

PERSONAL INFORMATION

Gian Luca Israel

📍 INAF,– Osservatorio Astronomico di Roma, Via Frascati 33, 00078 Monte Porzio Catone (Roma), Italy

✉ gianluca.israel@inaf.it

🌐 Institutional WEB information

Gender Male | Date of birth 2 August 1965

RESEARCH EXPERIENCE

2017 – Present

Research Director

High-Energy Astrophysics Group at the Astronomical Observatory of Rome - National Institute for Astrophysics (*hereafter OAR-INAF*)

2006 – 2017

Lead Researcher

OAR-INAF, Via Frascati 33, Monte Porzio Catone (RM), Italy

2000 – 2006

Staff Astronomer

OAR
High-Energy Astrophysics sector

1998 – 2000

Associated Astronomer

OAR
High Energy Astrophysics: the JET-X telescope

1997 – 1998

Postdoctoral Researcher

OAR
Calibration and identification of JET-X (SPECTRUM X-I[†]) scientific programs

EDUCATION AND TRAINING

1993 – 1996

PhD in Astrophysics

[International School for Advanced Studies – SISSA, Trieste, Italy](#)

Thesis Title: **‘Systematic Search for New X-ray Pulsators in ROSAT public fields’**.

For the first time in high energy astrophysics a systematic and automatized search for coherent signals has been carried out over an unprecedented large number of X-ray cosmic sources (40.000) detected by the the ROSAT and EXOSAT missions. New peculiar X-ray pulsators has been discovered, some of which became the prototype of a class of neutron stars.

Supervisor: Prof. Luigi Stella (Osservatorio di Merate) and Prof. Aldo Treves (Universita' degli Studi di Milano / SISSA)

1992	Italian “Laurea” Degree (110/110) “La Sapienza” University of Rome , Rome, Italy Thesis Title: ‘A new coherent periodicity search technique for X-ray cosmic sources’ A new powerful technique has been developed aimed at automatically searching for coherent signals in the power spectra of high energy time series, even in presence of additional non-Poissonian noise components. Supervisor: Prof. Luigi Stella (Osservatorio di Merate) e Prof. Remo Ruffini (“La Sapienza” University of Rome)
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TEACHING ACTIVITIES

2010 – Present	Università degli Studi di Roma “Tor Vergata”, Master of Science degree in “Space Science and Technology” Coordinator and Lecturer of the “Analysis of Space Missions Data”, http://masterst.roma2.infn.it/joomla/
2008 – 2024	Università degli Studi di Roma “Tor Vergata”, Master of Science degree course. High Energy Astrophysics Lecturer
October 2011	International School “Principles of Multi-wavelength High Time Resolution Astrophysics”, Pula, Italy Lecturer: “Timing Analysis”. http://www.htra.ie/htra11/index.php
August 2008	International School “Urbino 2008: High Energy Astrophysics Summer School”, Urbino, Italia Lecturer: “Timing Analysis”. http://universe.nasa.gov/urbino/urbino.html
May 2005	SIGRAV School in “A Century from Einstein Relativity: probing gravity theories in binary system”, Como, Villa Olmo Lecturer: “White Dwarfs in Binary systems”
2001 – 2002	Università degli Studi di Roma III, PhD in Astronomy course Lecturer: “Astrophysics of Compact Objects”

ADVISORY ACTIVITY

2021-Present	Matteo Imbrogno Ph.D in Astronomy, Università degli Studi di Roma “La Sapienza”/“Tor Vergata”. In search for Pulsating Ultra-Luminous X-ray sources and the quest for their accretion mechanisms
2022	Marzia Campanelli B.Sc. in Physics, Università degli Studi di Roma “La Sapienza”. Studio e caratterizzazione di un campione di nuovi pulsatori X
2020	Matteo Imbrogno B.Sc. in Physics, Università degli Studi di Roma “La Sapienza”. Ricerca di sorgenti periodiche di raggi X nelle osservazioni di XMM-Newton tramite tecniche di accelerazione
2016	Giacomo Cannizzaro B.Sc. in Physics, Università degli Studi di Roma “La Sapienza”. A deep X-ray view of the latest discovered magnetar candidate SGRJ1935+2154

- 2014 **Piero Vaccari**
B.Sc. in Physics, Università degli Studi di Roma "Tor Vergata".
GX 339-4: variabilità e flusso in banda infrarossa
- 2013 **Guillermo Andres Rodriguez Castillo**
Ph.D in Astronomy, Università degli Studi di Roma "La Sapienza".
Taking The Pulse of Transient Magnetars: Connecting Their Long-term Spectral and Timing X-ray Properties
- 2012 **Alexis Antoniadis**
International Stage, Univ. de Paris Diderot VII.
Timing and spectroscopic studies of magnetars, the strongest magnets in the Universe
- 2011 **Daniele Facchino**
B.Sc. in Physics, Università di Bologna "Alma Mater Studiorum".
Taking the Time of the "Magnificent Seven" source RBS1223
- 2011 **Elisa Nichelli**
Ph.D in Astrophysics, Università degli Studi di Roma "Tor Vergata".
The SWIFT Gaze to the Milky Way
- 2011 **Clement Feller**
International Stage, Univ. de Paris Diderot VII.
Etude temporelle et spectrale du rayonnement X de SGR 0501+4516 durant l'épisode de 2008
- 2010 **Federico Bernardini**
Ph.D in Astrophysics, Università degli Studi di Roma "Tor Vergata".
Unifying Timing and Spectral Properties of Transient Magnetar Candidates
- 2010 **Alessandra Albano**
Ph.D in Physics, Università degli Studi di Padova.
Spectral and Timing Properties of Transient Anomalous x-ray Pulsars
- 2010 **Claire Francois-Martin**
International Stage, Univ. de Paris Diderot VII.
Propriétés temporelles et spectrales des magnétars dans les hautes énergies
- 2007 **Federico Bernardini**
B.Sc. in Physics, Università degli Studi di Roma "La Sapienza".
Le Fasi di Raffreddamento di una Magnetar Transiente: Studio Spettrale e temporale della Pulsar X Anomala XTE J1810-197
- 2006 **Nanda Rea**
Ph.D in Astrophysics, Università degli Studi di Roma "Tor Vergata".
Magnetars' Multiwavelength Study
- 2006 **Elisa Nichelli**
B.Sc. in Physics, Università degli Studi di Roma "Tor Vergata".
Emissione ad Alte Energie da Oggetti Compatti con Proprietà Fisiche Estreme
- 2002 **Nanda Rea**
B.Sc. in Physics, Università degli Studi di Roma "Tor Vergata".
Studio delle Caratteristiche Temporali e di Emissione di un Campione di Sorgenti Galattiche di Raggi X

2000 **Francesco Verrecchia**
 B.Sc. in Physics, Università degli Studi di Roma "La Sapienza".
 Ricerca di Controparti Ottiche in un Campioni di Sorgenti Pulsanti di Raggi X in Sistemi Binari di Grande Massa

REFeree ACTIVITY

Journals **Astronomy & Astrophysics, Astronomy & Astrophysics Letters, Astrophysics Journal, Astrophysics Journal Letters, The Astrophysical Journal Supplement Series, Monthly Notices of the Royal Astronomical Society, Nature**

2016 – 2017 **Member of the ESO “Observing Programmes Committee” (OPC) for periods P99-P101**

2012 – 2013 **Member of the “Time Allocation Committee” of the XMM–Newton X-ray space observatory AO12 and AO13**

2006 **Member of the “Time Allocation Committee” of the XMM–Newton X-ray space observatory AO08**

2004-2005 **Member of the “Time Allocation Committee” of the XMM–Newton X-ray space observatory AO04 and AO05**

2000-2002 **Member of the “Time Allocation Committee” of the BeppoSAX X-ray space observatory**

INSTITUTIONAL POSITIONS

2023– **Member of the "Particle and Relativistic Astrophysics" RSN4 at the INAF “Scientific Advisory Panel”.**
http://www.inaf.it/it/sedi/sede-centrale-nuova/consiglio-scientifico?set_language=it

2012 – 2016 **Elected Member of the MA 4 "Particle and Relativistic Astrophysics" at INAF.**
<http://www.brera.inaf.it/MA4/>

1994 – 1996 **Students' President at SISSA**

EDITORIAL POSITIONS

2007 **2nd International congress Cefalù**
 Congress proceedings: “Multicolored Landscape of Compact Objects and their Explosive Origins”, Cefalù, 2006.
<http://scitation.aip.org/content/aip/proceeding/aipcp/10.1063/v924.frontmatter>

2005 **21st International congress Cefalù**
 Congress proceedings: “Interacting Binaries: accretion, evolution, and outcomes”, Cefalù, 2006.
<http://scitation.aip.org/content/aip/proceeding/aipcp/797>

2004 **48th congress of the Italian Astronomical Society**
 Congress proceedings Editor. Milan, 2004.
<http://sait.oat.ts.astro.it/MSAIS/5/>

INVITED REPORTS

Talks/Seminars **More than 60 invited talks/reviews in National and International Conferences/Workshops**

GROUND AND SPACE-BASED OBSERVATIONS

Radio **30 proposal accepted (2 as PI)**

Parkes, GBT

Optical/IR **> 50 Observations nights as PI**

VLT, TNG, NTT, LBT, SALT, WHT, CGHT, NOT, 3.6m ESO, 1.5m Loiano, 1.5m ESO Danese

X-Rays **> 120 pointings/proposals accepted as PI**

ROSAT (1), RXTE (1), ASCA (1), BeppoSAX (28), Chandra (14), XMM-Newton (50), Swift (>20). PI of 3 XMM-Newton Large Program (AO16, AO17, AO20)

FUND COORDINATION ROLES

2025 – 2027 **National Coordinator**

Programmi INAF di Ricerca Fondamentale – Bando 2024, "Timing the Ultra-Luminous x-ray Pulsars (TULiP)

2023 – 2024 **National Coordinator**

Programmi INAF di Ricerca Fondamentale – Bando 2022, "Too B or not too B: the quest for the PULX emission mechanism

2018 – 2022 **Local Coordinator**

PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2017, Prot. 2017LJ39LM - UniAM - UNifying Isolated and Accreting Magnetars

2019 – 2021 **National 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 - PULSating Ultra Luminous and TRANsient x-ray Sources (PulsULtraS)

2017 – 2019 **Local 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 - Understanding the x-ray variable and Transient Sky (ULtraS)

2014 – 2016 **Local Coordinator**

European 7th Framework Programme for Research. EXTraS - Exploring the X-ray Transient and variable Sky
<http://www.extras-fp7.eu/>

2014 **Local Coordinator**

ASI Funds. High Energy Observations of Stellar-mass Compact Objects: Black Holes, Neutron Stars and White Dwarfs

2007 – 2009 **Coordinator**

ASI Funds for the study of High Energy Astrophysics, Theory and Data Analysis. Study of Periodic and Aperiodic Variability of Cosmic X-ray Sources: Datamining in a Decade of Chandra / Swift/ XMM / RXTE Databases

2005 – 2006	Local Coordinator ASI Founds. High Energy Observations of Stellar-mass Compact Objects: Black Holes, Neutron Stars and White Dwarfs
2004 – 2005	Local Coordinator PRIN MIUR. New perspectives in the Astrophysics of Neutron Stars and Black Holes – Physics of compact objects with exrtreme properties
2002	Local Coordinator ASI Founds. Analisi dei dati del satellite BeppoSAX
2002	Local Coordinator ASI Founds. Study of Compact Objects with INTEGRAL
2000	Coordinator Progetto Giovani – Agenzia 2000 CNR Search for Optical/IR counterparts and identification of Anomalous X-ray Pulsars progenitors
DEVELOPMENT OF ASTROPHYSICAL INSTRUMENTATION	
STROBE-X	Science Working Group
SOXS	Son Of X-Shooter Member of the proposing Team. Submitted to ESO, now in acceptance phase.
New Athena	Member of the Science Working Group 3.3 "End points of Stellar Evolution". http://www.cosmos.esa.int/web/athena/community-wg
CTA	Collaborative Member. https://portal.cta-observatory.org/Pages/Countries.aspx
LOFT	Consortium Member e co-responsible of the Italian WP "Dense Matter". Mission submitted to ESA call M4 http://www.isdc.unige.ch/loft/index.php/loft-team/consortium-members
IXPE	Imaging X-ray Polarimetry Explorer. Consortium Member. https://portal.cta-observatory.org/Pages/Countries.aspx Mission submitted to ESA call M4
Swift	Mission Associate Scientist. http://swift.gsfc.nasa.gov/about_swift/participants/teamlist.html
REM	Rapid Eye Mount telescope. Science Verification Team.
JET-X	Joint European Telescope in X-rays (on board of the SPECTRUM X-Γ mission). Core Program identification. 1997-2000
BeppoSAX	X-ray Astronomy Satellite. Core Program identification. 1996

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C1	C1
Spanish	B2	B2	B1	B1	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

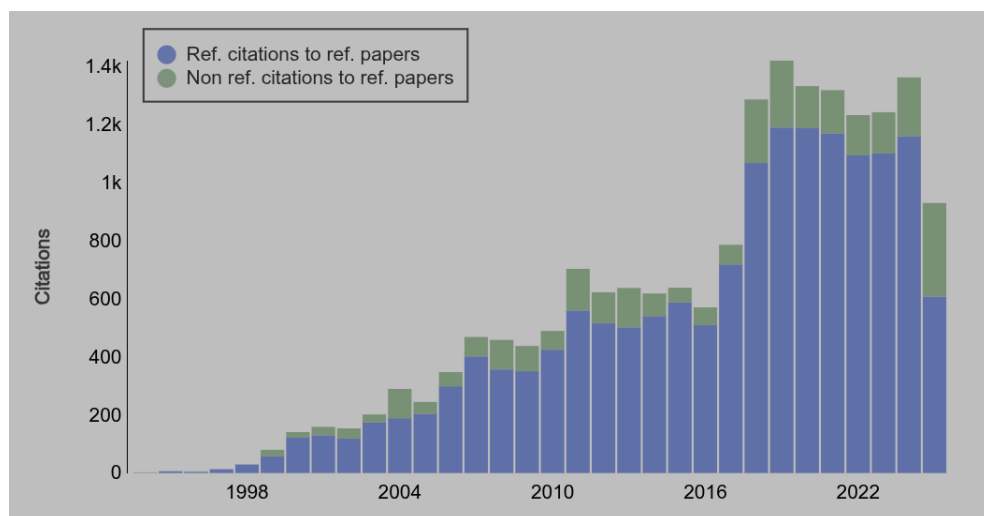
Computer skills

- Programme languages: Advanced knowledge of FORTRAN, knowledge of C/C++
- Data science: R, IDL .
- Operating Systems: GNU/Linux (good knowledge), Ultrix.
- Markup Languages: $\text{\LaTeX}$, HTML
- Scientific Software:
 - HEASoft (FTOOLS and XANADU, spectral and timing analysis; developer of a number of XRONOS packages).
 - XMM-Newton* Science Analysis System (reduction and data analysis; advanced user).
 - MIDAS (reduction and analysis of optical/IR observations; advanced user).
 - In-house developed software for state-of-the-art coherent timing analysis and pulse-phase resolved spectroscopy. Development of bash and csh pipelines/scripts
 - PASTA, SOPA, eSOPA: In-house developed software for state-of-the-art timing analysis and signals detection by means of accelerated searches for High-energy periodic sources, taking into account spin-period derivatives and the orbital motion of the compact object binary systems.

Driving licence B

Statistics

Author of 316 referred works, 40 of which as first author (1st July 2025). These works have been cited 15400 times on referred papers (excluding self-citations). The 316 referred works have the following indexes: $h = 63$, $g = 125$, $m = 1.9$, $i_{10} = 245$ and $tori = 25.9$. He is author of further > 250 works published on not refereed journals.



Topics/Keywords

Isolated and accreting Neutron Stars, Pulsators, Magnetars, Ultraluminous X-ray Sources, Timing analysis, Time-domain Astronomy, Data Mining, White Dwarfs, Cataclysmic Variables, AM CVs, FRBs, GRBs