



# Eleonora Giovannetti

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## WORK EXPERIENCE

01/06/2024 – CURRENT Rome, Italy

**POST-DOC RESEARCHER** SAPIENZA UNIVERSITY OF ROME

1-year post-doc position for research activities at Sapienza University of Rome within the group of Prof. Paolo Pani.

01/02/2023 – 31/05/2024 Marseille, France

**POST-DOCTORAL FELLOW** CENTRE DE PHYSIQUE THÉORIQUE - CNRS - AIX-MARSEILLE UNIVERSITÉ

2-years fellowship for research activities with the Quantum Gravity group at CPT in Marseille.

2-months visiting at Western Ontario University in London to collaborate with the Quantum Gravity group of Prof. Francesca Vidotto and Prof. Carlo Rovelli.

10/2022 – 01/2023 Rome, Italy

**UNIVERSITY TEACHING ASSISTANT** SAPIENZA UNIVERSITY OF ROME

Tutoring activity with classroom teaching for the Quantum Mechanics course held by Prof. Andrea Pelissetto and Prof. Marco Nardecchia.

03/2022 – 09/2022 Rome, Italy

**UNIVERSITY TEACHING ASSISTANT** SAPIENZA UNIVERSITY OF ROME

Tutoring activity with online teaching for the Mechanics course held by Prof. Giovanni Battista Bachelet and Prof. Nicolò Spagnolo.

02/2021 – 01/2022 Rome, Italy

**EXTERNAL SUPERVISOR** SAPIENZA UNIVERSITY OF ROME

External supervisor activity for the Master Thesis in Physics entitled "Natura quantistica del Big Bounce per l'Universo isotropo in presenza di un campo scalare autointeragente" by candidate Fabio Maione.

09/2020 – 01/2021 Rome, Italy

**EXTERNAL SUPERVISOR** SAPIENZA UNIVERSITY OF ROME

External supervisor activity for the Master Thesis in Physics entitled "Polymer quantum dynamics of the Bianchi I model in Ashtekar-like variables" by candidate Silvia Schiattarella.

03/2020 – 06/2020 Rome, Italy

**UNIVERSITY TEACHING ASSISTANT** SAPIENZA UNIVERSITY OF ROME

Tutoring activity with online teaching carried out for the Physics course held by Prof. Irene Di Palma.

## EDUCATION AND TRAINING

31/10/2019 – 29/05/2023 Rome, Italy

**PHD IN PHYSICS** Sapienza University of Rome

Research Area: General Relativity, Quantum Gravity, Quantum Cosmology.

**Final grade** Excellent with honors |

**Thesis** "Classical and quantum study of the Big Bounce in early cosmology" with advisor Prof. Giovanni Montani

Area: Theoretical Cosmology

**Final grade** 110/110 cum laude |

**Thesis** "Dinamica semiclassica e quantistica del modello Bianchi IX in rappresentazione polymer" with supervisor Prof. Giovanni Montani.

Area: Condensed Matter

**Final grade** 110/110 | **Thesis** "Il gas di elettroni omogeneo" with supervisor Prof. Giovanni Battista Bachelet.

Winner of a scholarship for honor newly-graduated students granted by "Ilgino Betti Foundation".

**Final grade** 100/100

## ● LANGUAGE SKILLS

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Mother tongue(s): **ITALIANO**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C1	C1	B2	B2
<b>SPANISH</b>	B1	B1	B1	B1	B1
<b>FRENCH</b>	A2	A2	A2	A2	A2

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## ● DIGITAL SKILLS

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Basic knowledge of LaTeX markup language | Mathematica | C

## ● PUBLICATIONS

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2023  
**Quantum Big Bounce for the Bianchi I model in the WDW framework**

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Contribution to the Gravitation Session of the 57th Rencontres de Moriond.

E. Giovannetti and G. Montani

2023  
**[The role of spatial curvature in constraining the Universe anisotropies across a Big Bounce](#)**

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E. Giovannetti and G. Montani, The European Physical Journal C, Springer

2023  
**[Quantum Big Bounce of the Isotropic Universe via a relational time](#)**

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E. Giovannetti, F. Maione and G. Montani, Universe, MDPI

2022  
**[Is Bianchi I a Bouncing Cosmology in the Wheeler-DeWitt picture?](#)**

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E. Giovannetti and G. Montani, Physical Review D, American Physical Society

2022

[\*\*Polymer Dynamics of Isotropic Universe in Ashtekar and in Volume Variables\*\*](#)

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E. Giovannetti, G. Barca, F. Mandini and G. Montani, Universe, MDPI

2022

[\*\*Semiclassical and quantum features of the Bianchi I cosmology in the polymer representation\*\*](#)

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E. Giovannetti, G. Montani and S. Schiattarella, Physical Review D, American Physical Society

2022

[\*\*Comparison of the semiclassical and quantum dynamics of the Bianchi I cosmology in the polymer and GUP extended paradigms\*\*](#)

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G. Barca, E. Giovannetti and G. Montani, IJGMMP, World Scientific

2022

[\*\*PQM and the GUP: Implications of Lattice Dynamics and Minimal Uncertainties in Quantum Mechanics and Cosmology\*\*](#)

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Contribution to the Gravitation Session of the 56th Rencontres de Moriond.

G. Barca, E. Giovannetti and G. Montani

2021

[\*\*An Overview on the Nature of the Bounce in LQC and PQM\*\*](#)

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Invited review article belonging to the Special Issue "Quantum Cosmology".

G. Barca, E. Giovannetti and G. Montani, Universe, MDPI

2021

[\*\*On the semiclassical and quantum picture of the Bianchi I polymer dynamics\*\*](#)

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Proceeding of the talk presented at the 16th Marcel Grossmann meeting.

E. Giovannetti, G. Montani and S. Schiattarella

2021

[\*\*Polymer Quantization of the Isotropic Universe: comparison with the Bounce of Loop Quantum Cosmology\*\*](#)

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Contribution to the 16th Marcel Grossmann meeting.

G. Barca, E. Giovannetti, F. Mandini and G. Montani

2019

[\*\*Polymer representation of the Bianchi IX cosmology in the Misner variables\*\*](#)

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E. Giovannetti and G. Montani, Physical Review D, American Physical Society

● **CONFERENCES AND SEMINARS**

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15/07/2024 – 19/07/2024 Madrid (Spain)

[\*\*Fifth annual conference on quantum gravity phenomenology in the multi-messenger era - QGMM24\*\*](#)

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Contribution to the Morning Session with the talk: "The Bounce in the Bianchi models as a quantum scattering"

29/04/2024 – 10/05/2024 Fort Lauderdale, Florida (USA)

[\*\*Loops' 24\*\*](#)

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Attendance both to the "Loops' 24 Blaumann School for Quantum Gravity" and the "Loops' 24 International Conference on Quantum Gravity". Contribution to the Afternoon Session with the talk: "The Bounce in the Bianchi models as a quantum scattering".

11/12/2023 – 13/12/2023 Valencia (Spain)  
**7th Winter Workshop @Valencia**

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Contribution to the Afternoon Session with the talk: "Quasi-isotropic Bounce à la Vilenkin in the Bianchi IX model"

17/07/2023 – 21/07/2023 Bilbao (Spain)  
**EREP 2023 - Spanish and Portuguese Relativity Meeting**

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Contribution to the Afternoon Session with the talk: "How to control Bianchi IX anisotropies in a bouncing scenario"

10/07/2023 – 14/07/2023 Nijmegen (Holland)  
**Quantum Gravity 2023**

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Contribution to the Afternoon Session with the talk: "How to constrain the Universe anisotropies across a Big Bounce"

18/03/2023 – 25/03/2023 La Thuile (Italy)  
**57th Rencontres de Moriond 2023**

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Contribution to the Gravitation Session with the poster: "Quantum Big Bounce for the Bianchi I model in the WDW framework"

23/01/2023 – 25/01/2023 Pisa (Italy)  
**DarkCosmoGrav: New Frontiers in Particle Physics, Gravity, and Cosmology**

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Contribution to the Cosmology Session with the talk: "A new paradigm for a Quantum Big Bounce in the Wheeler-DeWitt framework"

11/05/2022 – 13/05/2022 Amsterdam (Holland)  
**Strings, Cosmology, & Gravity Student Conference 2022 (SCGSC 2022)**

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Contribution to the Poster Session: "Quantum Big Bounce for the Bianchi I model in the WDW framework"

05/07/2021 – 10/07/2021 Virtual Meeting  
**Sixteenth Marcel Grossmann Meeting - MG16**

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Contribution to the Parallel Session with the talk: "On the semiclassical and quantum picture of the Bianchi I polymer dynamics"

## ● **ORGANISATIONAL SKILLS**

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### **High skills in problem solving.**

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Capability of optimizing working activities.  
Respect of the deadlines.

## ● **COMMUNICATION AND INTERPERSONAL SKILLS**

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### **Student support and Team working activities:**

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High experience in private teaching and supporting students in organizing their study and getting prepared for their exams.  
Great skills in team working thanks to the numerous laboratory activities performed during the Bachelor and Master studies.

## ● **OTHER SKILLS**

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### **Latin and modern dance at a competitive level**

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This activity helps to develop communicative and artistic skills, sense of responsibility towards your team, determination in improving yourself and achieving your objectives, dealing with stress and competition.

## ● **PROCESSING OF PERSONAL DATA**

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### **Authorization**

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I authorize the processing of personal data contained in my curriculum vitae based on art. 13 of the Legislative Decree 196/2003 and art. 13 of EU Regulation 2016/679 relating to the protection of natural persons with regarding to the processing of personal data.

14/10/2024

A handwritten signature in black ink, appearing to read "Laura Gravina". The signature is written in a cursive style with a large initial 'L'.