

Roberto Gilli - Curriculum Vitae

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Education and Career History

Since 2019: First Researcher, INAF — Osservatorio di Astrofisica e Scienza dello Spazio di Bologna (OAS)
2017 — 2018: Researcher, INAF — OAS
2005 — 2017: Astronomer, INAF — Osservatorio Astronomico di Bologna (OABO)
2002 — 2005: Astronomer, INAF — Osservatorio Astrofisico di Arcetri, Firenze
2001 — 2002: Postdoctoral position at The Johns Hopkins University, Baltimore.
Jan 31, 2001: PhD degree in Astronomy at the Firenze University
1998 — 2000: Postgraduate studies at the Firenze University
Jul 22, 1997: Master Degree in Astronomy
1992 — 1997: Undergraduate studies at the Bologna University

Main research interests

Physics and evolution of Active Galactic Nuclei (AGN); BH/galaxy co-evolution; AGN and galaxy clustering; population synthesis models of the X-ray background; the high-redshift Universe; early supermassive black holes, large scale structures, galaxy proto-clusters

Relevant professional activities

Membership in time allocation committees

2021: Participation to ALMA distributed peer review
2017 — 2015: Member of the Italian Time Allocation Committee for the LBT, TNG and REM
2014: Member of the Subaru Telescope TAC (category C-4)
2009: Member of the XMM-Newton OTAC, panel G1 (Cosmology, Extragalactic Deep Fields and Area Surveys) for the 9th Announcement of Opportunity (AO9)
2008: Member of the XMM-Newton OTAC, panel G1 for AO8
2008: Member of the Chandra OTAC, panel 13 (AGN) for observing Cycle 10
2005: Member of the XMM-Newton OTAC, panel E2 (AGN, Quasars, BL-Lac Objects & X-Ray Background) for AO5
2004: Member of the XMM-Newton OTAC, panel E2 for AO4

Panel review activities

2017 — 2021: Referee for the Research Executive Agency of the European Commission
2020: Referee for the Paris Region Fellowship Program (Ile-de-France Paris region)
2019: External referee for candidate PhD thesis, Yale University
2019: External referee for candidate PhD thesis, Roma La Sapienza University
2017: Member of the PhD Dissertation Committee, Bologna University, Dept. of Physics and Astronomy
2017: Member of the PhD Selection Committee, Bologna University, Dept. of Physics and Astronomy
2016: Member of the PhD Dissertation Committee, Geneva University
2016: Referee for the Royal Society (UK)
2016: Referee for the Swiss National Science Foundation
2015: Referee for the Chilean National Science and Technology Commission
2015: Member of the PhD Dissertation Committee, Ferrara University, Dept. of Physics
2013: Member of the PhD Dissertation Committee, Ferrara University, Dept. of Physics

Conference organizing committees

2022: SOC member of the COSPAR Meeting E1.11 Supermassive Black Holes at High-z (Athens, Greece, Jul 16-24)
2022: SOC member of the 14th AGN National Conference (Firenze, Italy, May 23-27)
2020: SOC chair of the workshop “Technological advances in X-ray astronomy” (online, Jul 15-16, 2020)
<http://cxb.oas.inaf.it/xtech20.html>
2019: SOC co-chair of the conference “X-ray astronomy 2019” (Bologna, Italy, Sep 8-13)
2019: SOC member of the workshop “Hot Topics in Astrophysics” (Sexten, Italy, Jul 15-19)

2019: LOC member of the conference “Views on the interstellar medium in galaxies in the ALMA era” (Bologna, Italy, Sep 2-6)
 2017: SOC member of the IV workshop on mm- and submm-astronomy in Italy (Bologna, Italy, Nov 7-10)
 2015: SOC member of the conference "Demographics of AGN from multi-wavelength surveys" (Chania, Greece, Sep 21-24)
 2014: SOC member of the 11th AGN National Conference (Trieste, Italy, Sep 23-26)
 2014: SOC member, workshop “The first billion year of galaxies and black holes” (Sexten, Italy, June 30-July 4)
 2012: SOC member of the workshop “The high-redshift Universe” (Bologna, Italy, Jun 5-6)
 2011: LOC member of the workshop “X-ray astrophysics up to 511 keV” (Ferrara, Italy, Sep 14-16)
 2010: LOC Chairman of the 9th AGN National Conference (Ferrara, Italy, May 24-27)
 2009: SOC member of the workshop “The Wide Field X-ray Telescope” (Bologna, Italy, Nov 25-26)
 2009: LOC member of the conference “X-ray 2009” (Bologna, Italy, Sep 7-11)
 2008: SOC member of the 8th AGN National Conference (Torino, Italy, May 19-22)
 2007: LOC member of the workshop “Simbol-X: the hard X-ray Universe in focus” (Bologna, May 14-16)
 2004: LOC member of the 6th AGN National Conference (Volterra, Italy, May 25-28)

Seminars and colloquia

2020: National Observatory of Athens (online)
 2017: Scuola Normale Superiore, Pisa, Italy
 2017: SISSA, Trieste, Italy
 2016: INAF - Istituto di Radio Astronomia, Bologna, Italy
 2016: Yale University, New Haven, NJ, USA
 2015: Harvard Smithsonian Center for Astrophysics, Cambridge, MA, USA
 2014: INAF - Osservatorio Astronomico di Roma, Italy
 2014: INAF - Osservatorio Astrofisico di Arcetri, Italy
 2011: Universita' La Sapienza, Rome, Italy
 2011: Institute of High Energy Physics, Beijing, China
 2010: Johns Hopkins University, Baltimore, MD, USA
 2010: Goddard Space Flight Center, Greenbelt, MD, USA
 2008: INAF – Osservatorio Astrofisico di Arcetri, Firenze, Italy
 2008: INAF – Osservatorio Astronomico di Brera, Merate, Italy
 2008: University of Innsbruck, Innsbruck, Austria
 2008: European Southern Observatory, Garching, Germany
 2003: Harvard Smithsonian Center for Astrophysics, Cambridge, MA, USA
 2002: Institute of Radio Astronomy, Bologna, Italy
 2001: Osservatorio Astronomico di Brera, Milano, Italy
 1999: RIKEN, Tokyo, Japan

Invited contributions at international conferences

2020: Invited talk at the workshop “Getting ready to descend the slippery slope of multi-messenger cosmological black holes data”, Sexten, Italy, Feb 10-14
 2019: Invited talk at the “Memorial Symposium to Honor Riccardo Giacconi”, National Academy of Science, Washington D.C., May 29-30
 2019: Invited talk at the workshop “Accretion History of AGN (AHA)”, Miami, Oct 17-19
 2018: Invited talk at the workshop “Accretion History of AGN (AHA)”, Miami, Oct 18-20
 2018: Invited talk at the workshop “The interstellar medium of high-z galaxies” MIAPP, Munich, Germany, Apr-May
 2017: Invited talk at the workshop "The remarkable life of a BCG", Sexten, Italy, Feb 20-24
 2015: Discussion panelist. "X-ray surveys of the hot and energetic Cosmos", IAU focus meeting 6 (Honolulu, HI, USA, Aug 5-6)
 2012: Discussion chair. “Illuminating the AGN/galaxy connection” workshop, Ringberg, Germany, Dec 3-5
 2012: Review. “X-ray astronomy: towards the next 50 years” conference, Milano, Italy, Oct 1-5
 2012: Concluding remarks. “Half a century of X-ray astronomy” conference, Mykonos, Greece, Sep 17-21
 2011: Invited talk at the conference “The Sun, the Stars, the Universe and General Relativity”, Beijing, China, Oct 11-15
 2011: Invited talk at the conference “Bridging electromagnetic astrophysics and cosmology with gravitational waves”, Milano, Italy, 28-30 March
 2011: Invited talk at the conference “Present status and future prospects in X-ray astronomy”,

Rome, Italy, March 14-16

- 2010: Solicited talk the conference “9th AGN National Conference”, Ferrara, May 24-27
- 2009: Invited talk at the conference “X-ray astronomy 2009”, Bologna, Sep 7-11
- 2008: Invited talk at the meeting “Exploring the hot Universe with IXO”, Garching, Germany, Sep 17-19
- 2007: Talk. “Journée franco-italienne sur la recherche et coopération” meeting, Marseille, Oct 19
- 2002: Invited review at the 6th AGN National Conference, Como, Italy, Jun 11-14
- 2002: Invited review at the 34th COSPAR meeting, Houston, TX, USA, Oct 10-19.

Successful proposals as PI

- 2021: LBT(LUCI+SOUL), 6hr, “Star formation, AGN feedback, and galaxy assembly: the turbulent youth of a protocluster at $z=1.7$ ”
- 2019: LOFAR, 8hr, Galaxy formation, ICM heating and AGN feedback: the turbulent youth of a proto-cluster at $z=1.69$
- 2018: ALMA, Cycle 6, 10hr, “The Making of a local galaxy cluster: star formation and AGN feedback in a proto-cluster at $z=1.69$ ”
- 2017: LBT(MODS+LUCI), 52hr, strategic program, "The wide and deep survey around J1030: an INAF-LBT legacy field"
- 2017: ALMA, Cycle 5, 12hr, C target, "The environment of early black holes: ALMA observations of a flagship field"
- 2015: Chandra, Cycle 17, 500ks, Large Program, "QSOs at $z=6$: black hole growth and feedback in the early Universe"
- 2015: LBT(LUCI), 8hr, "The brightest galaxy at the reionization epoch"
- 2015: CFHT(WIRCAM), 6hr, "The large-scale environment of QSOs at $z\sim 6$ "
- 2015: ALMA, Cycle 3, 5hr, C targets, “The early coevolution of galaxies and black holes”
- 2013: CFHT(WIRCAM), 6hr, "The large-scale environment of QSOs at $z\sim 6$ "
- 2013: LBT(MODS), 12hr, “The primordial environment of supermassive black holes: an LBC legacy”
- 2012: LBT(MODS), 2012B, 4hr, “High- z black holes in wide area surveys: a novel selection technique”
- 2012: LBT/LBC, 2012A, 12hr, "Mapping the primordial environment of QSOs at $z\sim 6$ "
- 2011: ALMA, Cycle 0, 1hr, C target, “A laboratory to study BH-galaxy coevolution in the early Universe”
- 2010: FORS@VLT, P87, 20hr, “X-ray emitting i-band dropouts: a shortcut to select QSOs at $z\sim 6$ ”
- 2010: XMM, AO10, 80ks, “[Ne V]-selected heavily obscured QSOs at the epoch of the X-ray background”
- 2009: Suzaku, AO3, 90ks, “Another Compton-thick AGN just around the corner”
- 2008: Chandra, Cycle 10, 80ks, “Luminous Compton-thick QSOs at $z\sim 1$ ”
- 2006: Dolores@TNG, AOT13, 4hr, “Tracing an AGN cosmic filament at $z=0.3$ ”
- 2005: Chandra, Cycle 7, 150ks, “Tracing the X-ray cosmic web at $z=0.3$ ”

Large observing programs as co-I

- 2018: Chandra, 700ks, “The spiderweb protocluster”, PI P. Tozzi
- 2017: Chandra, 429ks, "A Reliable X-ray View of the First Quasars", PI N. Brandt
- 2015: XMM, 1.3Ms, "Going beyond COSMOS with the XMM-SERVS survey of W-CDF-S, XMM-LL. and ELAIS-S1", PI. N. Brandt
- 2014: Chandra, 1.25Ms "Black hole fingerprints from cosmic dawn to cosmic noon", PI G. Hasinger
- 2013: Chandra, 3Ms, "The Chandra Deep Field-South: A Peerless Ultradeep Survey for Exploring the Distant X-ray Universe", PI N. Brandt
- 2012: XMM, 300ks, "The XMM-ATLAS survey: AGN - star-formation coevolution", PI I. Georgantopoulos
- 2011: Herschel, 193.6 hr, “Herschel+CANDELS: Unraveling the physical processes that regulate star formation and AGN activity in ordinary galaxies at $z=2$ ”, PI M. Dickinson
- 2008: XMM, 3Ms, “The ultradeep survey in the CDFS: an XMM-Newton legacy”, PI A. Comastri
- 2007: Herschel, 362.6 hr, “The Great Observatories Origins Deep Survey : Far-Infrared Imaging with Herschel”, PI D. Elbaz
- 2006: Chandra, 1.8Ms, “The Chandra-COSMOS survey”, PI M. Elvis
- 2004: XMM, 1.5Ms, “The XMM-Newton wide field survey in the COSMOS field”, PI G. Hasinger

Other Activities

- 2010: Proceedings editor of the workshop “The Wide Field X-ray Telescope” (Bologna, Italy, Nov 25-26)
- Since 2001: Regular referee for A&A, MNRAS, ApJ, ApJL

Main international collaborations

Member of the core science team of the STAR-X mission proposed to the NASA MIDEX call 2021
Member of the Advance X-ray Imaging Satellite (AXIS) team (proposed to the NAS Decadal Survey 2020)
Member of the: Chandra-COSMOS-Legacy collaboration (since 2012); Euclid consortium (since 2010);
Chandra/XMM-COSMOS (since 2005); Chandra/XMM – Deep Field South collaboration (since 2000);
Athena SWG 2.1 and 2.2.
Member of the core science team of the STAR-X mission proposed to the NASA MIDEX call 2016
(16-APMIDEX16-0006)
Chair of the “J1030 deep field” collaboration: <http://j1030-field.oas.inaf.it/>

Teaching and supervision activities

2021: PhD Thesis co-supervisor of Giovanni Mazzolari, Bologna University (Unibo)
2021: Lectures on supermassive black holes for graduate students, Ferrara University (UniFe)
2019: Postdoc supervisor of Stefano Marchesi, INAF-OAS
2018: Lectures on supermassive black holes for graduate students, UniFe
2017: Master Thesis (Laurea Magistrale) co-supervisor of Alessandro Peca, UniBo
2017: Master Thesis co-supervisor of Quirino D’Amato, UniBo
2017: PhD Thesis supervisor of Riccardo Nanni, UniBo
2016: Postdoc supervisor of Barbara Balmaverde, INAF-OAS
2016: Master Thesis co-supervisor of Riccardo Nanni, UniBo
2016: Master Thesis co-supervisor of Chiara Circosta, UniBo
2016: Master Thesis co-supervisor of Luca Bortuzzo, UniBo
2016: Lectures on supermassive black holes for graduate students, UniFe
2015: Lectures on high-redshift AGN for graduate students, Unibo
2015: Lectures on supermassive black holes for graduate students, UniFe
2014: Postdoc supervisor of Nico Cappelluti, INAF-OAS
2013: Master Thesis co-supervisor of Chiara Mongardi, UniBo
2013: Master Thesis co-supervisor of Laura Morselli, UniBo
2012: Master Thesis co-supervisor of Simone Giacche’, UniFe
2012: PhD Thesis co-supervisor of Fabio Vito, UniBo
2011: Master Thesis co-supervisor of Fabio Vito, UniBo
2009: Master Thesis co-supervisor of Sara Cazzoli, UniBo
2008: Contract professor at UniFe, course on High-Energy Astrophysics
2007: Lectures on AGN/galaxy clustering and the cosmic X-ray background for graduate students at UniBo
2006: Lectures on X-ray AGN spectra and the X-ray background for undergrads at UniBo

Publications as of Feb 2022

228 papers on refereed journals (20 as first author) with more than 18900 (1790) citations.
H-index = 69 (source ADS). The full publication list can be consulted [here](#)

Funding ID as a Principal Investigator

2018: 120 kEUR from ASI - INAF 2017-14-H.0
2017: 13 kEUR from ASI - INAF I/037/12/0
2015: 10 kEUR from ASI - ASI-INAF I/037/12/0
2014: 57 kEUR from ASI - ASI-INAF I/037/12/0
2013: 103 kEUR from INAF - PRIN-INAF 2012
2010: 11 kEUR from ASI - ASI-INAF I/009/10/0
2009: 15 kEUR from ASI - ASI-INAF I/008/06