

Session Program

Dec 2 - 6, 2024



DISCRETE 2024 in Ljubljana

Plenary session

Mon, December 2

9:00 AM

Plenary session: Monday 1

Session | **Location:** Exhibition and Convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana

09:00 - 09:10 **Welcome and introduction to Discrete 2024**

Speaker

Prof. Miha Nemevsek

09:10 - 09:40

Deciphering New Physics through $b \rightarrow s \nu \nu$, $b \rightarrow c \ell \nu$ and $c \rightarrow s \ell \nu$ decays

Speaker

Dr Damir BECIREVIC

09:40 - 10:10

Semileptonic decays with Belle and Belle II

Speaker

Florian Bernlochner

10:10 - 10:40

Top quark operators in SMEFT

Speaker

David Marzocca

10:40 AM

11:10 AM

Plenary session: Monday 2

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

11:10 - 11:40

Flavor Phenomenology of Light Dark Vectors

Speaker

Dr Emmanuel Stamou

11:40 - 12:10

Light dark sector searches at accelerators

Speaker

Prof. Christopher Hearty

12:10 PM

2:00 PM

Plenary session: Monday 3

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

14:00 - 14:30

Branching fractions and CP asymmetries in charm meson decays

Speaker

Prof. Ulrich Nierste

14:30 - 15:00

Study of $b \rightarrow s \ell \ell$ transitions with LHCb

Speaker

Marie-Helene Schune

15:00 - 15:30

Studies of $b \rightarrow s$ transitions with Belle/Belle II

Speaker

Alexander Glazov

3:30 PM

4:00 PM

Plenary session: Monday 4

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

16:00 - 16:30 **Higgs and CP-violation**

Speaker

Christoph Englert

16:30 - 17:00 **Probing CP on lattice**

Speaker

Christoph Lehner

5:00 PM

Tue, December 3

9:00 AM

Plenary session: Tuesday 1

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

09:00 - 09:30 **Recent results in neutrino physics experiments**

Speaker

Francesca Di Lodovico

09:30 - 10:00 **Cosmological perspective on neutrinos**

Speaker

Miguel Escudero Abenza

10:00 - 10:30 **Left-Right Symmetry at Hadron Colliders**

Speaker

Prof. Fabrizio Nesti

10:30 AM

11:00 AM

Plenary session: Tuesday 2

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

11:00 - 11:30 **Strong CP without axions**

Speaker

Ferruccio Feruglio

11:30 - 12:00 **Froggatt-Nielsen ALP**

Speaker

ALESSANDRO VALENTI

12:00 PM

2:00 PM

Plenary session: Tuesday 3

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

14:00 - 14:30 **Searches for Long Lived Particles**

Speakers

Albert De Roeck, Albert De Roeck

14:30 - 15:00 **Baryon number violations involving tau leptons**

Speaker

Julian Heeck

3:00 PM

Wed, December 4

9:30 AM	<p>Plenary session: Wednesday 1 Session Location: Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia</p> <p>09:30 - 10:00 Theory of baryon number violation</p> <p>Speaker Dr Vasja Susič</p> <p>10:00 - 10:30 SUSY particle searches at LHC</p> <p>Speaker Iacopo Vivarelli</p>
10:30 AM	
11:00 AM	<p>Plenary session: Wednesday 2 Session Location: Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia</p> <p>11:00 - 11:30 Malaphoric Z' model for flavour</p> <p>Speaker Prof. Ben Allanach</p> <p>11:30 - 12:00 New particle searches at LHC (non-SUSY)</p> <p>Speaker Livia Soffi</p>
12:00 PM	
2:00 PM	<p>Plenary session: Wednesday 3 Session Location: Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia</p> <p>14:00 - 14:30</p> <p>One Born-Oppenheimer Effective field theory to rule them all: hybrids, tetraquarks, pentaquarks, quarkonium and doubly heavy baryons</p> <p>Speaker Nora Brambilla</p> <p>14:30 - 15:00 Beta decays as probes for fundamental physics</p> <p>Speaker Martin Gonzalez-Alonso</p> <p>15:00 - 15:30</p> <p>SIMP Miracles and WIMP Dead Ends: Navigating the Freeze-Out of MeV Dark Matter</p> <p>Speaker Josef Pradler</p>
3:30 PM	

Thu, December 5

9:00 AM

Plenary session: Thursday 1

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

09:00 - 09:30 **Is flavor discrete?**

Speaker

Alexei Smirnov

09:30 - 10:00 **Generalized symmetries in particle physics**

Speaker

Joseph Enea Davighi

10:00 - 10:30 **Fundamental tests with antimatter**

Speaker

Paolo Crivelli

10:30 AM

11:00 AM

Plenary session: Thursday 2

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

11:00 - 11:30 **New measurement of the ultra-rare $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ decay**

Speaker

Radoslav Marchevski

11:30 - 12:00 **Future colliders**

Speaker

Marcel Vos

12:00 PM

Fri, December 6

9:00 AM

Plenary session: Friday 1

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

09:00 - 09:30 **CP violation in baryogenesis**

Speaker

Rachel Anne Houtz

09:30 - 10:00 **Domain Walls in the early Universe and their gravitational signatures**

Speaker

Fabrizio Rompineve

10:00 - 10:30 **B-meson semileptonic decays from lattice QCD**

Speaker

Alejandro Marino Vaquero Avilés-Casco

10:30 AM

11:00 AM

Plenary session: Friday 2

Session | **Location:** Exhibition and convention center, Urška 4, Dunajska cesta 18, 1000 Ljubljana, Slovenia

11:00 - 11:30 **Towards the long distance contributions from lattice**

Speaker

Prof. Antonin Portelli

11:30 - 12:00 **Searches for new physics with muons**

Speaker

Jure Zupan

12:00 - 12:15 **Closing session**

Speakers

Margarida Nesbitt Rebelo, Prof. Miha Nemevsek

12:15 PM