

# CURRICULUM VITAE



## PERSONAL INFORMATION

Name

**GIULIANA RUSSANO**

## WORK EXPERIENCE

- Dates (from – to)
- Name and address of employer
- Type of business or sector
- Title
- Main activities and responsibilities

2019 October 17 – at today

University of Trento, Department of Physics, Via Sommarive, 14, 38123 Povo (TN), Italy.  
High-level Technical and Administrative Staff

*Research and development activities within the LISA project.*

Ground testing of the gravitational reference sensor of LISA with torsion pendulum facility; support activities for the phase A of development of the future space-based observatory of gravitational waves LISA and ground testing of its Charge Management System.

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2015 June 15 – 2019 September 15

University of Trento, Department of Physics, Via Sommarive, 14, 38122 Povo (TN), Italy.  
Research grant, post-doc.

*LISA Pathfinder mission: experimental activities and data analysis in preparation to the mission and support to mission operations.*

Data analysis of the main experiments performed aboard the satellite, in particular leading a small group of researchers in designing and analyzing the “free-fall mode” experiment, which employed periodic impulse force control of the two-test-mass gradiometer; support for mission operation and data analysis at the European Space Operation Center in Darmstadt; model fitting, noise spectrum estimation and bias analysis with fit and statistical approaches; ground testing of the gravitational reference sensor of LISA Pathfinder with torsion pendulum facility; support activities for the phase A of development of the future space based observatory of gravitational waves LISA and ground testing of its Charge Management System.

- Dates (from – to)
- Name and address of employer
- Type of business or sector

Academic year 2017/2018, 2<sup>nd</sup> semester, 16/02/2018-30/09/2018

University of Trento, Department of Physics, Via Sommarive, 14, 38122 Povo (TN), Italy.  
Teaching support activities for the course of Laboratory of Physics II, 2<sup>nd</sup> module, Optics.

- Dates (from – to)
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- Main activities and responsibilities

2015 May 11 – 2015 June 11

University of Trento, Department of Physics, Via Sommarive, 14, 38122 Povo (TN), Italy.  
Contract for Scientific research.

Experimental activity and data analysis for the on-ground experiment of the “free-fall” mode experiment performed aboard the LISA Pathfinder satellite, by means of torsion pendulum facility.

## EDUCATION AND TRAINING

- Dates (from – to)
- Name and type of organization providing education and training
- Title of qualification awarded
- Principal subjects/occupational

01 November 2011 – 24 April 2015

University of Trento  
Via Sommarive, 14, 38122 Povo (TN), Italy

Ph.D. in Physics

Study and characterization of the performances of the Gravitational Reference Sensor baseline

skills covered	for the LISA Pathfinder mission. Ground testing by means of torsion pendulum facilities. Measurement campaign of the 'Free Fall mode' experiment performed aboard LISA Pathfinder satellite. Participation to the data analysis of the LISA Pathfinder mission.
• Ph. D. thesis title	"A torsion pendulum ground test of the LISA Pathfinder Free-fall mode"
• Dates (from – to)	2007-23/03/2011
• Name and type of organization providing education and training	University Federico II of Napoli Via Cintia, 80100 Napoli (Italy)
• Level in national classification	Master degree Laurea in Astrofisica e Scienze dello Spazio 66/S Classe LM-58 "Scienze dell'Universo" del D.M. 270/04
• Master Degree thesis	"Optical sensor for LISA Pathfinder ground testing". Study and characterization of the noise of the multiple reflection optical sensor (MRORO), used for ground testing of the space mission LISA Pathfinder. The research activity was carried out in the laboratories of the University of Trento and Federico II of Napoli.
• Evaluation	110/110 + first class honors degree
• Dates (from – to)	1999-22/02/2007
• Name and type of organisation providing education and training	University Federico II of Napoli Via Cintia, 80100 Napoli (Italy)
• Level in national classification	Bachelor degree
• Degree thesis	"Cosmic background radiation anisotropies". Main cosmological models, particular attention to scientific results of the main space missions dedicated to cosmic microwave background radiation detection.
• Dates (from – to)	1995-1999
• Name and type of organisation providing education and training	High school Galileo Galilei Via S. Domenico, 80100 Napoli (Italy)
• Title of qualification awarded	Scientific high school qualification

**PERSONAL SKILLS AND COMPETENCES**

MOTHER TONGUE

**ITALIAN**

OTHER LANGUAGES

**ENGLISH**

- Reading skills
- Writing skills
- Verbal skills

BASIC, B2  
BASIC, B1  
BASIC, B1

TECHNICAL SKILLS AND COMPETENCES

Good knowledge of several technologies and instrumentation utilized in laboratory (electronic and optical sources, sensors, oscilloscopes, spectrum analyzers, vacuum enclosure and systems, lock-in amplifiers, ...).

COMPUTER SKILLS AND COMPETENCES

- Excellent knowledge of Matlab. daily use for data analysis application.
- Good knowledge of C and C++ programming languages.
- Good knowledge of Python programming language.
- Good knowledge of the LTPDA object-oriented analysis tool developed for the data analysis of LISA Pathfinder mission for Matlab environment, <https://www.elisascience.org/ltpda/>
- Beginner level of Wolfram Mathematica.

- Ordinary use of technical-scientific application in operating systems like Linux, Mac OS X and Windows
- Good knowledge of Office (Word, Excel, PowerPoint) and document markup language Latex.
- Moderate knowledge of revision control systems and GIT clients (SVN, SourceTree).
- Ordinary use of world wide web and relating utilities, electronic mail.

## SOCIAL SKILLS AND COMPETENCES

Diligent and meticulous attitude towards research activity; good interaction with others and strong sense of community during lab activities and data analysis sessions.

## AWARD AND RECOGNITION

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|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Dates</li> </ul>                                                | October 2017                                                                                         |
| <ul style="list-style-type: none"> <li>• Name and type of organization that awarded the prize</li> </ul> | ESA Corporate Team Achievement Award                                                                 |
| <ul style="list-style-type: none"> <li>• Motivation</li> </ul>                                           | In recognition of the valuable contribution to the success of the LISA Pathfinder Mission.           |
| <ul style="list-style-type: none"> <li>• Dates</li> </ul>                                                | July 2013                                                                                            |
| <ul style="list-style-type: none"> <li>• Name and type of organization that awarded the prize</li> </ul> | International Society on General Relativity and Gravitation (ISGRG)                                  |
| <ul style="list-style-type: none"> <li>• Motivation</li> </ul>                                           | Hartle award for the best student presentation in session C9 at GR20, 10 July 2013, Warsaw (Poland). |