintucci, P. Temi, L. P. David, J. Vrtilek, T. Venturi, E. Liuzzo, M. Massardi, and K. Rajpurohit. "Multiphase Gas Offsets in the Atmospheres of Central Galaxies and Their Consequences for SMBH Activation. I. The Hot and Warm Ionized Gas Phases". In: *The Astrophysical Journal* 994.2, 247 (Dec. 2025), p. 247. arXiv: 2510.01323 [astro-ph.GA].

[2] **F. Ubertosi**, M. Gitti, P. Temi, E. O'Sullivan, V. Olivares, G. Schellenberger, F. Brighenti, and M. Giroletti. "JVLA and VLBA Study of the Merging Cool Core CHIPS 1911+4455 at z $\sim$ 0.5 Radio Emission from an Infant Active Galactic Nucleus and from a Rapidly Star-forming Brightest Cluster Galaxy". In: *The Astrophysical Journal* 989.1, 128 (Aug. 2025), p. 128. arXiv: 2508.04778 [astro-ph.GA].

[3] **F. Ubertosi**, Y. Gong, P. Nulsen, J. P. Leahy, M. Gitti, B. R. McNamara, M. Gaspari, M. Singha, C. O'Dea, and S. Baum. "Cocoon shock, X-ray cavities, and extended inverse Compton emission in Hercules A: Clues from Chandra observations". In: *Astronomy & Astrophysics* 693, A171 (Jan. 2025), A171. arXiv: 2411.12804 [astro-ph.HE].

[4] **F. Ubertosi**, S. Giacintucci, T. Clarke, M. Markevitch, T. Venturi, E. O'Sullivan, and M. Gitti. "Multi-epoch jet outbursts in Abell 496: Synchrotron ageing and buoyant X-ray cavities draped by warm gas filaments". In: *Astronomy & Astrophysics* 691, A294 (Nov. 2024), A294. arXiv: 2409.15440 [astro-ph.GA].

[5] **F. Ubertosi**, M. Giroletti, M. Gitti, N. Biava, E. De Rubeis, A. Bonafede, L. Feretti, M. Bondi, L. Bruno, E. Liuzzo, A. Ignesti, and G. Brunetti. "A JVLA, LOFAR, e-Merlin, VLBA, and EVN study of RBS 797: can binary supermassive black holes explain the outburst history of the central radio galaxy?" In: *Astronomy & Astrophysics* 688, A86 (Aug. 2024), A86. arXiv: 2405.08079 [astro-ph.GA].

[6] **F. Ubertosi**, G. Schellenberger, E. O'Sullivan, J. Vrtilek, S. Giacintucci, L. P. David, W. Forman, M. Gitti, T. Venturi, C. Jones, and F. Brighenti. "Jet Reorientation in Central Galaxies of Clusters and Groups: Insights from VLBA and Chandra Data". In: *The Astrophysical Journal* 961.1, 134 (Jan. 2024), p. 134. arXiv: 2312.02283 [astro-ph.GA].

[7] **F. Ubertosi**, M. Gitti, F. Brighenti, V. Olivares, E. O'Sullivan, and G. Schellenberger. "Waking the monster: The onset of AGN feedback in galaxy clusters hosting young central radio galaxies". In: *Astronomy & Astrophysics* 673, A52 (May 2023), A52. arXiv: 2303.04821 [astro-ph.GA].

[8] **F. Ubertosi**, M. Gitti, F. Brighenti, M. McDonald, P. Nulsen, M. Donahue, G. Brunetti, S. Randall, M. Gaspari, S. Ettori, M. Calzadilla, A. Ignesti, L. Feretti, and E. L. Blanton. "Multiple Shock Fronts in RBS 797: The Chandra Window on Shock Heating in Galaxy Clusters". In: *The Astrophysical Journal* 944.2, 216 (Feb. 2023), p. 216. arXiv: 2212.10581 [astro-ph.GA].

[9] **F. Ubertosi**, M. Gitti, and F. Brighenti. "Chasing ICM cooling and AGN feedback from the macro to the meso scales in the galaxy cluster ZwCl 235". In: *Astronomy & Astrophysics* 670, A23 (Feb. 2023), A23. arXiv: 2211.09141 [astro-ph.GA].

[10] **F. Ubertosi**, M. Gitti, F. Brighenti, G. Brunetti, M. McDonald, P. Nulsen, B. McNamara, S. Randall, W. Forman, M. Donahue, A. Ignesti, M. Gaspari, S. Ettori, L. Feretti, E. L. Blanton, C. Jones, and M. Calzadilla. "The Deepest Chandra View of RBS 797: Evidence for Two Pairs of Equidistant X-ray Cavities". In: *The Astrophysical Journal Letters* 923.2, L25 (Dec. 2021), p. L25. arXiv: 2111.03679 [astro-ph.GA].

[11] **F. Ubertosi**, M. Gitti, E. Torresi, F. Brighenti, and P. Grandi. "A Chandra study of Abell 795 - a sloshing cluster with an FR0 radio galaxy at its centre". In: *Monthly Notices of the Royal Astronomical Society* 503.3 (May 2021), pp. 4627–4645. arXiv: 2103.08682 [astro-ph.GA].

[12] M. Prunier, **F. Ubertosi**, J. Hlavacek-Larrondo, and A. Pillepich. "X-ray shocks in the cool cores of galaxy clusters: insights from TNG-Cluster". In: *Monthly Notices of the Royal Astronomical Society* 544.4 (Dec. 2025), pp. 4188–4207. arXiv: 2509.25314 [astro-ph.GA].

[13] Michael Koss et al. "The Advanced X-ray Imaging Satellite Community Science Book". In: *arXiv e-prints*, arXiv:2511.00253 (Oct. 2025), arXiv:2511.00253. arXiv: 2511.00253 [astro-ph.HE].

[14] G. Peluso, I. Delvecchio, J. Radcliffe, E. Daddi, R. Deane, M. Jarvis, G. Zamorani, I. Prandoni, M. Gitti, C. Spingola, **F. Ubertosi**, M. Sargent, V. Smolcic, W. Wang, J. Delhaize, S. Jin, and A. Deller. "Investigating the influence of radio-faint AGN activity on the infrared-radio correlation of massive galaxies". In: *arXiv e-prints*, arXiv:2509.17536 (Sept. 2025), arXiv:2509.17536. arXiv: 2509.17536 [astro-ph.GA].

[15] L. White, M. McDonald, **F. Ubertosi**, M. Gaspari, J. Hlavacek-Larrondo, H. Russell, and T. Somboonpanyakul. "The Onset of Feedback in A1885: Evidence for Large-scale Quenching Despite a Young Central Active Galactic Nucleus". In: *The Astrophysical Journal* 988.1, 24 (July 2025), p. 24. arXiv: 2506.03277 [astro-ph.CO].

[16] N. Rotella, **F. Ubertosi**, M. Gitti, M. Rossetti, F. Gastaldello, G. W. Pratt, F. Brighenti, E. Torresi, and P. Grandi. "A JVLA, GMRT, and XMM study of Abell 795: Large-scale sloshing and a candidate radio phoenix". In: *Astronomy & Astrophysics* 697, A232 (May 2025), A232. arXiv: 2504.16178 [astro-ph.GA].

[17] M. Gitti, A. Bonafede, F. Brighenti, **F. Ubertosi**, M. Balboni, F. Gastaldello, A. Botteon, W. Forman, R. J. van Weeren, M. Brüggen, K. Rajpurohit, and C. Jones. "Deep Chandra observations of PLCKG287.0+32.9: A clear detection of a shock front in a heated former cool core". In: *Astronomy & Astrophysics* 697, A72 (May 2025), A72. arXiv: 2503.13735 [astro-ph.CO].

[18] I. Fornasiero, **F. Ubertosi**, and M. Gitti. "Investigating AGN feedback in Hα-luminous galaxy clusters: First Chandra X-ray analysis of Abell 2009". In: *Astronomy & Astrophysics* 695, A265 (Mar. 2025), A265. arXiv: 2503.07781 [astro-ph.GA].

[19] G. V. Pignataro, A. Bonafede, G. Bernardi, M. Balboni, F. Vazza, R. J. van Weeren, **F. Ubertosi**, R. Cassano, G. Brunetti, A. Botteon, T. Venturi, H. Akamatsu, A. Drabent, and M. Hoeft. "Mind the gap between A2061 and A2067: Unveiling new diffuse, large-scale radio emission". In: *Astronomy & Astrophysics* 691, A99 (Nov. 2024), A99. arXiv: 2409.15412 [astro-ph.CO].

[20] L. Bruno, M. Brienza, A. Zanichelli, M. Gitti, **F. Ubertosi**, K. Rajpurohit, T. Venturi, and D. Dallacasa. "From 100 MHz to 10 GHz: Unveiling the spectral evolution of the X-shaped radio galaxy in Abell 3670". In: *Astronomy & Astrophysics* 690, A160 (Oct. 2024), A160. arXiv: 2408.11377 [astro-ph.GA].

[21] G. Schellenberger, E. O'Sullivan, L. P. David, J. Vrtilek, C. Romero, G. Petitpas, W. Forman, S. Giacintucci, M. Gurwell, C. Jones, K. Rajpurohit, **F. Ubertosi**, and T. Venturi. "Probing the High-frequency Variability of NGC 5044: The Key to Active Galactic Nucleus Feedback". In: *The Astrophysical Journal* 976.2, 246 (Dec. 2024), p. 246. arXiv: 2409.06039 [astro-ph.GA].

[22] E. O'Sullivan, K. Rajpurohit, G. Schellenberger, J. Vrtilek, L. P. David, A. Babul, Va. Olivares, **F. Ubertosi**, K. Kolokythas, I. Babyk, and I. Loubser. "A Hot Core in the Group-dominant Elliptical Galaxy NGC 777". In: *The Astrophysical Journal* 970.1, 65 (July 2024), p. 65. arXiv: 2405.13667 [astro-ph.GA].

[23] L. Rosignoli, **F. Ubertosi**, M. Gitti, F. Brighenti, T. Pasini, E. O'Sullivan, F. Gastaldello, M. Gaspari, and P. Temi. "Deep Chandra Observations of A2495: A Possible Sloshing-regulated Feedback Cycle in a Triple-offset Galaxy Cluster". In: *The Astrophysical Journal* 963.1, 8 (Mar. 2024), p. 8. arXiv: 2312.12855 [astro-ph.GA].

[24] A. Bonafede, M. Gitti, N. La Bella, N. Biava, **F. Ubertosi**, G. Brunetti, G. Lusetti, M. Brienza, C. J. Riseley, C. Stuardi, A. Botteon, A. Ignesti, H. Röttgering, and R. J. van Weeren. "Shock imprints on the radio mini halo in RBS 797". In: *Astronomy & Astrophysics* 680, A5 (Dec. 2023), A5. arXiv: 2310.07773 [astro-ph.CO].

[25] M. S. Calzadilla, M. McDonald, M. Donahue, B. R. McNamara, K. Fogarty, M. Gaspari, M. Gitti, H. R. Russell, G. R. Tremblay, G. M. Voit, and **F. Ubertosi**. "Testing the Limits of AGN Feedback and the Onset of Thermal Instability in the Most Rapidly Star-forming Brightest Cluster Galaxies". In: *The Astrophysical Journal* 940.2, 140 (Dec. 2022), p. 140. arXiv: 2207.01624 [astro-ph.GA].

CONFERENCE PROCEEDINGS

F. Ubertosi, M. Gitti, E. Torresi, F. Brighenti, and P. Grandi. "The central FR0 in the sloshing cluster Abell 795: Indications of mechanical feedback from Chandra data". In: *Astronomische Nachrichten* 342.1207 (Nov. 2021), pp. 1207–1211. arXiv: 2111.02160 [astro-ph.GA].

PERSONAL SKILLS

Computer skills

- Reduction and analysis of astronomical data from the following international observing facilities: JVLA, EVN, VLBA and *Chandra* data (proficient knowledge), LOFAR, e-MERLIN, uGMRT, MeerKAT, ALMA (advanced knowledge), *XMM-Newton* and VLT-MUSE (intermediate knowledge).
- Programming skills: Python (advanced), Fortran90 (basic/intermediate).
- Operating systems: macOS, GNU/Linux

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Social and Communication skills

– Team work: During my PhD and Postdoc I have worked in several national and international teams, practicing and mastering effective communication and active listening. I improved my relational and social skills by interacting with researchers involved in the PhD and Postdoc projects (mainly from Italian, European, and US research institutes). During the three fellowships at the Center for Astrophysics (Cambridge, MA) I developed the capability to work with researchers from different countries and research areas.
– Mediating skills: As a co-supervisor of four Master's degree students and one Bachelor's degree student, I have managed the interaction between the students and the main advisor, developing the empathy, patience, and problem-solving skills that are necessary when teaching and supervising students.
– Outreach skills: At present, I am volunteering as a **trainer for the 2025/2026 edition of the project "Invisibili"**, an outreach initiative of the Department of Physics and Astronomy at the University of Bologna, that brings interactive scientific experiences on the "invisible" aspects of the Universe (such as dark matter and neutrinos) into primary schools, while promoting STEM skills and addressing gender disparities in science through engaging activities and science communication with children aged 5–11. During my PhD I attended a **public outreach school** (Designing innovative public engagement activities), where I learned to communicate science to the general public. I participated in designing, producing, and testing a multi-sensory (seeing, hearing, and touching) outreach activity that was presented at the Astronomy Festival "The Universe in all senses". During this project I improved my ability to stimulate scientific awareness in the general public.

Organisational / managerial skills

In pursuing my research projects, I developed original projects from conception to execution. This required to translate ideas into working plans, identify suitable collaborators based on their experience, and manage time effectively. The skills that I have developed allow me to effectively manage multiple deadlines and parallel projects, as evidenced by my **average of 2.4 first-author refereed publications per year** (4.8 publications/year when co-authored publications are counted), a total of **24 accepted observing proposals as PI**, and a total of **22 conferences (with 4 invited talks)** that I have attended **between 2021 and 2025**. As co-supervisor of Master's and Bachelor's degree students, I helped developing the aims and timelines for the thesis projects, ensuring that the projects were in line with the academic interests of the students. I provided regular feedback and guidance to help the students step by step.

Le informazioni contenute nel presente "curriculum vitae et studiorum" sono rese sotto la personale responsabilità del sottoscritto, ai sensi degli articoli 46 e 47 del Decreto del Presidente della Repubblica 28 dicembre 2000, numero 445, e successive modifiche ed integrazioni, consapevole della responsabilità penale prevista dall'articolo 76 del medesimo Decreto per le ipotesi di falsità in atti e dichiarazioni mendaci.