

Session Program

28 September 2026 to 2 October 2026



From Quantum Gravity to Cosmology

Invited Talks

Kavli IPMU, Lecture Hall
Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5
Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

Monday 28 September

09:30

Invited Talks

Session |

Location: Kavli IPMU, Lecture Hall, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

09:30–10:20

TBD

Speaker

Jun'ichi Yokoyama

10:20

11:00

Invited Talks

Session |

Location: Kavli IPMU, Lecture Hall, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

11:00–11:50

Black hole resonances and cosmological particle production: an exact WKB approach

Speaker

Ryo Namba

11:50–12:40

Locality of soft dressings: inflationary perturbations and the infrared-finite S-matrix

Speaker

Yuko Urakawa

12:40

14:10

Invited Talks

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14:10–15:00

TBD

Speaker

Misao Sasaki

15:00

Tuesday 29 September

09:30

Invited Talks

Session |

Location: Kavli IPMU, Lecture Hall, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

09:30–10:20

Hořava-Lifshitz Quantum Cosmology

Speaker

Shinji Mukohyama

10:20

11:00

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11:00–11:50

Primordial Signatures of the Quantum Bounce: The robustness of analytic approximations near the bounce in hybrid loop quantum cosmology

Speaker

Kristina Giesel

11:50–12:40

TBD

Speaker

Bianca Dittrich

12:40

14:10

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14:10–15:00

Emergent spacetime and a quantum gravity explanation of the dark sector

Speaker

Daniele Oriti

15:00

Wednesday 30 September

09:30

Invited Talks

Session |

Location: Kavli IPMU, Lecture Hall, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

09:30–10:20

Is Dark Energy Dynamical in the DESI Era?

Speaker

Salvatore Capozziello

10:20

11:00

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11:00–11:50

Phantom crossing from the Standard Model and General Relativity

Speaker

Antonino Marcianò

11:50–12:40

Connecting Quantum Gravity, Effective Theory and Cosmological Observations

Speaker

Bose Benjamin

12:40

15:30

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15:30–16:30

The Dark Universe: from Cosmology to the Laboratory (IPMU colloquium)

Speaker

Clare Burrage

16:30

Thursday 1 October

09:30

Invited Talks

Session |

Location: Kavli IPMU, Lecture Hall, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8583, Japan

09:30–10:20

Making Quantum Gravity Observable: From the Big Bang to Black Holes and Cosmic Horizons.

Speaker

Niayesh Afshordi

10:20

11:00

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11:00–11:50

Formalizing QFT and Quantum Gravity via Homotopy Algebras

Speaker

Olaf Hohm

11:50

Friday 2 October

09:30

Invited Talks

Session |

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09:30–10:20

Cosmology in the string theory landscape and swampland

Speaker

Viktoria Venken

10:20

11:00

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11:00–11:50

Emergent Metric Spacetime and Early Universe Cosmology from the BFSS Matrix Model

Speaker

Robert Brandenberger

11:50–12:40

Emergence of (3+1)-dimensional expanding spacetime from the Lorentzian type IIB matrix model with deformations

Speaker

Asato Tsuchiya

12:40

14:10

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14:10–15:00

Emergent droplet geometry from multi-Matrix Quantum Mechanics

Speaker

Suddhasattwa Brahma

15:00