VATICAN OBSERVATORY LECTURES ON QUANTUM GRAVITY 2026
OPEN QUESTIONS IN QUANTUM GRAVITY

JUNE 22-26, 2026 - SPECOLA VATICANA

Lecturers:
Sergio Cacciatori (Università dell'Insubria)
Claus Kiefer (University of Cologne)
Pierpaolo Mastrolia (Università di Padova)
Roberto Percacci (SISSA)

The quantization of space and time as GR dynamical variables is an unresolved problem. Therefore known quantization methods generate technical problems like perturbative non-renormalizability of the theory.
The lectures will explore fundamental approaches, including: canonical quantum gravity, the problem of time, amplitudes and effective field theory in quantum gravity, covariant quantum gravity. The goal is to confront and contrast these methods, fostering the exchange of ideas necessary to resolve outstanding issues in the field.

The interdisciplinary program consists of FOUR courses for a total of 20 hours and it is oriented to PhD students, postdocs and early career researchers, both in mathematics and in physics. Interaction with and among professors will also be encouraged.

Scientific & Organizing board:
Gabriele Gionti - Dean (Vatican Observatory)
Matteo Galaverni (Vatican Observatory)

Registration:
All applications have to be submitted through the Registration Form Indico system by ***15 April 2026***
here: https://indico.global/event/16082
Selected participants will be invited to pay the registration fee into the bank account that will be indicated to them.

Registration includes:
teaching material in PDF format, lunches, coffee breaks, Guided tour and Social Dinner
EARLY FEE: € 100,00 due payment by May 30th, 2026
REGULAR FEE: € 200,00 due payment by June 15th, 2026
Participants have to find their accommodation in Albano Laziale and cover their travel expenses.

Fellowships:
Scholarships for accommodation (shared room) are offered for up to a maximum of 10 participants

Email:
specolaevents@protonmail.com