

EUROPEAN
CURRICULUM
VITAE
FORMAT



PERSONAL INFORMATION

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National Institute for Astrophysics - Institute for Space Astrophysics and Planetology.
ORCID <https://orcid.org/0000-0001-5668-6863>

Education

30 September 1999 **Physics Degree** at Università di Roma La Sapienza, 110/110
10 April 2003 **Astronomy Doctor of Philosophy degree** - Conferimento Dottorato di ricerca in astronomia at the University of Roma Tor Vergata.

NATIONAL ACADEMIC QUALIFICATION “MIUR Abilitazione Scientifica Nazionale professore II fascia” (FIS/05) bando 2012: IDONEO”

POSITIONS AND
FELLOWSHIP
(pre-post PhD)

January 2008-date: **Permanent Research at INAF/IAPS** Roma
April 2004 – January 2008: **Research staff at INAF/IASF** (Ex Art. 23) - Roma
April 2003 – April 2004: **Fellowship at INAF/IASF**- Roma
September 2003: Winner of a **PostDoc position** at INAF/Osservatorio di Brera (Milano) Italy
August 2001- May 2002: **EARA (European Association for Research in Astronomy) Marie Curie Training Fellow doctorate** at Institute of Astronomy (Cambridge University, UK)
November 2002 – February 2003: **EARA (European Association for Research in Astronomy) Marie Curie Training Fellow doctorate** at Institute of Astronomy (Cambridge University, UK)

MATERNITY LEAVES

From 26/1/2006 to 25/6/2006
From 23/12/2008 to 22/5/2009

PARTICIPATION TO
ASTROPHYSICS
SCHOOLS

Astrophysics national school. 1999-2000: 4th course: Galaxies formation – Active Galactic nuclei. 10-16 September 2000. Asiago, Italy
Astrophysics national school. 1999-2000: 3th course: Astrophysical plasma – Supernovae. 29 may – 2 June 2000. Mondello (PA), Italy.

30th SAAS-FEE ADVANCED COURSE. High energy spectroscopic astrophysics. 3-8 April 2000, Les Diablerets, Switzerland

RESEARCH INTERESTS

My scientific interest focuses on the study of high energy Astrophysics, through the analysis and modeling of data from space missions. My expertise mainly involves the study of X and gamma -ray emission from compact objects, namely Active Galactic Nuclei and X-ray binaries (i.e. Black Hole on different masses scale), including: study of the inner engine, BH environment, dual and multiple AGN in galaxy mergers and their multi-wavelength behavior, AGN triggering. I am also deeply involved in the study of the scientific requirements of future space missions in the high-energy domain: scientific requirements, instrument trade-off, scientific and instrument simulations.

PUBLICATIONS

More than 150 publications on the scientific journals. The full list can be found Here

<https://ui.adsabs.harvard.edu/search/q=orcid%3A0000-0001-5668-6863&sort=date+desc>

2020-date Scientific Section editor of the chapter “AGN” on *Handbook for X-ray and Gamma-ray Astrophysics*, to be published in Springer Nature Singapore.

ELECTED OBSERVING PROPOSALS

More than 30 selected proposals as PI and CoI with SAX, XMM-Newton, Chandra, INTEGRAL, Suzaku, NuStar, AGILE, VLA, eEVN, MUSE,ESO, Loiano

ACTIVITY OF PEER REVIEW and Advisory Board

2021-2025 **Advisory board member** project Czech Science Foundation EXPRO: *Accreting Black Holes in the new era of X ray polarimetry missions*

2019 and 2020 **Reviewer consolidated grant** proposals made to the Science and Technology Facilities Council (STFC), UK

2019-2020 **ESA Topical Team member** *The Extreme Universe, including Gravitational Waves, black holes, and compact objects for Voyage 2050 process*

2019 and 2013 Member of **peer review panel “Active Galaxies and Quasars” for the Chandra mission** (NASA mission) Cycle 15 (2013) and cycle 21 (2019)

2013 **Referee** for the Italian ministry for education and University funding programs **MIUR/FuturoInRicerca**

2009-2010 Member of the “extragalactic” panel of the **Time Allocation Committee of INTEGRAL** (ESA mission) for cycles AO7 and AO8

Referee of several papers published in most popular refereed journals ApJ, MNRAS, A&A

Review Editor for *Frontiers in Astronomy and Space Sciences*, section extragalactic Astronomy

**TEACHING: lectures
and courses
And ACADEMIC
ACTIVITIES**

2021-date Tutor for a Master thesis at Tübingen University, Faculty of Science, Institute for Astronomy and Astrophysics, Title "X-ray properties of optically selected dual AGN candidates."

2021 Teaching lecture at the workshop "X-ray data modelling of accreting Black Holes", 19-23 July, 2021.

2016-date: "Incarico di docenza" per il Corso di laurea magistrale "Misure Astrofisiche" at Università di Roma Tre, Dipartimento di Fisica e Matematica

2018 member of the committee examination for the Physics PhD conferment at Scuola Internazionale Superiore di Studi Avanzati, Trieste. Title *Clues on the physics of AGN through X-ray spectral, temporal and polarimetric analysis*

2016 member of the committee examination for the Physics PhD conferment at Université Grenoble Alpes and l'Università degli Studi Roma Tre. Title *Constraining the high-energy emission sources in the environment of supermassive black holes*

2013 external referee for the PhD Physics thesis conferment at "Università degli studi roma Tre"
Title: *CAIXA-A, a Catalogue of AGN In the XMM-Newton Archive*

2013 committee examination member for the Physics PhD conferment at "Università degli studi Roma Tre. Esame finale XXV ciclo del concorso della scuola di dottorale in Scienze Matematiche Fisiche e Naturali. Sez. Fisica. Tematica Astrofisica, Fisica terrestre e dell'ambiente".

2012-2013-2014-2015 Physics PhD lecture on "Strong field gravity studies with LOFT" at University Roma Tre, Università di Roma Tre, Dipartimento di Fisica e Matematica

2010 Astronomy PhD course on "High energy astrophysics" Astronomy Ph.D. Degree at "Dip.to Fisica, Università degli Studi di Roma Tor Vergata"

**ADVISOR OF POSTDOC
AND PHD STUDENTS**

2019- date Advisor of **1 postDoc** on the project "Science case study and scientific simulations for the enhanced X-ray Timing Polarimetry mission, eXTP"

2010-2011 Advisor of **1 postDoc** on the project "Analysis of the multiwavelength emission from radio-loud AGN "

2009-2010 Advisor of **1 postDoc** on the project "Analysis and study of the multiwavelength emission from radio-loud AGN observed with Fermi-LAT"

2007 Co-advisor Astronomy **PhD degree thesis** "INTEGRAL observations of AGN"

2004 Co-advisor **Physics Laurea Degree** "X-ray study of the diffuse emission on the Galactic plane at l=95".

GRANTS

6 as PI, 3 as Local PI and 5 as Participant

Scientific coordinator "Attività di Studio per la comunità scientifica di Astrofisica delle Alte Energie e Fisica Astroparticellare - Accordo Attuativo **ASI-INAF n. 2017-14-H.0** – Analisi dati, Teoria e Simulazioni 2019 *Science case study and scientific simulations for the enhanced X-ray Timing Polarimetry mission, eXTP*

Scientific coordinator "Attività di Studio per la comunità scientifica di Astrofisica delle Alte Energie e Fisica Astroparticellare - Accordo Attuativo **ASI-INAF n. 2017-14-H.0** – Analisi dati, Teoria e Simulazioni 2017 *Scientific Simulations for the enhanced X-ray timing polarimetry mission eXTP*

Scientific coordinator (Team Leader) of the international team on the project presented at the International Space Science Institute ISSI 2013-2015 *Unveiling multiple AGN activity in galaxy mergers* <http://www.issibern.ch/teams/agnactivity/Home.html>

Scientific coordinator (PI) of the NuStar data analysis grants 2014 (ASI INAF NuSTAR I/037/12/0). *From phenomenological to physical disk-corona models of AGNs using broad-band NuStar (+XMM) data*

Scientific Coordinator (PI) of INAF-PICS 2012 project (International Program for Scientific cooperation France-Italy). *CHEESES: Constraining the High Energy Emission Sources in the Environment of Supermassive black holes*

National Scientific Coordinator (PI) of the **PRIN-INAF-2011** *A deep insight into strong gravity around black-holes: new theoretical and observational approaches*

Local Scientific coordinator (Responsabile di Unità): 3 data analysis grants ASI-INAF

ASI-INAF I/023/05/0 **Analisi Astrofisica delle Alte Energie**
X-raying accreted and ejected AGNs (PI. M. Cappi)

ASI-INAF I/088/06/0: Studio di Astrofisica delle Alte Energie
Accretion Processes in Nearby and Distant Radio-Quiet AGNs/QSOs. (PI. M. Cappi)

ASI-INAF I/009/10/0: Alte energie e cosmologia delle strutture formate *Analysis of the multiwavelength emission from radio-loud AGN (PI. M. Raiteri)*

Participant

PRIN-INAF 2019 "A Systematic Study of the Largest Reservoir of Baryons and Metals in the Universe: the Circum-Galactic Medium of Galaxies".
PI: F. Nicastro

PRIN-MIUR 2017 “Black hole winds and the baryon life cycle of galaxies: the stone-guest at the galaxy evolution supper”
PI: F. Fiore

CoI at INAF/IASF-Roma, of **5** data analysis grants ASI-INAF I/088/06/0 DA-024, ASI-INAF I/023/05/0, ASI-INAF I/023/05/0, ASI-INAF I/009/10/0, ASI-INAF n. 2017-14-H.0

LOFT – Assessment Phase - ASI I/021/12/0 2012-2014

TECNO-ASI 2014 “A Fast Multi-Pixel, Integrated Silicon Detector-Read-out System for Focal Plane High Resolution X-ray Timing and Spectroscopy” **responsible of work packages:** *Science case and configuration study* and *Science Requirements Document*

ASI-INAF NRAO 2015 “The NuSTAR view of Heavy Obscuration and Strong Feedback in Active Galactic Nuclei”

**COORDINATION
MEMBER OF WORKING
GROUPS FOR FUTURE
MISSIONS**

Current

eXTP - LAD **Project Scientist**

eXTP – **Mission Scientific Co-Coordinator**

eXTP strong field gravity – SFG – **Coordinator**

eXTP Simulation WG – **Coordinator**

LISA Astrophysics Working Group – **Participant**

LISA pre-LISA EM WG – **Co-Coordinator**

IXPE - **Participant**

STROBE-X NASA probe mission – **Steering committee member**

ATHENA SWG2.4 Energetic Universe - The close environments of supermassive black-holes **Participant**

Theseus Observatory Science on AGN – **Coordinator**

Past

LOFT strong field gravity – SFG5 - **Coordinator**

Italian LOFT Strong field gravity working group – **Coordinator**

LOFT Observatory science WG: **Radio-Quiet AGN – Coordinator**

LOFT background study working group - **Participant**

INTEGRAL AGN/survey team – **Participant**

XIPE (X-ray Imaging Polarimetry Explorer) WG3.2: AGN; WG4.2:

Strong Gravity **Participant**

Fermi **associated scientist**

**ESA SCIENTIFIC
REPORTS**

LOFT – Large Observatory for X-ray Timing.

Assessment Study Report “yellow book” for ESA-M3

<http://sci.esa.int/loft/53447-loft-yellow-book/>

Science requirement document <http://sci.esa.int/loft/49447-loft-science-requirements-document/>

LOFT Preliminary Requirements Review Technical and Programmatic Report <http://sci.esa.int/loft/53521-loft-preliminary-requirements-review-technical-and-programmatic-report/>

Technical report “LOFT Large Area Detector Scientific requirements

to the LAD Background variation and systematics”
Technical report “LOFT Large Area Detector Background variation and systematics”

EMINARS AND TALKS:

More that 30 invited talk at international conferences and workshops

Conference SCIENTIFIC ORGANISING COMMITTEES

1st Mondragone Frontiers of Astronomy Series - Latest Advances in X-ray Spectroscopy and Polarimetry" May 19-21 2021 Rome

X-ray Astronomy 2019: Current Challenges and New Frontiers in the Next Decade – 8-13 September 2019. Bologna (Italy)

EWASS 2019 - European Week of Astronomy and Space Science – Symposium S13: Jets and disk Winds Across Cosmic Scales. 27-28 June 2019, Lyon, France

9th FER0 Meeting,- Finding Extreme Relativistic Objectsts - 23-25 May 2018 Heraklion (Crete), Greece

Lorentz center Workshop - The Quest for Multiple Supermassive Black Holes: A Multi-Messenger View Chair person- Nov. 20-24 2017 Leiden, NL

EWASS 2016 - European Week of Astronomy and Space Science Special Session - A multi-messenger view of mergers and multiple supermassive black holes Chair person. 4 – 8 July 2016 Athens, Greece,

LOFT – Second science meeting. 24-27 September 2012, Toulouse France
<http://isdc.unige.ch/loft/index.php/meetings/second-loft-science-meeting>

PRAGUE SYNERGY, co-Chair parson. November 23 - December 1 2013. Prague Czech republic
<http://www.synergy2013.physics.cz/>

AGN10 - X Congresso Nazionale sui Nuclei Galattici Attivi – Roma 10 - 13 September 2012.

Black holes: power behind the scene, 24-28 April 2006, Katmandu, Nepal

Seminars organization

2018-2021 Member of the commision for Seminar organization at INAF-IAPS

MEMBERSHIP OF COMPETITION COMMISSIONS

Member of 18 Announcements for public selection for PostDoc position (Assegno di Ricerca)

Member of 7 Announcements for public selection for “ricercatore a tempo determinato” position at INAF/IAPS

**PRESS RELEASES AND
OUTREACH**

Elsevier Highlights article: *The quest to discover supermassive black hole binaries*

INAF: Coppie di buchi neri affamati cercasi

<https://www.media.inaf.it/2020/03/12/agn-multipli/>

INAF: UN gruppo davvero attivo

<http://www.media.inaf.it/2015/07/21/un-gruppo-davvero-attivo/>

INAF: Il super vento che oscura il buco nero

<http://www.media.inaf.it/2014/06/19/super-vento-buco-nero/>

LE Scienze

http://www.lescienze.it/lanci/2014/06/20/news/inaf_il_super_vento_che_oscura_il_buco_nero-2188515/

INTEGRAL observes a distant (redshift 2.5) lensed galaxy

Picture Of the Month December 2004

http://www.cosmos.esa.int/web/integral/pomgeneration?p_p_id=48_INSTANCE_cPRGXJw9FQjM&_48_INSTANCE_cPRGXJw9FQjM_iframe_yr=2004&_48_INSTANCE_cPRGXJw9FQjM_iframe_mon=12&_48_INSTANCE_cPRGXJw9FQjM_iframe_extn=jpg

Organization and lectures for school in the exhibition “L’occhio della scienza sul sistema Solare e sulle galassie”, Priverno (LT), 18 – 28 May 2007, supported by Regione Lazio and University and Research Italian Ministry.

MOTHER TONGUE
OTHER LANGUAGES

ITALIAN

English [fluent], French [basic]

Il sottoscritto consapevole che – ai sensi dell’art. 76 del D.P.R. 445/2000 – le dichiarazioni mendaci, la falsità negli atti e l’uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali, dichiara che le informazioni rispondono a verità. Il sottoscritto dichiara di aver preso visione dell’informativa sul trattamento dei dati personali pubblicata all’indirizzo: <http://www.uniroma3.it/privacy/>

Roma 23/7/2021 Firmato da ALESSANDRA DE ROSA (in stampatello o con strumenti meccanografici) - copia originale firmata conservata agli atti dell’Università degli Studi di Roma Tre

Roma, 23 July 2021

Alessandra De Rosa