

4th CERN Baltic Conference (CBC 2024)

Report of Contributions

Contribution ID: 1

Type: **not specified**

Open Problems in Contemporary Particle Physics

Wednesday 16 October 2024 09:00 (1 hour)

Presenter: RAIDAL, Martti (National Institute of Chemical Physics and Biophysics (EE))

Contribution ID: 2

Type: **not specified**

Dark Matter Models

Wednesday 16 October 2024 10:00 (20 minutes)

Presenter: KANNIKE, Kristjan (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Particle Physics Theory

Contribution ID: 3

Type: **not specified**

Cosmology and DESI Implementations

Wednesday 16 October 2024 10:20 (20 minutes)

Presenter: HÜTSL, Gert

Session Classification: Particle Physics Theory

Contribution ID: 4

Type: **not specified**

Gravitational Wave Probes of Dark Matter

Wednesday 16 October 2024 10:40 (20 minutes)

Presenter: VEERMÄE, Hardi (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Particle Physics Theory

Contribution ID: 5

Type: **not specified**

Practicalities

Tuesday 15 October 2024 11:00 (5 minutes)

Presenter: KOEL, Ants (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: POLICY SESSION

Contribution ID: 6

Type: **not specified**

Opening of the Conference and Welcome - Chair of the CERN Baltic Group

Tuesday 15 October 2024 11:05 (15 minutes)

Primary author: DREIMANIS, Karlis (Riga Technical University (LV))

Presenters: Dr ABAKEVIČIENĒ, Brigita (Kaunas University of Technology); DREIMANIS, Karlis (Riga Technical University (LV))

Session Classification: POLICY SESSION

Contribution ID: 7

Type: **not specified**

CERN Welcome (online)

Tuesday 15 October 2024 11:20 (10 minutes)

Presenter: Prof. TSESMELIS, Emmanuel (CERN)

Session Classification: POLICY SESSION

Contribution ID: 8

Type: **not specified**

Welcome Address by the Vice Rector of Taltech

Tuesday 15 October 2024 11:30 (15 minutes)

Presenter: Dr LUKK, Tiit (Taltech Vice Rector of Research)

Session Classification: POLICY SESSION

Contribution ID: 9

Type: **not specified**

Welcome Address from the Minister of Education and Science (online)

Tuesday 15 October 2024 11:45 (15 minutes)

online

Presenter: Mrs KALLAS, Kristina (Minister of Education and Science)

Session Classification: POLICY SESSION

Contribution ID: **10**

Type: **not specified**

Welcome Address from the Ministry of Economic Affairs and Communications

Session Classification: POLICY SESSION

Contribution ID: 11

Type: **not specified**

Welcome Address from the Parliament of Estonia

Tuesday 15 October 2024 12:00 (20 minutes)

Presenter: Dr KADASTIK, Mario (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: POLICY SESSION

Contribution ID: 12

Type: **not specified**

Welcome Address from the Baltic Assembly

Tuesday 15 October 2024 12:20 (20 minutes)

Presenter: Dr JOLLER, Karmen (Baltic Assembly)

Session Classification: POLICY SESSION

Contribution ID: 13

Type: **not specified**

Baltic ILO Activities

Tuesday 15 October 2024 14:00 (25 minutes)

Primary author: Ms PIKA-OZOLA, Alise (Industrial Liaison Officer for Latvia)

Co-author: AARE, Robert (Estonian Business and Innovation Agency)

Presenters: Ms PIKA-OZOLA, Alise (Industrial Liaison Officer for Latvia); AARE, Robert (Estonian Business and Innovation Agency)

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: 14

Type: **not specified**

Radius Machining

Tuesday 15 October 2024 14:25 (25 minutes)

Presenter: LAANEMÄE, Eva (Regional Manager)

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: 15

Type: **not specified**

GScan

Tuesday 15 October 2024 14:50 (30 minutes)

Presenter: HEKTOR, Andi (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: 16

Type: **not specified**

CBG Workgroup review: Advanced Particle Therapy Center

Tuesday 15 October 2024 15:20 (20 minutes)

Presenter: PALKIS, Kristaps (Riga Technical University (LV))

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: 17

Type: **not specified**

CBG Workgroup review: CMS Tier-II Baltic Computing Center

Tuesday 15 October 2024 15:40 (10 minutes)

Presenter: DREIMANIS, Karlis (Ryga Technical University | CERN)

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: **18**

Type: **not specified**

Lithuanian Student Education on Experimental High-Energy Physics Challenges

Tuesday 15 October 2024 15:50 (20 minutes)

Presenter: JUODAGALVIS, Andrius (Vilnius University (LT))

Session Classification: INDUSTRY AND CERN BG WORKGROUPS SESSION

Contribution ID: **19**

Type: **not specified**

Phase transitions

Wednesday 16 October 2024 11:20 (20 minutes)

Presenter: VASKONEN, Ville

Session Classification: Particle Physics Theory cont.

Contribution ID: 20

Type: **not specified**

Inflation

Wednesday 16 October 2024 11:40 (20 minutes)

Presenter: RACIOPPI, Antonio (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Particle Physics Theory cont.

Contribution ID: 21

Type: **not specified**

Ab-initio algebraic calculations for the small systems of nucleons

Wednesday 16 October 2024 12:00 (20 minutes)

Presenter: STEPSYS, Augustinas (Vilnius University)

Session Classification: Particle Physics Theory cont.

Contribution ID: 22

Type: **not specified**

Nonlocal Quark-Gluon Interactions, A Dyson-Schwinger approach

Wednesday 16 October 2024 12:20 (20 minutes)

Presenter: CHATTERJEE, Arpan (University of Tartu)

Session Classification: Particle Physics Theory cont.

Contribution ID: 23

Type: **not specified**

Quantum information at colliders

Wednesday 16 October 2024 14:00 (20 minutes)

Presenter: MARZOLA, Luca (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Collider Physics

Contribution ID: 24

Type: **not specified**

ZH at FCC

Wednesday 16 October 2024 14:20 (20 minutes)

Presenter: MARZO, Carlo (NICPB)

Session Classification: Collider Physics

Contribution ID: 25

Type: **not specified**

331 models

Wednesday 16 October 2024 14:40 (20 minutes)

Presenter: KOIVUNEN, Niko (University of Helsinki)

Session Classification: Collider Physics

Contribution ID: 26

Type: **not specified**

Dependence of vacuum arc initiation dynamics on the application of a static magnetic field

Wednesday 16 October 2024 15:00 (20 minutes)

Presenter: KOITERMAA, Roni (University of Tartu (EE))

Session Classification: Collider Physics

Contribution ID: 27

Type: **not specified**

Study of Non-Resonant HH Production in WWZZ Decay Mode at CMS Experiment

Wednesday 16 October 2024 15:20 (20 minutes)

Presenter: GAILE, Antra (Riga Technical University (LV))

Session Classification: Collider Physics

Contribution ID: **28**

Type: **not specified**

Di-Higgs Physics at the CMS experiment

Wednesday 16 October 2024 16:00 (20 minutes)

Presenter: LANGE, Torben (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Collider Physics cont.

Contribution ID: 29

Type: **not specified**

Improving Hadronically Decaying Tau Lepton Identification and Reconstruction with Unified End-to-End Machine Learning Methods

Wednesday 16 October 2024 16:20 (20 minutes)

Presenter: TANI, Laurits (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Collider Physics cont.

Contribution ID: **30**

Type: **not specified**

Machine Learning and computing for collider data

Wednesday 16 October 2024 16:40 (20 minutes)

Presenter: PATA, Joosep (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Collider Physics cont.

Contribution ID: 31

Type: **not specified**

Upgrading the Tau Trigger Algorithm at CMS for the High Luminosity LHC

Wednesday 16 October 2024 17:00 (20 minutes)

Presenter: NIELSEN, Christine (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Collider Physics cont.

Contribution ID: 32

Type: **not specified**

The influence of electromagnetic power in vacuum breakdown

Wednesday 16 October 2024 17:20 (20 minutes)

Presenter: TIIRATS, Tauno (University of Tartu (EE))

Session Classification: Collider Physics cont.

Contribution ID: 33

Type: **not specified**

Lepton flavour universality (LFU) violation study in $t\bar{t}$ decays in pp collisions at the CMS detector with $\sqrt{s}=13$ TeV

Wednesday 16 October 2024 17:40 (20 minutes)

Presenter: STRAUTNIEKS, Normunds Ralfs (University of Latvia (LV))

Session Classification: Collider Physics cont.

Contribution ID: **34**

Type: **not specified**

WW unitarity

Thursday 17 October 2024 09:00 (20 minutes)

Presenter: MÜÜRSEPP, Kristjan (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 35

Type: **not specified**

Inflation model building

Thursday 17 October 2024 09:20 (20 minutes)

Presenter: DIOGUARDI, Christian (KBFI)

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 36

Type: **not specified**

Type II Seesaw mechanism

Thursday 17 October 2024 09:40 (20 minutes)

Presenter: KUBARSKI, Aleksei

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 37

Type: **not specified**

Pulsar Timing Array results

Thursday 17 October 2024 10:00 (20 minutes)

Presenter: URRUTIA, Juan (KBFI)

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 38

Type: **not specified**

Probing the Dark Substructure of the Milky Way with Deep Learning

Thursday 17 October 2024 10:20 (20 minutes)

Presenter: PODER, Sven (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 39

Type: **not specified**

Exploring Vector Boson Fusion Di-Higgs Production in the $bb\tau$ Final State

Thursday 17 October 2024 10:40 (20 minutes)

Presenter: SEEBA, Norman (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 40

Type: **not specified**

Neutrino Physics

Thursday 17 October 2024 11:20 (20 minutes)

Presenter: KARKKAINEN, Timo Johnny (Helsinki Institute of Physics (FI))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 41

Type: **not specified**

Novel linear accelerator design for injection of helium ions into a particle therapy synchrotron and parallel radioisotope production

Thursday 17 October 2024 11:40 (20 minutes)

Presenter: NIKITOVIC, Lazar (Riga Technical University (LV))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 42

Type: **not specified**

Advancing the knowledge of Physicochemical and Radiobiological Mechanisms of Flash Radiotherapy

Thursday 17 October 2024 12:00 (20 minutes)

Presenter: Dr VENIUS, Jonas (National Cancer Institute of Lithuania)

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 43

Type: **not specified**

Experimental studies of radiochemical changes at ultra-high dose rates (UHDR) in perspective of FLASH therapy

Thursday 17 October 2024 12:20 (20 minutes)

Presenter: PALSQUIS, Kristaps (Riga Technical University (LV))

Session Classification: Applications and Engineering; Misc. Physics

Contribution ID: 44

Type: **not specified**

Design of a Supporting System for Superconducting Magnets and its application to Rotating Gantries for Cancer Therapy

Thursday 17 October 2024 12:40 (20 minutes)

Presenter: PIACENTINI, Luca (Riga Technical University (LV))

Session Classification: Applications and Engineering; Misc. Physics