

Session Program

2-6 Dec 2024



DISCRETE 2024 in Ljubljana

Plenary session

Monday 2 December

09:00

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

11:10

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

14:00

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

15:30

16:00

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

17:00

Tuesday 3 December

09:00

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

11:00

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

14:00

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

15:00

Wednesday 4 December

09:30

Plenary session: Wednesday 1

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

09:30–10:00 **Theory of baryon number violation**

Speaker

Dr Vasja Susič

10:00–10:30 **SUSY particle searches at LHC**

Speaker

Iacopo Vivarelli

10:30

11:00

Plenary session: Wednesday 2

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

11:00–11:30 **Malaphoric Z' model for flavour**

Speaker

Prof. Ben Allanach

11:30–12:00 **New particle searches at LHC (non-SUSY)**

Speaker

Livia Soffi

12:00

14:00

Plenary session: Wednesday 3

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

14:00–14:30

One Born-Oppenheimer Effective field theory to rule them all: hybrids, tetraquarks, pentaquarks, quarkonium and doubly heavy baryons

Speaker

Nora Brambilla

14:30–15:00 **Beta decays as probes for fundamental physics**

Speaker

Martin Gonzalez-Alonso

15:00–15:30

SIMP Miracles and WIMP Dead Ends: Navigating the Freeze-Out of MeV Dark Matter

Speaker

Josef Pradler

15:30

Thursday 5 December

09:00

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

11:00

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

Friday 6 December

09:00

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

11:00

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