

Prof. Francesco Tombesi

Curriculum Vitae

PERSONAL INFORMATION

First name: Francesco
Last name: Tombesi
Day of birth: June 19th 1982
Nationality: Italian

CONTACT INFORMATION

Tor Vergata University of Rome

Department of Physics, Via della Ricerca Scientifica 1, 00133 Rome, Italy
E-mail: francesco.tombesi@uniroma2.it
Tel: +39 0672594541

INFN - Roma Tor Vergata

Via della Ricerca Scientifica 1, 00133 Rome, Italy
E-mail: francesco.tombesi@roma2.infn.it

INAF - Astronomical Observatory of Rome

Via Frascati 33, 00078 Monteporzio Catone, Italy
E-mail: francesco.tombesi@inaf.it

University of Maryland, College Park

Department of Astronomy, Physical Sciences Complex, 4296 Stadium Drive, College Park, MD 20742, USA

NASA - Goddard Space Flight Center

X-ray Astrophysics Laboratory (Code 662), Greenbelt, MD 20771, USA
E-mail: ftombesi@umd.edu

EDUCATION

- 2010 - Ph.D. in Astronomy, Alma Mater Studiorum - University of Bologna. Graded with honors. Thesis: "An X-ray absorption line spectroscopy study of ultra-fast outflows from the innermost regions of AGNs". Advisor: Prof. G.G.C. Palumbo.
- 2006 - Master Degree in Astrophysics & Cosmology, Alma Mater Studiorum - University of Bologna. Graded 110/110 cum Laude. Thesis: "X-ray study of the accretion onto the central black hole of NGC 3783". Advisor: Prof. G.G.C. Palumbo.
- 2004 - Bachelor Degree in Astronomy, Alma Mater Studiorum - University of Bologna (Italy). Graded 110/110 cum Laude. Thesis: "Models for the distribution of matter in clusters of galaxies". Advisor: Prof. Lauro Moscardini.

CURRENT PROFESSIONAL SCIENTIFIC APPOINTMENTS

- 03/2020 to present - **Associate Professor of Astrophysics**, Physics Department, Tor Vergata University of Rome.
- 01/2020 to present - Affiliated Researcher, INFN - Roma Tor Vergata.
- 01/2018 to present - Affiliated Researcher, INAF - Astronomical Observatory of Rome.
- 02/2014 to present - Assistant Research Scientist, Dept. of Astronomy, University of Maryland, College Park (MD), USA.
- 05/2010 to present - Astrophysicist, NASA - Goddard Space Flight Center, Greenbelt (MD), USA.

PAST PROFESSIONAL SCIENTIFIC APPOINTMENTS

- 03/2017 to 02/2020 - “**Montalcini**” **Assistant Professor of Astrophysics** (Ricercatore di Tipo b, *Montalcini*), Physics Department, Tor Vergata University of Rome.
- 08/2010 to 02/2014 - Research Associate, Dept. of Astronomy, University of Maryland, College Park (MD), USA.
- 05/2010 to 08/2010 - Research Assistant, Dept. of Physics and Astronomy, George Mason University (VA), USA.
- 03/2010 to 06/2010 - Research grant (Assegno di Ricerca), INAF-IASF Bologna.
- 09/2009 to 12/2009 - Short-term scholar, Dept. of Physics and Astronomy, George Mason University (VA), USA.
- 03/2008 to 03/2009 - Research Scholar, Dept. of Physics and Astronomy, Johns Hopkins University and NASA/GSFC (USA).
- 07/2008 to 08/2008 - Honorary Visiting Fellow, Dept. of Physics and Astronomy, University of Leicester (UK).
- 01/2007 to 01/2010 - Affiliated Researcher, INAF - IASF Bologna (Italy).
- 01/2007 to 12/2009 - Graduate student, Astronomy Department, Alma Mater Studiorum - University of Bologna.

NATIONAL LICENSE FOR UNIVERSITY PROFESSORS (Abilitazione Scientifica Nazionale)

- 03/2021 to 03/2032 - National License for Full Professor of Astronomy & Astrophysics (Abilitazione Scientifica Nazionale, Professore di Prima Fascia, FIS/05).
- 03/2017 to 03/2023 - National License for Associate Professor of Astronomy & Astrophysics (Abilitazione Scientifica Nazionale, Professore di Seconda Fascia II, FIS/05).

PRIZES AND AWARDS

1. 2024 - *Bruno Rossi Prize* from the High-Energy Astrophysics Division of the American Astronomical Society awarded to the IXPE team.
2. 2022 - *Bruno Rossi Prize* from the High-Energy Astrophysics Division of the American Astronomical Society awarded to the NICER team.
3. 2017 - *Aspen Institute Italia Award* “for research and scientific cooperation between Italy and the United States”.
4. 2016 - “*Exceptional Scientific Achievement Medal*” from the NASA Administrator.
5. 2015 - “*Robert H. Goddard Honor Award*” for Exceptional Achievement in Science at the NASA Goddard Space Flight Center.
6. 2015 - National Prize “*Premio nazionale Gentile da Fabriano*”.
7. 2015 - “*La Ginestra*” prize, recognizing exceptional talents in different arts linked to the poetry of Giacomo Leopardi.
8. 2014 - “*NASA Astrophysics Science Division Peer Award*” at NASA Goddard Space Flight Center.
9. 2014 - “*Early Career Research Scientist Prize for Excellence*”, Dept. of Astronomy, University of Maryland, College Park.
10. 2014 - *Special mention*, “Cefalù 2014 Prize for Astrophysics”.
11. 2013 - *Special mention*, “ISSNAF Award for Young Investigators”, Italian Scientists and Scholars of North America Foundation.

ACADEMIC APPOINTMENTS AND SERVICE

- 2023: Selection Committees for Fixed-Term Researcher Positions (Assegno di Ricerca) at the Tor Vergata University of Rome.
- 2022 - present: **Selection Committee, Erasmus Mundus Joint Master Degree - Master in Astrophysics and Space Science (MASS)**, Tor Vergata University of Rome.
- 2022: Selection Committees for Fixed-Term Researcher Positions (Assegno di Ricerca) at the Tor Vergata University of Rome.
- 2021: Dissertation Committee for the PhD in Physics and Astrophysics, University of Turin.
- 2021: Dissertation Committee for the PhD in Physics and Astrophysics, University of Turin and Masaryk University.
- 2021: Dissertation Committee for the PhD in Physics, Roma TRE University.
- 2020 - present: **Restricted Didactic Commission**, Physics Degree, Tor Vergata University of Rome.

- 2020 - 2021: Executive Committee, Department of Physics, Tor Vergata University of Rome.
- 2020 - present: Co-organizer, Rome Joint Astrophysics Colloquia; Tor Vergata University of Rome, INAF/OAR, INAF/IAPS.
- 2017 - present: **Board of Faculty, PhD in Astronomy, Astrophysics and Space Science**; Tor Vergata University of Rome, Sapienza University of Rome, INAF, ASI.
- 2017 - present: Co-organizer, Astrophysics Seminars, Dept. of Physics, Tor Vergata University of Rome.
- 2015 - 2016: Committee“Plan of Organization for Shared Governance”, Department of Astronomy, University of Maryland, College Park.

TEACHING EXPERIENCE

1. 2023/2024 - Elements of Astrophysics, Bachelor Degree in Physics, Tor Vergata University of Rome (6 CFU).
2. 2023/2024 - Black Holes & Galaxies, Master Degree in Physics (Curriculum in Astrophysics & Space Science) and Erasmus Mundus Joint Master Degree - Master in Astrophysics and Space Science, Tor Vergata University of Rome (6 CFU).
3. 2022/2022 - Elements of Astrophysics, Bachelor Degree in Physics, Tor Vergata University of Rome (6 CFU).
4. 2021/2022 - Active Galactic Nuclei, Master Degree in Physics (Curriculum in Astrophysics & Space Science), Tor Vergata University of Rome (6 CFU).
5. 2021/2022 - Elements of Astrophysics, Bachelor Degree in Physics, Tor Vergata University of Rome (co-teaching, 2 CFU).
6. 2021/2022 - Physics 2 (Electromagnetism and Optics), Bachelor Degree in Applied Chemistry, Tor Vergata University of Rome (9 CFU).
7. 2021/2022 - Active Galactic Nuclei, Master Degree in Physics (Curriculum in Astrophysics & Space Science), Tor Vergata University of Rome (6 CFU).
8. 2020/2021 - Elements of Astrophysics, Bachelor Degree in Physics, Tor Vergata University of Rome (6 CFU).
9. 2019/2020 - Physics 2 (Electromagnetism and Optics), Bachelor Degree in Applied Chemistry, Tor Vergata University of Rome (9 CFU).
10. 2018/2019 - Physics 2 (Electromagnetism and Optics), Bachelor Degree in Applied Chemistry, Tor Vergata University of Rome (9 CFU).
11. 2017/2018 - Physics 2 (Electromagnetism and Optics), Bachelor Degree in Applied Chemistry, Tor Vergata University of Rome (9 CFU).

STUDENT THESIS SUPERVISION

- **Bachelor Degree in Physics:** Simone Mestici (2020); Pierpaolo Condo' (2021); Mattia Marzi (2021), Nicolo' Rovazzani (2022), Samuele Massimi (2022), Alessandro Russo (2023), Giada Rinaldi (2023), Kevin Fieni (2023).
- **Master Degree in Physics/Astrophysics:** Samuele Ronchini (2018), Elenia Pacetti (2020), Alessio Mei (2020), Alessandra Ambrifi (2021), Simone Mestici (2022), Pierpaolo Condo' (2023), Mattia Marzi (2023), Sagarika Paul (2024), Sreeparna Ganguly (2024), Stefano Ferrante (2024).
- **PhD in Astronomy, Astrophysics and Space Science:** Alfredo Luminari (2017-2022), Elia Chiaraluce (2017-2022), Ajay Ratheesh (2018-2022), Marco Laurenti (2019-2023), Tommaso Aniello (2021-2024), Matteo Imbrogno (2021-2024), Dawoon Kim (2021-2024), Pierpaolo Condo' (2023-2026).

GRANTS AND PROPOSALS

1. 2023 - PI PRIN/MUR 2022 "Advanced X-ray modeling of black hole winds" (project number 2022K9N5B4). Two years grant, total funding **263.842 EUR**.
2. 2023 - Co-I PRIN/INAF "BLack hOleS Swift fOrMation (BLOSSOM)". Two years grant, total funding **200.000 EUR**.
3. 2023 - Co-I PRIN/INAF "The XRISM-to-XIFU (X2X) Agreement and Beyond: entering a new Era of High-Resolution X-Ray Spectroscopy". Two years grant, total funding **200.000 EUR**.
4. 2023 - Co-I ESA/XMM-Newton AO23 "The WISSHFUL Program: unveiling SMBH winds at cosmic noon", Multi-Year Heritage Programme, 2.3Ms.
5. 2023 - Co-I ESA/XMM-Newton AO23 "Probing the SMBH mass growth of the first QSOs", Large Program, 604ks.
6. 2023 - Co-I ESA/XMM-Newton AO23 "Ultra-fast outflows and their potential for feedback in tidal disruption events", 77ks.
7. 2023 - Co-I ESA/XMM-Newton AO23 "A deep view of the ionized absorbers in PG 1114+445", 104ks.
8. 2023 - Co-I ESA Einstein Probe AO-1 Proposal "The late-time X-ray behavior of Tidal Disruption Events", 75ks.
9. 2023 - Co-I NASA/IXPE AO1 "Deciphering the Comptonization properties of low luminosity AGN through X-ray polarimetry", 600ks.
10. 2023 - Co-I NASA/IXPE AO1 "A novel view of disk winds in transient black hole low-mass X-ray binaries with X-ray spectro-polarimetry", 430ks + NICER 60ks.
11. 2023 - Co-I NASA/IXPE AO1 "Deciphering the Comptonization properties of low luminosity AGN through X-ray polarimetry", 600ks.
12. 2023 - Co-I NASA/IXPE AO1 "Superorbital variability of Cyg X-1 in X-ray polarization", 300ks.

13. 2023 - Co-I NASA/Chandra Cycle 25 "Probing the hot wind from the low-luminosity active galactic nucleus in NGC 4579", 150ks Chandra exposure. Total funding **\$44,000**.
14. 2023 - Co-I Large Binocular Telescope (LBT) "Short-term variability of ultra-fast outflows in luminous quasars at Cosmic Noon", 6 hrs.
15. 2023 - Co-I NASA/JWST Cycle 2 "Extreme Feedback in Action: Fast and Powerful Molecular Outflows in the Local Universe", 40 hrs.
16. 2023 - Co-I NASA/NuSTAR Cycle 9 "NuSTAR-XRISM Observations of the Archetypical Ultrafast Outflow of PDS 456", 150ks NuSTAR and 120ks XMM-Newton.
17. 2022 - Co-I VLT/UVES "The high-resolution monitoring of UV ultra-fast outflows in luminous quasars at high-redshift", 21 hrs exposures.
18. 2022 - Co-I NASA/Chandra Cycle 24 "Probing energy-driven AGN winds in the brightest, non-lensed QSO at $z>3$ ", 150ks Chandra exposure.
19. 2022 - Co-I NASA/NICER Cycle 4 "The first X-ray polarimetry and spectroscopy observations of a transient black hole X-ray binary", 80ks NICER and NuSTAR exposures.
20. 2022 - Co-I NASA/Swift Cycle 18 "Capturing quasi-periodic outflows from a future AGN outburst using XRT and UVOT monitoring", 50ks Swift ToO.
21. 2021 - Co-I Astrosat Cycle A11 "Unprecedented wide band X-ray polarimetry of Cygnus X-1: Joint AstroSat, IXPE, and XL-Calibur observations", 248ks.
22. 2021 - Co-I Astrosat Cycle A11 "Simultaneous polarization and spectral studies of flaring binaries using AstroSat and XL-Calibur", 40ks.
23. 2021 - Co-I NASA/ROSES Astrophysics Data Analysis Program (ADAP) "Systematic disk-wind modeling of multi-phase ultra-fast outflows across diverse AGN populations".
24. 2021 - Co-I NASA/NuSTAR Cycle 7 "Smoking gun tests of black hole accretion models based on NuSTAR, NICER, IXPE, and XL-Calibur observations of Cyg X-1", 40ks NuSTAR.
25. 2021 - Co-I NASA/NuSTAR Cycle 7 "Broad-band X-ray study of a peculiar hyper-Eddington AGN: IRAS 04416 + 1215", 170ks NuSTAR and 40ks XMM-Newton.
26. 2021 - Co-I NASA/NuSTAR Cycle 7 "Understanding the connection between the X-ray corona and the nuclear radio emission in AGN", 100ks NuSTAR monitoring.
27. 2021 - Co-I NASA/NICER Cycle 3 "The first X-ray polarimetry and spectroscopy observations of a transient black hole X-ray binary", 80ks NICER and NuSTAR exposures.
28. 2020 - Co-I ESA/XMM-Newton AO-20 "Physics and Energetics of the Ultra Fast Outflow in IRAS F11119 + 3257", 110 ks XMM-Newton and 53 ks NuSTAR exposures.
29. 2020 - Co-I ESA/XMM-Newton AO-20 "The first X-ray polarimetry and spectroscopy observations of GRS 1915+105", 150 ks XMM-Newton and 60 ks NuSTAR exposures.

30. 2020 - Co-I PRIN-INAF grant "Piercing through the clouds: a multi-wavelength study of obscured accretion in nearby supermassive black holes". Total funding of **32.750 EUR**.
31. 2020 - Co-I ASI/Swift Cycle 17 "Searching for the awakening of the X-ray corona in high-Eddington quasars", 40 ks exposure.
32. 2020 - Co-I of the four-years European grant Horizon 2020 - AHEAD2020, regarding the task "WP14 - Advanced tools for X-ray data analysis".
33. 2019 - Co-I of the grant ASI-INAF entitled "Supermassive Black Hole Winds in X-rays". Total funding of **69.000 EUR**.
34. 2019 - Co-I NASA/Hubble Space Telescope Cycle 27 "Supermassive Black Hole Winds in X-rays (SUBWAYS): Building the HST Line with FUV Spectroscopy", 27 HST orbits.
35. 2018 - Co-I ESA/XMM-Newton AO-18 "Shedding X-ray Light on Supermassive Black Hole Winds", 1.6 Ms exposure.
36. 2018 - Co-I ESA/XMM-Newton AO-18 "X-ray Spectroscopic Survey of Highly-Accreting AGN", 220 ks exposure.
37. 2018 - Co-I ASI/Swift Cycle 15 "Entrained Ultra-Fast Outflow variability in PG 1114+445", 80 ks exposure.
38. 2018 - Co-I NASA/Chandra Cycle 20 Archive "Understanding AGN Warm Absorbers: A systematic Correlation Analysis of Physical Properties". Total funding **\$60,000**.
39. 2018 - Co-I Telescopio Nazionale Galileo "Probing the most luminous QSOs in the universe by completing the NIR photometry of the WISSH sample". Scheduled in AOT37, 13 hours observation.
40. 2017 - Co-I of the ASI, INAF proposal entitled "Probing AGN feedback in the most luminous QSOs at cosmic noon (z 2-3)". Total funding **80.000 EUR**.
41. 2017 - Co-I ALMA Cycle 5 "Quasar Feedback: Connecting the Accretion Disk Wind to the Large-Scale Molecular Outflow. Part II.", priority C.
42. 2017 - Co-I ALMA Cycle 5 "IBISCO-south: mapping feeding and feedback in an unbiased sample of local AGN", priority B.
43. 2017 - Co-I NASA/Chandra Cycle 19 "Heavily reddened, luminous type 1 QSOs: a transition population emerging from the dust", 144 ks exposure. Total funding of **\$66,000**
44. 2017 - Co-I NASA/Chandra Cycle 19 "Chandra HETG observations of NGC 1275", 500 ks exposure.
45. 2016 - PI "Programma Montalcini" from the Ministero dell'Istruzione, Università e Ricerca (MIUR), Italy. Total funding of **218.000 EUR**.
46. 2016 - Co-I ESO/VLT/MUSE "Close encounters of the third kind: connecting UFOs and galaxy scale outflows with MUSE", observing time 3hrs.

47. 2016 - Co-I ESA/XMM-Newton AO-16 “A path-finder X-ray spectral study of massive outflows in the X-ray brightest QSOs at $z \sim 2$ ”, 400 ks observations.
48. 2016 - PI NASA/NuSTAR Cycle 2 “Establishing the Quasar Mode Feedback with NuSTAR and XMM-Newton”, 150 ks NuSTAR and 90 ks XMM-Newton. Grant **\$68,000**.
49. 2016 - Co-I NASA/Chandra Cycle 18 “The 3C 111 Jet: X-ray variability, spectrum & broadband SED”, 180ks Chandra, 8 orbits Hubble, and 100ks NuSTAR.
50. 2015 - Co-I NASA/ROSES Astrophysics Data Analysis Program (ADAP) “X-ray Absorbers as Probes of AGN Unification”, Co-I funding **\$70,000**.
51. 2015 - Co-I ALMA Cycle 3 “Quasar Feedback: Connecting the Accretion Disk Wind to the Large-Scale Molecular Outflow”.
52. 2015 - Co-I NASA/Chandra Cycle 17 “Elliptical galaxy on the making: the black hole activity, galaxy-scale outflow, and metal-rich halo of Mrk 273”, 200 ks, grant **\$70,000**.
53. 2015 - Co-I NASA/Chandra Cycle 17 Archive proposal “X-ray tomography of the MHD winds of AGN and XRB”, grant **\$60,000**.
54. 2015 - Co-I ASI/INAF Italy “The NuSTAR view of Heavy Obscuration and Strong Feedback in AGNs”, grant **77.000 EUR**.
55. 2015 - Co-I ESO/VLT/MUSE “Close encounters of the third kind: connecting UFOs and galaxy scale outflows with MUSE”, observing time 3hrs.
56. 2014 - PI NASA/Suzaku Cycle 10 “Linking black hole winds to large-scale molecular outflows in IRAS F05189-524”, 250 ks.
57. 2014 - PI NASA/NuSTAR Cycle 1 “Revealing the black hole wind in the ultraluminous infrared galaxy IRAS F11119+3257 with NuSTAR”, 100 ks, grant **\$42,000**.
58. 2013 - PI NASA/Chandra Cycle 15th “Unifying X-ray winds in radio galaxies with Chandra HETG”, 500 ks, grant **\$170,344**.
59. 2012 - PI NASA/Suzaku AO8 “IRAS F11119+3257: the smoking gun evidence for AGN feedback”, 250 ks.
60. 2012 - Co-I XMM-Newton AO12 “Probing the variable, relativistic wind in the high- z QSO HS 1700+6416”, 120 ks.
61. 2011 - Co-I NASA/Suzaku A07 “Probing the Ultra-Fast-Outflows of PG 1404+226 with Suzaku”, 80 ks.
62. 2011 - PI NASA/XMM-Newton A011 “Probing the connection between the accretion disk, outflows and the jet in 3C 111”, AO11, 90 ks.
63. 2010 - PI NASA/XMM-Newton AO10 “Testing Radio-Loud vs Radio-Quiet AGN Unification through XMM-Newton Observations of Broad-Line Radio Galaxies”, 174 ks.

64. 2010 - Co-I NASA/Suzaku AO5 “Probing the Ultra-fast Outflow in 3C 111 with Suzaku”, 240 ks.
65. 2010 - PI NASA/ROSES Astrophysics Data Analysis Program (ADAP) “Ultra-fast Outflows in Radio-Loud AGN: New Constraints on the Jet-Disk Connection”, three year grant of **\$246,142**.

SCIENTIFIC CONFERENCES ORGANIZATION

- “Roma International Conference on AstroParticle Physics - RICAP 24”, LOC, Villa Tuscolana (Frascati), Italy, 23-24 September 2024.
- “AGN Feedback and Star Formation Across Cosmic Scales and Time”, SOC, Sirolo, Italy, 2-6 September 2024.
- EAS 2024 Special Session SS16 “Relativistic jets from AGN in the era of high energy polarimetry”, SOC, Padova, Italy, 1-5 July 2024, .
- “ITAXRISM”, co-chair SOC and LOC, Rome, Italy, 9 October 2023.
- “Congresso Nazionale Società Astronomica Italiana - LXVII Assemblea”, SOC, Camerino, Italy, 15-19 May 2023.
- “Black Hole Winds at All Scales”, SOC, IAU Symposium 378, Haifa, Israel, 12-16 March 2023.
- “The inner parsec of AGN: accretion, winds & clouds”, co-chair SOC, EAS 2022 Special Session, Valencia, Spain, 27 June - 1 July 2022.
- “Multiphase AGN Feeding and Feedback II”, co-chair SOC, Sesto, Italy, 20-24 June 2022.
- “1st Mondragone Frontiers of Astronomy Series: Latest Advances in X-ray Spectroscopy and Polarimetry”, chair SOC and LOC, Rome, Italy, 18-20 May 2022.
- “LXIII Congress of the Italian Astronomical Society”, SOC, Rome, 14-17 May 2019.
- “Jets and Disk Winds Across Cosmic Scales”, SOC, EWASS (European Week of Astronomy and Space Science) Symposium, Lyon (France), June 24-28 2019.
- “Quasar feedback: ejecting, compressing and enriching gas at different scales” SOC, EWASS (European Week of Astronomy and Space Science) Special Session, Lyon (France), June 24-28 2019.
- “Multiphase AGN Feeding and Feedback”, co-chair SOC, Sexten (Italy), July 9-13 2018.
- “Breaking the Limits 2018: Super-Eddington Accretion on Compact Objects”, co-chair SOC, Sardinia (Italy), on October 1-5 2018.
- “AGN Winds on the Georgia Coast”, SOC, Jekyll Island, Georgia (USA), June 26-29 2017.
- “Breaking the Limits: Super-Eddington Accretion on Compact Objects”, co-chair SOC, Arbatax, Sardinia (Italy), September 19-23 2016.

- “The Extremes of Black Hole Accretion”, SOC, ESA European Space Astronomy Centre (ESAC), Villafraanca del Castillo, Spain, 8–10 June 2015.
- “AGN Winds in Charleston”, SOC, Charleston, SC, USA, 15–18 October 2011.

MAJOR SCIENTIFIC PROJECT AND COLLABORATIONS

1. 2023 - present: PI of the advanced X-RAY modelinG Of quasar wiNds (DRAGON) collaboration.
2. 2023 - present: Cherenkov Telescope Array (CTA) Consortium.
3. 2023 - present: ESA’s Laser Interferometer Space Antenna (LISA) Consortium.
4. 2023 - present: Rubin LSST AGN Science Collaboration.
5. 2022 - present: HYPERluminous quasars at the Epoch of ReionizATIOn (HYPERION) science collaboration.
6. 2022 - present: Tor Vergata University member of the Spoke 3 - Astrophysics & Cosmos Observations of the ICSC National Research Centre for High Performance Computing, Big Data and Quantum Computing.
7. 2022 - present: ESA appointed Guest Scientist, JAXA/NASA/ESA’s X-Ray Imaging Spectroscopy Mission (XRISM).
8. 2022 - present: AGN science working group, NASA’s Probe mission proposal High Energy X-ray Probe (HEX-P).
9. 2021 - present: Science Collaborator, NASA/ASI’s Imaging X-ray Polarimetry Explorer (IXPE).
10. 2021 - present: Co-I, cubesat Sun Cube One (SEE), Italian Space Agency’s call “Bando per Future Missioni Cubesat 2020”. Funding of 714.661 EUR.
11. 2020 - 2021: Science Participant, NASA/ASI’s Imaging X-ray Polarimetry Explorer (IXPE).
12. 2019 - present: “Black hole winds and the baryon life cycle of galaxies” (BLACKOUT) collaboration.
13. 2019 - 2020: Galaxy Evolution Working Group, ESA’s Space Infrared Telescope for Cosmology and Astrophysics (SPICA) proposal.
14. 2018 - present: WISE/SDSS selected hyper-luminous (WISSH) quasars collaboration.
15. 2018 - present: Supermassive Black Hole Winds in X-rays (SUBWAYS) collaboration.
16. 2016 - present: NASA’s Neutron star Interior Composition ExploreR (NICER) science team.
17. 2016: ESO-Athena Synergy Team (EAST).
18. 2016: SKA-Athena Synergy Team (SAST)

19. 2016 - present: Co-I, NASA Astrophysics Probe Mission Proposal, Advanced X-ray Imaging Satellite (AXIS).
20. 2015 - present: NASA endorsed member of NASA's *X-ray Surveyor* Science Working Group for the topics of "Physics of Feedback", "Physics of High Density Matter, Compact Objects, and Accretion", and "X-rays in the Multi-Wavelength, Multi-Messenger Era".
21. 2014 - present: NASA endorsed member, ESA's *NewAthena* Science Study Team: SWG2.2 "Understanding the buildup of SMBH and galaxies" and SWG 2.3 "Feedback in local AGN and star forming galaxies".
22. From 2010 to 2018: NASA endorsed member, JAXA/NASA's *ASTRO-H/Hitomi* X-ray observatory.
23. Former Science Working Group member: Simbol-X, IXO, GRAVITAS, LOFT.

PEER REVIEW

- Referee: Nature, Science, Physical Review Letters, Nature Astronomy, The Astrophysical Journal, The Astrophysical Journal Letters, Astronomy & Astrophysics, Monthly Notices of the Royal Astronomical Society, Publications of the Astronomical Society of Japan, New Astronomy.
- 2012 - present: Reviewer, NASA grant programs (Chandra, Swift, NuSTAR, NICER, Astrophysics Theory Program, NASA Postdoctoral Program).
- 2023: Reviewer, FONDECYT, Government of Chile.
- 2022: Reviewer, Large Binocular Telescope.
- 2021: Reviewer, National Science Center, Poland.
- 2020: Reviewer, VQR, Ministry of University and Research (MUR).
- 2020: Reviewer, Pazy Foundation, Israel.
- 2019 - 2020: Reviewer, NASA's Future Investigators in NASA Earth and Space Science and Technology (FINESST).
- 2014, 2020: Reviewer, National Science Foundation (NSF).
- 2018 - present: Reviewer, Register of Expert Peer Reviewers for Italian Scientific Evaluation (REPRISE), Ministry of University and Research (MUR).
- 2017 - 2018: Reviewer "Italian Scientists and Scholar of North America Foundation" ISSNAF Award for Young Investigators.
- 2017: Reviewer "Netherlands Organisation for Scientific Research" (NWO, Dutch Research Council) VINI grant program, Innovational Research Incentives Scheme of Netherlands.
- 2016: Best Practice Models for Collaborative Mentorship Programs, European Commission, EURAXESS North America.

- 2013: Reviewer, ARISTEIA, Ministry of Education of Greece' and National Council for Research and Technology, Greece.

CONFERENCE PRESENTATIONS

INVITED

1. "Unleashing the Fury: Exploring the Power and Impact of Black Hole Winds", Hangzhou, China, 9-13 October 2023 (review talk).
2. "Multiphase AGN Feeding and Feedback II", Sesto, Italy, 20-24 June 2022 (talk).
3. "XCalibur 2019 - Next generation X-ray spectroscopy", Winchester, UK, July 15-18 2019 (talk)
4. "European Week of Astronomy and Space Science, EWASS 2019", Lyon, France, June 24-28 2019 (review talk).
5. "Whereabouts and Physics of the Roaming Baryons in the Universe", Sexten Center for Astrophysics, Sexten (Italy), on July 10-14 2017 (review talk).
6. "AGN driven winds", Technion, Haifa (Israel), on May 22-26 2017 (review talk).
7. "Breaking the Limits: Super-Eddington Accretion on Compact Objects", Arbatax, Sardinia (Italy), on September 19-23 2016 (talk and chair of SOC).
8. "ESO-Athena Synergy Workshop", European Southern Observatory, Garching, Germany on September 14-16 2016 (review talk).
9. "Crossing the Rubicon: the fate of gas in galaxies", Santarcangelo di Romagna, Italy, on September 5-9 2016 (review talk).
10. 2015 Joint Space Science Institute (JSI) Workshop "The Physics of Supermassive Black Hole Formation and Feedback", Annapolis (Maryland), October 12-14 2015 (review talk and chair of one session).
11. "14th ASTRO-H Science Meeting", Tokyo Metropolitan University, Tokyo (Japan), July 28th 2015 (talk).
12. "The Extreme of Black Hole Accretion", European Space Astronomy Center, Madrid (Spain), June 8-10 2015 (review talk).
13. "Black Hole Accretion and AGN Feedback", Shanghai (China), June 1-5 2015 (review talk).
14. "Compact Objects as Astrophysical and Gravitational Probes", Lorentz Center, Leiden University, Leiden (Netherlands), February 2-6 2015 (review talk).
15. "The Unquiet Universe", Cefalu', Italy, June 2-7 2014 (talk).
16. "ASTRO-H HXI/SGD Science Workshop", Hiroshima University, Hiroshima, Japan, February 24th 2014 (talk).

17. “2013 annual retreat of the Center for Research and Exploration in Space Science & Technology”, University of Maryland Baltimore County, Baltimore (MD), USA, November 15th 2013 (talk).
18. “Revealing radiative processes near black holes”, Princeton Center for Theoretical Science, Princeton University, Princeton (NJ), USA, May 1-3 2013 (talk).
19. “Spectral/timing properties of accreting objects: from X-ray binaries to AGN”, European Space Agency - European Space Astronomy Centre, Spain, April 3-5 2013, (review talk).
20. “39th COSPAR Scientific Assembly”, Scientific event E1.7 “Beyond the continuum: X-ray line spectroscopy of compact objects”, Mysore, India, July 14–22 2012, (talk).
21. “AGN Winds in Charleston”, Charleston, SC, USA, 15–18 October 2011 (talk).

CONTRIBUTED

1. “The inner parsec of AGN: accretion, winds & clouds” for the EAS 2022, Valencia, Spain, 27 June - 1 July 2022 (poster).
2. ”Black hole accretion disk winds”, Durham (UK) (remotely), September 6-9 2021 (talk).
3. ”European Astronomical Society Annual Meeting 2021”, virtual meeting, June 28 - July 2 2021 (poster).
4. ”3rd IXPE Science Collaboration Meeting”, virtual meeting, June 1-3 2021.
5. ”XMM-Newton Science Workshop - A high-energy view of exoplanets and their environments”, ESA/ESAC Madrid (Spain), virtual meeting, May 24-28 2021 (talk).
6. “European Astronomical Society Annual Meeting 2020”, virtual meeting, June 29 to July 3 2020 (talk and poster).
7. “Cosmic Evolution of Quasars: from the First Light to Local Relics”, Beijing (China), October 21-25 2019 (talk).
8. “IAU Symposium 356: Nuclear Activity in Galaxies Across Cosmic Time”, Addis Ababa (Ethiopia), October 7-11 2019 (talk).
9. “The 3C Extragalactic Radio Sky: Legacy of the Third Cambridge Catalogue”, Turin (Italy), September 16-20 2019 (talk).
10. “X-ray Astronomy 2019”, Bologna (Italy), September 8-13 2019 (poster).
11. “Active Galactic Nuclei 13: Beauty and the Beast”, Milan (Italy), October 9-12 2018 (talk).
12. “Breaking the Limits 2018: Super-Eddington Accretion onto Compact Objects”, Sardinia (Italy), October 1-5 2018 (talk).
13. “Exploring the Hot and Energetic Universe”, Palermo (Italy), September 24-27 2018 (talk).
14. “Multiphase AGN feeding & feedback”, Sesto (Italy), July 9-13 2018 (talk).

15. "COSPAR 2018 General Assembly", Pasadena, California (USA), July 14-22 2018 (talk).
16. "X-ray Skies with High-Res Eyes: Imaging the Cosmos with AXIS", Washington DC (USA), August 6-7 2018 (talk).
17. "IV. Workshop on millimetre and submillimetre astronomy in Italy", Bologna, Italy, November 7-10 2017 (talk).
18. "The Power of X-ray Spectroscopy", Warsaw, Poland, September 6-8 2017 (talk and chair of one session).
19. "The X-ray Universe 2017", Rome, Italy June 6-9 2017 (talk).
20. "Mid-Atlantic Radio-Loud AGN Meeting, MARLAM 2016", Johns Hopkins University, Baltimore, October 14th 2016 (talk).
21. "Chandra Science for the Next Decade", Harvard-Smithsonian Center for Astrophysics, Harvard University, Cambridge (MA), August 16-19 2016 (talk).
22. "15th ASTRO-H Science Meeting", Tokyo Metropolitan University, Tokyo (Japan), May 18-20 2016.
23. "XMM-Newton: The Next Decade", European Space Astronomy Centre, Madrid, Spain, May 9-11 2016 (talk).
24. "High Energy Astrophysics Division Fifteenth Meeting", Naples, Florida, April 3-7 2016 (talk).
25. "Mid-Atlantic Radio-Loud AGN Meeting 2015", University of Maryland, Baltimore County, October 22nd 2015 (talk).
26. "Max's 4 Questions in X-ray Astronomy to be Addressed with ASTRO-H", University of Tokyo, Tokyo, Japan, on July 31st 2015.
27. "Mid-Atlantic radio-loud AGN meeting 2014", NASA - Goddard Space Flight Center, Greenbelt, MD, on October 10th 2014 (talk).
28. "Active Galactic Nuclei 11: where black holes and galaxies meet", Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, September 23-26 2014 (talk).
29. "Suzaku-MAXI 2014: Expanding the Frontiers of the X-ray Universe", Heime University, Matsuyama, Japan, February 19-22 2014 (talk).
30. "11th ASTRO-H Science Meeting", Heime University, Matsuyama, Japan, February 17-18 2014 (talk).
31. "Putting accretion theory to the test", 2013 Joint Space Science workshop, Annapolis (MD), USA, November 4-6 2013 (talk).
32. "Black Hole g(Astronomy) - Exploring the different flavours of accretion", Brindisi, Italy, September 2-6 2013 (talk).
33. "10th ASTRO-H Science Meeting", Yale University, New Haven (CT), USA, July 10-12 2013 (poster).

34. “13th meeting of the High Energy Astrophysics Division”, Monterey (CA), USA, April 7-11 2013 (talk).
35. “Goddard Poster Party”, NASA - Goddard Space Flight Center, Greenbelt (MD), USA, January 30th 2013, (poster).
36. “Astro-H Science Working Group meeting”, Japan, February 18–22 2013, (poster).
37. “2nd LOFT Science Meeting”, Toulouse, France, September 24–27 2012.
38. “Active Galactic Nuclei 10”, Rome, Italy, September 10–13 2012 (talk).
39. “39th COSPAR Scientific Assembly”, Scientific event E1.6 “Seyfert galaxies: known and the unknown”, Mysore, India, July 14–22 2012 (talk).
40. “Energetic Astronomy, Prof. Richard Mushotzky’s 65 birthday”, Annapolis, Maryland, June 4–6 2012 (poster).
41. “16 Years of Discovery with RXTE: A Celebration of the Mission”, NASA/GSFC, Greenbelt, MD, USA, 29–30 March 2012.
42. “NRAO-NAASC 2012 Workshop Outflows, Winds and Jets: From Young Stars to Supermassive Black Holes”, Charlottesville, VA, USA, 3–6 March 2012 (poster).
43. “High Energy Views of Galaxies and their Nuclei”, Tulum, Mexico, 8–11 November 2011 (talk).
44. “High Energy Astrophysics Division Meeting 2011”, Newport, RI, USA, 7–10 September 2011 (talk).
45. “Sixth Astro-H Working Group Meeting” and “Exploring the X-ray Universe: Suzaku and Beyond”, SLAC National Accelerator Laboratory, CA, USA, 18–22 July 2011 (talk).
46. “The X-ray Universe 2011”, Berlin, Germany, 27–30 June 2011 (poster).
47. “CRESST NASA/GSFC-University of Maryland Science Interaction Program”, College Park, MD, USA, December 3rd 2010 (poster).
48. “The Ins and Outs of Black Holes”, Annapolis, MD, USA, 15–17 November 2010 (poster).
49. “CRESST Retreat at UMBC”, Baltimore, MD, USA, 26th October 2010 (poster).
50. “Accretion and Outflows in Black Hole Systems”, Kathmandu, Nepal, 11–15 October 2010 (talk).
51. “IAU Symposium 275: Jets at all scales”, Buenos Aires, Argentina, 13-17 September 2010 (poster).
52. “X-ray Astronomy 2009: present status, multi-wavelength approach and future perspectives”, Bologna, Italy, 7–11 September 2009 (talk).
53. “The energetic cosmos: from Suzaku to Astro-H”, Otaru, Japan, 29 June – 2 July 2009 (poster).
54. “Accretion and ejection in AGN: a global view”, Como, Italy, 22–26 June 2009 (poster).
55. “IXO Science Team Meeting”, Boston, MA, USA, 28–29 January 2009 (poster).

56. “Exploring the Universe with IXO”, Science meeting at MPE Garching, Germany, 17–19 September 2008.
57. “37th COSPAR Scientific Assembly”, Montreal, Canada, 13–20 July 2008 (poster).
58. “1st FEROS Meeting”, European Space Astronomy Center, Villafranca del Castillo, Spain, 4–6 February 2008 (talk).
59. “Simbol-X: the hard X-ray universe in focus”, International Workshop, 14–16 May 2007, Bologna, Italy (poster).

INVITED TALKS AT SCIENTIFIC INSTITUTES

1. Physics Colloquium, Tor Vergata University of Rome, Rome (Italy) on March 29th 2023 (colloquium).
2. Astrophysics Seminar, University of Milano Bicocca, Milan (Italy) on March 9th 2023 (seminar).
3. Cosmology colloquium at Scuola Normale Superiore, Pisa (Italy) on February 18th 2020 (colloquium).
4. NASA Goddard Extrasolar Planets Seminar, NASA - Goddard Space Flight Center (Greenbelt, MD), USA, on February 19th 2019 (seminar).
5. Plenary talk at the 2018 Symposium of the Water Academy SRD, Lugano (Switzerland), on October 4-8 2018 (colloquium).
6. Physics Colloquium, Roma Tre University, in Rome (Italy) on June 5th 2018 (colloquium).
7. Bologna Joint Astrophysical Colloquium, Dept. of Physics and Astronomy, University of Bologna (Bologna, Italy) on January 11th 2018 (colloquium).
8. Plenary Talk for the 2017-2018 Academic Commencement at the University of Rome “Tor Vergata” in Rome (Italy) on December 15th 2017 (colloquium).
9. Plenary Talk at the “International Conference of Physics Students”, Turin (Italy), August 7-14 2017 (colloquium).
10. Dept. of Physics, Tor Vergata University of Rome, Rome, Italy on November 9th 2016 (colloquium).
11. INAF Astronomical Observatory of Roma, Rome, Italy on November 10th 2016 (seminar).
12. INAF Brera Astronomical Observatory, Milan, Italy on October 5th 2016 (seminar).
13. Department of Physics & Astronomy, University of Delaware, Newark, DC on March 11th 2016 (seminar).
14. FAME seminar at the University of Bologna and INAF/Bologna Observatory, Bologna, Italy on February 26th 2016 (seminar).
15. NASA Astrophysics Science Division Colloquium at NASA Goddard Space Flight Center, Greenbelt, MD on January 12th 2016 (colloquium).

16. Physics and Astronomy Dept. of the James Madison University, Harrisonburg, VA, on December 3rd 2015 (colloquium).
17. Institute for Space and Astronautical Sciences (ISAS) of the Japan Aerospace Exploration Agency (JAXA) in Tokyo, Japan, on July 30th 2015 (colloquium).
18. NASA's Sciences and Exploration Directorate Director's Seminar at NASA/GSFC, Greenbelt, MD on July 10th 2015 (seminar).
19. NASA - Goddard Space Flight Center, Greenbelt, MD on April 17th 2015 (seminar).
20. Space Telescope Science Institute (STScI), Baltimore, USA, on April 3rd 2015 (seminar).
21. Arcetri Astrophysical Observatory, Florence, Italy, on February 24th 2015 (seminar).
22. Stony Brook University, New York, on October 15th 2014 (seminar).
23. NASA - Goddard Space Flight Center, Greenbelt, on August 1st 2014 (seminar).
24. Department of Astronomy of Columbia University, New York City, on April 3rd 2014 (seminar).
25. Department of Astronomy of Kyoto University, Kyoto, Japan, on February 26th 2014 (seminar).
26. Embassy of Italy in Washington, DC, on October 29th 2013 (seminar).
27. "Astrophysics Science Division Colloquium" at NASA/GSFC, Greenbelt, MD, USA, on July 16th 2013 (colloquium).
28. "Wunch" talk at the Dept. of Astrophysical Sciences at Princeton University, Princeton, NJ, USA, on March 27th 2013 (seminar).
29. Dept. of Physics of the Catholic University of America, Washington, DC, USA, on February 20th 2013 (colloquium).
30. Dept. of Astronomy of the University of Bologna, Bologna, Italy, on September 25th 2012 (seminar).
31. "Theory Lunch" Talk at the Dept. of Astronomy of the University of Maryland, College Park, MD, USA, 2012 (seminar).

SELECTED SCIENTIFIC NEWS

1. Tor Vergata news, 5 Dec. 2022 - "IXPE, lo scrutatore dell'universo violento. Ce ne parla l'astrofisico Francesco Tombesi"
2. INAF news, 13 Dec. 2021 - "Lampi X dalla Mucca, un oggetto compatto in fasce"
3. INAF press release, 19 May 2021 - "Buchi neri e cancro: evoluzioni a confronto"
4. NASA press release, 19 March 2020 - "Chandra Data Tests Theory of Everything"

5. INAF press release, 19 March 2020 - “Nel cuore di Perseo, in cerca di una nuova fisica”
6. ESA press release, 24 July 2019 - “How black holes shape galaxies”
7. INAF press release, 24 July 2019 - “Così i buchi neri forgiavano le galassie”
8. University of Rome “Tor Vergata” press release, 24 July 2019 - “Così i buchi neri forgiavano le galassie e rallentano la formazione delle stelle”
9. University of Maryland press release, 21 September 2015 - “Astronomers Identify a New Mid-size Black Hole”
10. INAF press release, 22 September 2015 - “Il rapporto 3 a 2 fa il buco nero intermedio”
11. NASA press release, 25 March 2015 - “Suzaku, Herschel link a black-hole ‘wind’ to a galactic gush of star-forming gas”
12. ESA press release, 25 March 2015 - “Black hole winds pull the plugs on star formation”
13. ESA press release, 25 March 2015 - “How black holes clear galaxies of star-making gas”
14. University of Maryland press release, 25 March 2015 - “Supermassive Black Hole Clears Star-making Gas From Galaxy’s Core”
15. INAF press release, 25 March 2015 - “Attila il buco nero, flagello della galassia”
16. Japan Aerospace Exploration Agency (JAXA) press release, 25 March 2015 - “Galaxy scale outflow of matter stimulated by a monster black-hole”
17. INAF press release, 5 February 2013 - “La dove osano i buchi neri”
18. NASA press release, 27 February 2012 - “Ultra-fast Outflows Help Monster Black Holes Shape Their Galaxies”
19. ESA press release, 27 February 2012 - “XMM-Newton measures the power of black-hole driven outflows in galaxies”
20. INAF press release, 27 February 2012 - “Dai buchi neri sgorgano gli UFO”
21. HEASARC (High Energy Astrophysics Science Archive Research Center) picture of the week, “UFOs from AGN”, 5 March 2012
22. INAF press release, 26 July 2010 - “Ufo, getti volanti identificati”

SELECTED NEWS AND TV/RADIO INTERVIEWS

1. Video interview for the news program TG5 of the Italian nationwide TV channel Canale 5 on April 11th 2019 regarding the first “image” of a supermassive black hole.
2. Invitation and live interview at the TV program “Uno Mattina in Famiglia” of Rai 1 on March 31st 2018.

3. Interview for the TV news Tg5 at Mediaset Canale 5 and Rainews24 on March 14th 2018 regarding the scientific contributions of Stephen Hawking.
4. Live phone interview for the RAI Radio3 Scienza channel regarding the state of the scientific research in the United States on March 1st 2018.
5. Interview for the national TV channel Rainews24 on November 3rd 2017.
6. Interview for the national TV news Tg2 on Rai 2 regarding the Aspen Award 2017 on October 26th 2017.
7. Interview for the national TV channel Rai Parlamento “Punto Europa” on September 23rd 2017.
8. Guest and interview for the live TV show “SkyTG 24 Economia” at SkyTG 24 on October 7th 2016.
9. Guest and interview for the radio show “Giovani Talenti” (“Young Talents”) at Radio 24, the radio station of the main Italian journal on economics “Il Sole 24 Ore” on December 19th 2015.
10. Guest and interview for the TV show “The Innovation Game” of Repubblica TV live at Adrian’s Temple in Rome on June 4th, 2015.
11. Video interview (30 min) for the TV program “Community - L’altra Italia” for the national Italian TV channels RAI Italia and RAI 3 on March 31st 2014.

SELECTED OUTREACH ACTIVITIES

1. Co-organizer, “European Researcher’s Night”, Tor Vergata University of Rome, Rome, September 29-30th 2023.
2. Invited Panel Speaker, “FantaMacerata”, Macerata, June 17th 2023.
3. Online public outreach presentation for the “European Researcher’s Night” in collaboration with the “Science Together NET” project at the Tor Vergata University of Rome, on September 24th 2021.
4. Online public outreach presentation for the “European Researcher’s Night” in collaboration with the “Science Together NET” project at the Tor Vergata University of Rome, on November 27th 2020.
5. Online public outreach presentation for the astronomical association AstronomiAmo on April 8th 2020.
6. Contribution to the “FISICAST” outreach project of podcasts about physics and astrophysics published on Radio Scienza since February 2020.
7. Invited speaker at the “StartupItalia Open Summit 2019”, in Milan (Italy) on December 16th 2019.
8. Invited panelist on “International Day of Science for Peace and Development” organized by the Marche region and the municipality of Osimo, Italy, on 10 November 2019.
9. Plenary presentation at the inauguration of the 2019/2020 academic year of the “Università di Istruzione Permanente” of Recanati, Italy, on 9 November 2019.

10. Invited panelist on “Turism and Science” by the Marche regional government during the celebrations of the “International Space Week”, 4 October 2019, Osimo, Italy
11. Outreach presentation “Il mistero dei buchi neri, una fotografia dall’universo profondo” for the School of Popular Philosophy of Macerata on July 5th 2019, Macerata, Italy
12. Invitation and special mention during the 2019 inauguration of the judiciary year (Inaugurazione dell’anno giudiziario 2019) of the Court of Auditors of the Lazio region (Corte dei Conti, Sezione Regionale del Lazio), on February 28 2019, Rome, Italy.
13. Invited speaker for the “Galassica” Astronomy Festival on June 21-24 2018 at Macerata, Italy.
14. Invited speaker for the international scientific festival “Pint of Science” on May 14th 2018 in Rome, Italy.
15. Invited guest and speaker at the event “Spazio al Futuro” for the promotion of astronomy, astrophysics and aerospace in the Marche region of Italy on April 14th 2018.
16. Public outreach event entitled “Voyage to discover the mysteries of the Universe” (“Viaggio alla scoperta dei misteri dell’Universo”) organized by the “Popular School of Philosophy of Macerata” (“Scuola Popolare di Filosofia di Macerata”) at Macerata, Italy, on June 1st 2017.
17. Invited panelist for the event “Italian scientists in Italy and abroad: finding a career” organized by the Italian Cultural Society of Washington D.C. on March 19th 2017 in Bethesda, MD (USA).
18. Volunteer for the “Ask an Astrophysicist” project at NASA/GSFC, as part of the “Imagine the Universe!”
19. Member of the “National Geographic Insider Panel” of the National Geographic Society.
20. Public presentation entitled “How can supermassive black holes influence the evolution of entire galaxies?” at the University of Maryland Observatory, College Park (MD), on July 20th 2016.
21. Organizer and chair of the ISSNAF Washington DC Chapter kick-off event at the Embassy of Italy in Washington, DC on June 20th 2016.
22. Organizer and volunteer for the ISSNAF NASA Chapter booth at the Embassy of Italy in Washington, DC, during the EU Open House Day of May 14th 2016.
23. Attended the “AAAS Forum on Science and Technology Policy” in Washington, DC on April 14th–15th 2016.
24. Video presentation at the University of Milan during the UniSTEM Day 2016 on March 11th 2016. The audience was composed of 1000 high school students. By invitation from the Italian Senator for Life, Prof. Elena Cattaneo.
25. Skype outreach conference for teenagers with the POST (Perugia Officina per la Scienza e la Tecnologia) located in Perugia, Italy, on December 11th 2015
26. Organized a tour of NASA/GSFC for 16 members of the association “Le DIVE - Donne Italiane che Vivono all’Estero” on November 6th 2015

27. Volunteer at the ASTRO-H booth for the “Explore @ NASA Goddard” at NASA/GSFC on September 26th 2015. The NASA/GSFC was open to the public and about 15,000 visitors attended the event.
28. Invited outreach talk and visit of the Loccioni Group (www.loccioni.com) company on September 1st 2015, Angeli di Rosora, Ancona, Italy.
29. Co-organizer and speaker for a Professional Networking event on Aerospace held at 1776 in Washington, DC, on October 16th 2014. The other speaker was ESA astronaut Roberto Vittori and a representative of SpaceX.
30. Co-organizer and main speaker of the outreach event “Nottecassiano: viaggio nell’Universo” on Astronomy and Cosmology for the general public. After the event a telescope was positioned in the main square of the town for people to directly observe astronomical objects. The event was held in Montecassiano, Italy, on September 18th 2014.
31. Selected testimonial for the campaign “Marche is Good” intended to promote the culture, cuisine and products of my Italian region of origin, Le Marche, in the United States. This activity took place in New York City during the whole month of October 2013 and consisted in a series of events in several places throughout the city, such as Eataly, Scavolini, Guzzini, Paciotti and so on. This project was created by a collaboration between Regione Marche (the regional government of the Italian region of Marche) and Confindustria Marche (the federation of companies located in the Marche region).
32. Since 2012, founding member and webmaster of the group “Italians @ NASA” which gathers together Italian scientists and engineers working at NASA and promotes outreach activities related to space sciences and technology. This activity was carried out with the collaboration of the colonel of the Italian Air Force and ESA astronaut Roberto Vittori and Giulio Maria Busulini, Scientific Attache’ at the Embassy of Italy in Washington, DC, USA.
33. Attendance at the workshop “Italy–United States Defense Science & Technology Dialogue”, Embassy of Italy in the United States, Washington (DC), May 29 2013. (Invited).

CURRENT AND PAST MEMBERSHIPS

1. American Astronomical Society (AAS)
2. European Astronomical Society (EAS)
3. American Association for the Advancement of Science (AAAS)
4. International Astronomical Union (IAU)
5. Committee on Space Research (COSPAR)
6. Selected Member of the Aspen Junior Fellows Alumni of *Aspen Institute Italia* since January 2018.
7. Aspen Junior Fellows of *Aspen Institute Italia* from June 2014 to December 2017.
8. “Italian Scientists and Scholars of North America Foundation” (ISSNAF)

9. Chair and founding member of the “ISSNAF Washington DC Chapter”.
10. Co-Chair and founding member of the “ISSNAF NASA Chapter”
11. Board member of the “Italians in DC” non-profit association

BOOKS AND ARTICLES

- Invited preface to the book “Perche’ l’Universo?” (“Why the Universe?”) by Stephen Hawking, Castelvecchi Editore, 21 March 2018, Italy.
- Invited article about “Black Holes and Galaxies” in the science and history magazine “PROMETEO” of September 2016 (Anno 34 Numero 135) published every three months by Arnoldo Mondadori Editore, Italy.
- “X-ray probe of ultra-fast outflows in Active Galactic Nuclei”, 308 pages in English, LAP LAMBERT Academic Publishing (August 16, 2012), ISBN-10: 3659218073, ISBN-13: 978-3659218071.

Rome, January 16th 2024

Prof. Francesco Tombesi