

# **1st CERN Baltic Conference (CBC 2021)**

## **Report of Contributions**

Contribution ID: 2

Type: **not specified**

## HERTIS Collaboration

*Wednesday, 30 June 2021 09:15 (15 minutes)*

**Primary author:** Prof. TORIMS, Toms (Riga Technical University (LV))

**Co-authors:** PIKURS, Guntis (Riga Technical University (LV)); KRAVALIS, Kalvis (Riga Technical University); Ms RUSE, Aija (Riga Technical University)

**Presenter:** Prof. TORIMS, Toms (Riga Technical University (LV))

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: 3

Type: **not specified**

## **A review of elemental mass origin and fundamental forces unification**

*Tuesday, 29 June 2021 14:45 (15 minutes)*

**Primary author:** Mr HUSSAIN, Abrar (Tallinn University of Technology)

**Co-authors:** Dr PODGURSKY, Vitali (Tallinn University of Technology); Dr VILJUS, Mart (Tallinn University of Technology); Dr GOLJINDIN, dmitri (Tallinn University of Technology); Dr ANTONOV, Maksim (Tallinn University of Technology); Mr SHAIKH, Asad Alamgir (Tallinn University of Technology)

**Presenter:** Mr HUSSAIN, Abrar (Tallinn University of Technology)

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 4

Type: **not specified**

## **RTU engineering engagement in CMS Technical Integration and BTL**

*Wednesday, 30 June 2021 16:55 (15 minutes)*

**Primary author:** PIKURS, Guntis (Riga Technical University (LV))

**Co-authors:** Dr DREIMANIS, Karlis (Riga Technical University (LV)); Prof. TORIMS, Toms (Riga Technical University (LV))

**Presenter:** PIKURS, Guntis (Riga Technical University (LV))

**Session Classification:** Advanced Technologies: Detectors

**Track Classification:** Detectors: CMS

Contribution ID: 6

Type: **not specified**

## Particle Physics teaching at Vilnius University

*Monday, 28 June 2021 16:15 (10 minutes)*

**Primary author:** GAJDOSIK, Thomas (Vilnius University (LT))

**Presenter:** GAJDOSIK, Thomas (Vilnius University (LT))

**Session Classification:** National Activities and Education

Contribution ID: 7

Type: **not specified**

## **SEMICONDUCTOR AND SCINTILLATION MATERIALS FOR RADIATION DETECTORS**

*Monday, 28 June 2021 14:20 (10 minutes)*

**Primary author:** Mrs BULYCHEVA, Anna (Baltic Scientific Instruments)

**Presenter:** Mrs BULYCHEVA, Anna (Baltic Scientific Instruments)

**Session Classification:** Industry Engagement and R&D

**Track Classification:** Industry engagement and R&D: Detectors

Contribution ID: 8

Type: **not specified**

## Radioactive Waste Monitoring in Nuclear Industry

*Monday, 28 June 2021 14:40 (10 minutes)*

**Primary author:** Mr POHULIAI, Serhii (Baltic Scientific Instruments)

**Presenter:** Mr POHULIAI, Serhii (Baltic Scientific Instruments)

**Session Classification:** Industry Engagement and R&D

**Track Classification:** Industry engagement and R&D: General

Contribution ID: 9

Type: **not specified**

## **Additive Manufacturing Applications for Accelerator Technologies**

*Wednesday, 30 June 2021 11:30 (15 minutes)*

**Primary author:** RATKUS, Andris (Riga Technical University (LV))

**Co-authors:** Prof. TORIMS, Toms; Mr PIKURS, Guntis

**Presenter:** RATKUS, Andris (Riga Technical University (LV))

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: Advanced technological solutions



Contribution ID: **10**

Type: **not specified**

# Gantry Design for the Heavy-Ion Therapy Medical Application

*Wednesday, 30 June 2021 10:00 (15 minutes)*

**Primary author:** RATKUS, Andris (Riga Technical University (LV))

**Co-authors:** Prof. TORIMS, Toms; Mr VILCANS, Jānis

**Presenter:** RATKUS, Andris (Riga Technical University (LV))

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: 11

Type: **not specified**

## Quintessence in a Trap

*Tuesday, 29 June 2021 12:15 (15 minutes)*

**Primary author:** KARCIAUSKAS, Mindaugas (Universidad Complutense de Madrid)

**Presenter:** KARCIAUSKAS, Mindaugas (Universidad Complutense de Madrid)

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 12

Type: **not specified**

## **Improvement of Mechanical and Magnetic Properties of Nb/Cu Structure by Laser Radiation for SRF Applications**

*Wednesday, 30 June 2021 15:00 (15 minutes)*

**Primary authors:** Prof. MEDVIDS, Arturs (Riga Technical University); Dr ONUFRIJEVS, Pavels (Riga Technical University); MALYSHEV, Oleg (STFC Daresbury Laboratory); VALIZADEH, Reza (STFC Daresbury Laboratory); TURNER, Daniel; RIES, Rastislav; SEILER, Eugen (IEE Slovak Academy of Sciences); GÖMÖRY, Fedor (Slovak Academy of Sciences); PIRA, Cristian (LNL-INFN); CHYHYRYNETS, Eduard (INFN - National Institute for Nuclear Physics); Dr ŽUNDA, Audrius; PADGURSKAS, Juozas

**Presenter:** Prof. MEDVIDS, Arturs (Riga Technical University)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Accelerators & Advanced Technologies: Advanced technological solutions

Contribution ID: 13

Type: **not specified**

## High density QCD matter in hadron collisions

*Tuesday, 29 June 2021 16:30 (15 minutes)*

**Primary author:** Dr MAZELIAUSKAS, Aleksas (CERN)

**Presenter:** Dr MAZELIAUSKAS, Aleksas (CERN)

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 14

Type: **not specified**

## **CMS HL-LHC Tracker Upgrade**

*Wednesday, 30 June 2021 16:40 (15 minutes)*

**Primary author:** RINKEVICIUS, Aurelijus (Vilnius University (LT))

**Presenter:** RINKEVICIUS, Aurelijus (Vilnius University (LT))

**Session Classification:** Advanced Technologies: Detectors

**Track Classification:** Detectors: CMS

Contribution ID: 15

Type: **not specified**

## LIEBE loop hydraulic parameter determination

*Wednesday, 30 June 2021 11:00 (15 minutes)*

**Primary authors:** Mr BOIX, Ferran (Materials Engineer Trainee en CERN); KRAVALIS, Kalvis (University of Latvia, Institute of Physics); Dr BUCENIEKS, Imants (Senior Researcher, University of Latvia, Institute of Physics); Dr BULIGINS, Leonids (Director of Institute of Physics of University of Latvia); Dr GOLDSTEINS, Linards (University of Latvia, Institute of Physics, Senior Researcher); Dr DELONCA, Melanie (Head Of Business Development Drive Technology); Dr STORA, Thierry (CERN, Senior physicist)

**Presenter:** KRAVALIS, Kalvis (University of Latvia, Institute of Physics)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: MEDICIS

Contribution ID: 16

Type: **not specified**

## The $Zb\bar{b}$ couplings in models with extended Higgs sectors

*Tuesday, 29 June 2021 16:15 (15 minutes)*

**Primary authors:** JURCIUKONIS, Darius (Vilnius University (LT)); Dr LAVOURA, Luis (CFTP-ULisboa)

**Presenter:** JURCIUKONIS, Darius (Vilnius University (LT))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 17

Type: **not specified**

## **Assessment of Concrete Core and Seating Mortar Samples from CERN UXC55 Cavern Base Slab & Joint studies of Specialist Concrete in view of Radiation Protection Aspects**

*Monday, 28 June 2021 12:10 (10 minutes)*

**Primary author:** CEPURITIS, Rolands (Primekss SIA)

**Presenter:** CEPURITIS, Rolands (Primekss SIA)

**Session Classification:** Industry Engagement and R&D

**Track Classification:** Industry engagement and R&D: Detectors



Contribution ID: **18**

Type: **not specified**

## Connection between tadpole renormalization and gauge dependences

*Tuesday, 29 June 2021 14:30 (15 minutes)*

**Primary author:** DŪDĖNAS, Vytautas (Vilnius University (LT))

**Co-author:** Dr LÖSCHNER, Maximilian (Institute for Theoretical Physics, Karlsruhe Institute for Technology)

**Presenter:** DŪDĖNAS, Vytautas (Vilnius University (LT))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: **19**

Type: **not specified**

## Untangling the spin of a dark boson in Z decays

*Tuesday, 29 June 2021 16:00 (15 minutes)*

**Primary author:** Dr GABRIELLI, Emidio (Nat. Inst. of Chem.Phys. & Biophys. (EE))

**Presenter:** Dr GABRIELLI, Emidio (Nat. Inst. of Chem.Phys. & Biophys. (EE))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 20

Type: **not specified**

## **Pseudo-Goldstone dark matter: gravitational waves and direct-detection blind spots**

*Tuesday, 29 June 2021 12:00 (15 minutes)*

**Primary authors:** TUOMINEN, Kimmo (University of Helsinki); KANNIKE, Kristjan (National Institute of Chemical Physics and Biophysics (EE)); HEIKINHEIMO, Matti (Helsinki Institute of Physics); BENINCASA, Nico (National Institute of Chemical Physics and Biophysics (EE)); KOIVUNEN, Niko (University of Helsinki); ALANNE, Tommi (University of Liverpool); KEUS, Venus (University of Helsinki)

**Presenter:** BENINCASA, Nico (National Institute of Chemical Physics and Biophysics (EE))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 21

Type: **not specified**

## **Cosmic ray tomography: from medical research to security applications**

*Wednesday, 30 June 2021 09:00 (15 minutes)*

**Primary author:** HEKTOR, Andi (National Institute of Chemical Physics and Biophysics (EE))

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

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: 22

Type: **not specified**

## High voltage, high frequency, high bandwidth sweeping arbitrary waveform challenge solution

*Wednesday, 30 June 2021 12:00 (15 minutes)*

**Primary authors:** APSE-APSITIS, Peteris (Riga Technical university); Dr STEIKS, Ingars (Riga Technical university)

**Co-authors:** Dr MEUSEL, Oliver (Institute of Applied Physics Goethe University Frankfurt); Dr DROBA, Martin (Institute of Applied Physics Goethe University Frankfurt); Dr ONDREKA, David (GSI Darmstadt); Dr KATHRIN, Schulte-Ulrichs (GSI Darmstadt)

**Presenter:** APSE-APSITIS, Peteris (Riga Technical university)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: Advanced technological solutions

Contribution ID: 23

Type: **not specified**

## **CLOUD experiment - climate research at CERN**

*Tuesday, 29 June 2021 09:55 (15 minutes)*

**Primary author:** Prof. JUNNINEN, Heikki (University of Tartu)

**Co-authors:** Mr KOEMETS, Paap (University of Tartu/Airel AS); Dr SANDER, Mirme (University of Tartu/Airel AS)

**Presenter:** Prof. JUNNINEN, Heikki (University of Tartu)

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

**Track Classification:** High Energy Physics & Atomic Physics: CLOUD

Contribution ID: 24

Type: **not specified**

## **Overview of Research on scintillator materials in Latvia: past, present, and future**

*Wednesday, 30 June 2021 16:00 (15 minutes)*

**Primary author:** POPOV, Anatoli (University of Latvia (LV))

**Presenter:** POPOV, Anatoli (University of Latvia (LV))

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Detectors: CCC

Contribution ID: 25

Type: **not specified**

## **Development of molecular ion beams for extraction and mass-separation of $^{43,44g,47}\text{Sc}$ radioisotopes from irradiated natural titanium targets at the CERN-MEDICIS facility**

*Tuesday, 29 June 2021 11:30 (15 minutes)*

**Primary author:** Mr MAMIS, Edgars (University of Latvia (LV))

**Co-authors:** STORA, Thierry (CERN); ROTHE, Sebastian (CERN); DUCHEMIN, Charlotte (CERN EN/STI/RBS); PAJUSTE, Elina (University of Latvia (LV)); RADZINA, Maija (Riga Stradins University)

**Presenter:** Mr MAMIS, Edgars (University of Latvia (LV))

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

**Track Classification:** Accelerators & Advanced Technologies: MEDICIS



Contribution ID: 26

Type: **not specified**

## A fakeon doublet solution to the muon $g-2$

*Tuesday, 29 June 2021 14:15 (15 minutes)*

**Primary author:** MELIS, Aurora (National Institute of Chemical Physics and Biophysics (EE))

**Co-authors:** ANSELMINI, DAMIANO; RAIDAL, Martti (National Institute of Chemical Physics and Biophysics (EE)); MARZOLA, Luca (National Institute of Chemical Physics and Biophysics (EE)); PIVA, Marco (NICPB, Tallinn); MÜÜRSEPP, Kristjan (National Institute of Chemical Physics and Biophysics (EE)); KANNIKE, Kristjan (National Institute of Chemical Physics and Biophysics (EE))

**Presenter:** MELIS, Aurora (National Institute of Chemical Physics and Biophysics (EE))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 27

Type: **not specified**

## The radiosensitizer potential of resveratrol on MDA-MB-231 breast cancer cell line

*Wednesday, 30 June 2021 10:15 (15 minutes)*

**Primary author:** LAUKAITIENĖ, Danguolė (Lithuanian University of Health Sciences)

**Co-authors:** Mrs SAVUKAITYTĖ, Aistė (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania); Ms BARTNYKAITĖ, Agnė (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania); Prof. INČIŪRA, Arturas (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania); Prof. JUOZAITYTĖ, Elona (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania); Prof. UGENSKIENĖ, Rasa (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania)

**Presenters:** LAUKAITIENĖ, Danguolė (Lithuanian University of Health Sciences); Ms BARTNYKAITĖ, Agnė (Oncology Institute, Lithuanian University of Health Sciences, Kaunas, Lithuania)

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: **28**

Type: **not specified**

## **Fakeons and particle phenomenology**

*Tuesday, 29 June 2021 14:00 (15 minutes)*

**Primary author:** PIVA, Marco (NICPB, Tallinn)

**Co-authors:** MELIS, Aurora; ANSELMINI, DAMIANO; KANNIKE, Kristjan (National Institute of Chemical Physics and Biophysics (EE)); MARZO, Carlo (NICPB); MARZOLA, Luca (National Institute of Chemical Physics and Biophysics (EE)); MÜÜRSEPP, Kristjan (National Institute of Chemical Physics and Biophysics (EE)); RAIDAL, Martti (National Institute of Chemical Physics and Biophysics (EE))

**Presenter:** PIVA, Marco (NICPB, Tallinn)

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 29

Type: **not specified**

# The origin of quark flavour observables and the stability of the electroweak vacuum in the context of radiative Yukawa couplings

*Tuesday, 29 June 2021 15:45 (15 minutes)*

**Primary author:** MÜÜRSEPP, Kristjan (National Institute of Chemical Physics and Biophysics (EE))

**Co-authors:** MARZO, Carlo (NICPB); GABRIELLI, Emidio (Nat. Inst. of Chem.Phys. & Biophys. (EE)); MARZOLA, Luca (National Institute of Chemical Physics and Biophysics (EE)); OUYANG, RUI-WEN (National Institute of Chemical Physics and Biophysics); RAIDAL, Martti (National Institute of Chemical Physics and Biophysics (EE))

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

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: **30**

Type: **not specified**

## **Multi-scale multi-physics simulations of vacuum breakdown phenomena**

*Wednesday, 30 June 2021 12:30 (15 minutes)*

**Primary author:** KYRITSAKIS, Andreas (University of Tartu)

**Presenter:** KYRITSAKIS, Andreas (University of Tartu)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: Other

Contribution ID: **31**

Type: **not specified**

**Cancelled**

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

Contribution ID: 32

Type: **not specified**

## **Estimating the fake lepton backgrounds for the Drell-Yan differential cross section measurement using 2016 CERN CMS data**

*Tuesday, 29 June 2021 10:25 (15 minutes)*

**Primary authors:** JUODAGALVIS, Andrius (Vilnius University (LT)); AMBROZAS, Marijus (Vilnius University (LT))

**Presenter:** AMBROZAS, Marijus (Vilnius University (LT))

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

**Track Classification:** High Energy Physics & Atomic Physics: Other

Contribution ID: 33

Type: **not specified**

## An algebraic approach for the six nucleon systems

*Tuesday, 29 June 2021 11:45 (15 minutes)*

**Primary author:** Dr STEPŠYS, Augustinas (Vytautas Magnus University)

**Co-authors:** Prof. MICKEVIČIUS, Saulius (Vytautas Magnus University); Dr GERMANAS, Darius (Center for Physical Sciences and Technology); Dr KALINAUSKAS, Ramutis Kazys (Vytautas Magnus University)

**Presenter:** Dr STEPŠYS, Augustinas (Vytautas Magnus University)

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory



Contribution ID: 34

Type: **not specified**

## **Aranet - wireless IoT ecosystem**

*Monday, 28 June 2021 12:00 (10 minutes)*

**Primary author:** Mr SPARNINS, Edgars (SAF Tehnika JSC)

**Presenter:** Mr SPARNINS, Edgars (SAF Tehnika JSC)

**Session Classification:** Industry Engagement and R&D

**Track Classification:** Industry engagement and R&D: General

Contribution ID: 35

Type: **not specified**

## **Real-time observation of strong electric-field-induced surface modification**

*Wednesday, 30 June 2021 12:45 (15 minutes)*

**Primary authors:** VLASSOV, Sergei (University of Tartu); KYRITSAKIS, Andreas; ORAS, Sven (University of Tartu); ZADIN, Vahur (University of Tartu (EE))

**Presenter:** VLASSOV, Sergei (University of Tartu)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: CLIC

Contribution ID: 36

Type: **not specified**

## **Characterization of Cu electrodes after vacuum breakdown with AFM and SEM**

*Wednesday, 30 June 2021 12:15 (15 minutes)*

**Primary author:** ORAS, Sven (University of Tartu)

**Presenter:** ORAS, Sven (University of Tartu)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: CLIC

Contribution ID: 37

Type: **not specified**

## **The study of structural, optical and luminescent properties of topical scintillator materials irradiated by swift heavy ions**

*Wednesday, 30 June 2021 15:45 (15 minutes)*

**Primary authors:** PANKRATOVA, Viktorija (Institute of Solid State Physics, University of Latvia); SKURATOV, Vladimir A. (Joint Institute for Nuclear Research); PANKRATOV, Vladimir (Institute of Solid State Physics, University of Latvia); POPOV, Anatoli I. (Institute of Solid State Physics, University of Latvia)

**Presenter:** PANKRATOVA, Viktorija (Institute of Solid State Physics, University of Latvia)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Detectors: CCC

Contribution ID: 38

Type: **not specified**

## Study of scintillating materials by synchrotron radiation

*Wednesday, 30 June 2021 15:15 (15 minutes)*

**Primary author:** PANKRATOV, Vladimir (Institute of Solid State Physics, University of Latvia)

**Co-author:** POPOV, Anatoli I. (Institute of Solid State Physics, University of Latvia)

**Presenter:** PANKRATOV, Vladimir (Institute of Solid State Physics, University of Latvia)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Detectors: CCC

Contribution ID: 39

Type: **not specified**

## Higher spin particles: dark matter and high energy colliders

*Tuesday, 29 June 2021 15:00 (15 minutes)*

**Primary author:** KOIVUNEN, Niko (National Institute of Chemical Physics and Biophysics (EE))

**Presenter:** KOIVUNEN, Niko (National Institute of Chemical Physics and Biophysics (EE))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 40

Type: **not specified**

## **Compact Linear Collider and the problem of electric breakdowns**

*Wednesday, 30 June 2021 11:45 (15 minutes)*

**Primary authors:** KYRITSAKIS, Andreas; BUTANOVS, Edgars (University of Tartu); ORAS, Sven (University of Tartu); VLASSOV, Sergei; ZADIN, Vahur (University of Tartu (EE))

**Presenter:** ZADIN, Vahur (University of Tartu (EE))

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: CLIC

Contribution ID: 41

Type: **not specified**

## Timing detector layer at the CMS experiment for LHC Run 4

*Wednesday, 30 June 2021 16:25 (15 minutes)*

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

**Co-authors:** STANA, Girts (Riga Technical University (LV)); VECKALNS, Viesturs (Riga Technical University (LV)); PIKURS, Guntis (Riga Technical University (LV))

**Presenter:** DREIMANIS, Karlis (Riga Technical University (LV))

**Session Classification:** Advanced Technologies: Detectors

**Track Classification:** Detectors: CMS



Contribution ID: 42

Type: **not specified**

## Top quark physics engagement at RTU

*Tuesday, 29 June 2021 11:00 (15 minutes)*

**Primary authors:** POTREBKO, Andris (Riga Technical University (LV)); VECKALNS, Viesturs (Riga Technical University (LV))

**Co-author:** DREIMANIS, Karlis (Riga Technical University (LV))

**Presenters:** POTREBKO, Andris (Riga Technical University (LV)); VECKALNS, Viesturs (Riga Technical University (LV))

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

**Track Classification:** High Energy Physics & Atomic Physics: Top Q Physics

Contribution ID: 43

Type: **not specified**

## Improving low-pt electron reconstruction for Higgs physics at CMS

*Tuesday, 29 June 2021 10:10 (15 minutes)*

**Primary authors:** GAILE, Antra (Riga Technical University (LV)); PROSKURINS, Eugene (Riga Technical University (LV)); STRAUTNIEKS, Normunds Ralfs (University of Latvia (LV))

**Co-authors:** DREIMANIS, Karlis (Riga Technical University (LV)); PAJUSTE, Elina (University of Latvia (LV))

**Presenters:** GAILE, Antra (Riga Technical University (LV)); PROSKURINS, Eugene (Riga Technical University (LV)); STRAUTNIEKS, Normunds Ralfs (University of Latvia (LV))

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

**Track Classification:** High Energy Physics & Atomic Physics: Higgs physics

Contribution ID: 44

Type: **not specified**

## **Development of a Doctoral Study programme in Particle Physics and Accelerator Technologies**

*Monday, 28 June 2021 16:00 (15 minutes)*

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

**Co-authors:** VITOLA, Silva (RTU); TORIMS, Toms (Riga Technical University (LV)); Prof. AUZINS, Marcis (University of Latvia)

**Presenters:** Dr DREIMANIS, Karlis (Riga Technical University (LV)); VITOLA, Silva (RTU); Prof. AUZINS, Marcis (University of Latvia)

**Session Classification:** National Activities and Education

Contribution ID: 45

Type: **not specified**

## **State research programme in High-Energy Physics and Accelerator Technologies in Latvia**

*Monday, 28 June 2021 15:30 (15 minutes)*

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

**Co-authors:** PAJUSTE, Elina (University of Latvia (LV)); POPOV, Anatoli I. (Institute of Solid State Physics, University of Latvia); RATKUS, Andris (Riga Technical University (LV)); RUSE, Aija (Riga Technical University)

**Presenter:** Dr DREIMANIS, Karlis (Riga Technical University (LV))

**Session Classification:** National Activities and Education

Contribution ID: 46

Type: **not specified**

## Examples of AI applications

*Wednesday, 30 June 2021 15:30 (15 minutes)*

**Primary author:** Prof. RAUDONIS, Vidas (Kaunas University of Technology)

**Presenter:** Prof. RAUDONIS, Vidas (Kaunas University of Technology)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Data analysis: Machine Learning

Contribution ID: 47

Type: **not specified**

## **Composite materials from nature for space applications**

*Wednesday, 30 June 2021 14:30 (15 minutes)*

**Primary authors:** Prof. PALEVIČIUS, Arvydas (Kaunas University of Technology); Dr ZELENI-AKIENĖ, Daiva (Kaunas University of Technology); Prof. JANUŠAS, Giedrius (Kaunas University of Technology); Dr DUNDULIS, Gintautas (Kaunas University of Technology); Dr YOUSEF, Samy (Kaunas University of Technology)

**Presenter:** Prof. JANUŠAS, Giedrius (Kaunas University of Technology)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Accelerators & Advanced Technologies: Other

Contribution ID: 48

Type: **not specified**

## **Medical radiation dosimetry: some recent developments at Kaunas University of Technology**

*Wednesday, 30 June 2021 09:45 (15 minutes)*

**Primary author:** Prof. ADLIENĖ, Diana (Kaunas University of Technology)

**Presenter:** Prof. ADLIENĖ, Diana (Kaunas University of Technology)

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: 49

Type: **not specified**

## **CERN activities at the Institute of Materials Science of Kaunas University of Technology**

*Monday, 28 June 2021 16:35 (10 minutes)*

**Primary authors:** Dr ABAKEVIČIENĖ, Brigita (Kaunas University of Technology); Prof. TAMULEVIČIUS, Sigitas (Kaunas University of Technology); Prof. TAMULEVIČIUS, Tomas (Kaunas University of Technology); Dr MEŠKINIS, Šarūnas (Kaunas University of Technology)

**Presenter:** Prof. TAMULEVIČIUS, Sigitas (Kaunas University of Technology)

**Session Classification:** National Activities and Education



Contribution ID: 50

Type: **not specified**

## **Assembly and technical check-up**

*Monday, 28 June 2021 09:45 (15 minutes)*

**Session Classification:** Welcome and Opening

Contribution ID: 51

Type: **not specified**

## **NIMMS: the Next Ion Medical Machine Study**

*Wednesday, 30 June 2021 10:30 (15 minutes)*

**Primary authors:** BENEDETTO, Elena (SEEIIST Association (CH)); VRETENAR, Maurizio (CERN)

**Presenter:** BENEDETTO, Elena (SEEIIST Association (CH))

**Session Classification:** Accelerator Technologies & Societal Applications

**Track Classification:** Accelerators & Advanced Technologies: Societal applications

Contribution ID: 52

Type: **not specified**

## Comparative analysis of two LYSO crystal bars by photoluminescence and Raman spectroscopy

*Wednesday, 30 June 2021 14:45 (15 minutes)*

**Primary authors:** PANKRATOVA, Viktorija (Institute of Solid State Physics, University of Latvia); IVANOVA, Anna (Institute of Solid State Physics, University of Latvia); PANKRATOV, Vladimir (Institute of Solid State Physics, University of Latvia); POPOV, Anatoli I. (Institute of Solid State Physics, University of Latvia)

**Presenter:** POPOV, Anatoli I. (Institute of Solid State Physics, University of Latvia)

**Session Classification:** Advanced Technologies: Materials

**Track Classification:** Detectors: CCC

Contribution ID: 53

Type: **not specified**

## **On the On-Shell Renormalization of Fermion Masses, Fields, and Mixing Matrices at 1-loop**

*Tuesday, 29 June 2021 15:30 (15 minutes)*

**Primary author:** Mr DRAUKŠAS, Simonas (Vilnius University (LT))

**Presenter:** Mr DRAUKŠAS, Simonas (Vilnius University (LT))

**Session Classification:** High Energy Physics & Atomic Physics: Theory

**Track Classification:** High Energy Physics & Atomic Physics: Theory

Contribution ID: 54

Type: **not specified**

## **Ab initio investigation of Cu nanoparticle behavior under high electric field**

*Wednesday, 30 June 2021 13:00 (15 minutes)*

**Primary author:** WANG, Ye (University of Tartu)

**Co-authors:** Prof. KYRITSAKIS, Andreas; Dr VLASSOV, Sergei; Prof. ZADIN, Vahur

**Presenter:** WANG, Ye (University of Tartu)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: Advanced technological solutions

Contribution ID: 55

Type: **not specified**

## Opening and welcome by the Rector of the University of Tartu

*Monday, 28 June 2021 10:00 (10 minutes)*

**Presenter:** Prof. ASSER, Toomas (UT)

**Session Classification:** Welcome and Opening

**Track Classification:** Welcome and Opening: Opening session

Contribution ID: 56

Type: **not specified**

## **Estonia and CERN: Minister of Education and Research of the Republic of Estonia**

*Monday, 28 June 2021 10:10 (10 minutes)*

**Presenter:** Ms KERSNA, Liina

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: Policy

Contribution ID: 57

Type: **not specified**

## **Latvia and CERN: Minister of Education and Science of the Republic of Latvia**

*Monday, 28 June 2021 10:30 (10 minutes)*

**Presenter:** Ms MUIŽNIECE, Anita

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: Policy



Contribution ID: 58

Type: **not specified**

## **Lithuania and CERN: Minister of Education, Science and Sport of the Republic of Lithuania**

*Monday, 28 June 2021 10:20 (10 minutes)*

**Presenter:** Ms ŠIUGŽDINIENĖ, Jurgita

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: Policy

Contribution ID: 59

Type: **not specified**

## **Importance of the cooperation with the CERN - development of science, research and technology in the Baltic States: President of the Baltic Assembly**

*Monday, 28 June 2021 10:40 (10 minutes)*

**Presenter:** Mr KUPČINSKAS, Andrius

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: Policy

Contribution ID: **60**

Type: **not specified**

## **CERN and Baltic States: CERN Director for International Relations**

*Monday, 28 June 2021 10:50 (10 minutes)*

**Presenter:** Ms WARAKAULLE, Charlotte Lindberg (CERN)

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: Policy

Contribution ID: **61**

Type: **not specified**

## **Evolution of the CERN Baltic Group**

*Monday, 28 June 2021 11:00 (10 minutes)*

**Presenter:** Prof. TORIMS, Toms (Riga Technical University (LV))

**Session Classification:** Policy and Strategy

**Track Classification:** Welcome and Opening: CBG activities

Contribution ID: 77

Type: **not specified**

## **Electron Acceleration using Chirped Radially Polarized Superluminal Bessel-X Beams**

*Wednesday, 30 June 2021 11:15 (15 minutes)*

**Primary authors:** LAURINAVIČIUS, Klemensas (FTMC); ORLOV, Sergej (FTMC); GOTOVSKI, Pavel (FTMC)

**Presenter:** ORLOV, Sergej (FTMC)

**Session Classification:** Advanced Technologies: Accelerators

**Track Classification:** Accelerators & Advanced Technologies: Advanced technological solutions

Contribution ID: 79

Type: **not specified**

## Doing business with CERN

*Monday, 28 June 2021 14:00 (20 minutes)*

**Presenter:** UNNERVIK, Anders (CERN)

**Session Classification:** Industry Engagement and R&D

Contribution ID: **80**

Type: **not specified**

## Testonica

*Monday, 28 June 2021 11:20 (10 minutes)*

**Presenter:** ARTUR, Jutman (Testonica)

**Session Classification:** Industry Engagement and R&D

Contribution ID: **81**

Type: **not specified**

## **Laser for wakefield acceleration**

*Monday, 28 June 2021 11:30 (10 minutes)*

**Presenter:** VARPUČIANSKIS, Justas (Ekspla)

**Session Classification:** Industry Engagement and R&D



Contribution ID: **82**

Type: **not specified**

## **Advanced 3D Microfabrication Workstation for High-Tech Applications**

*Monday, 28 June 2021 11:40 (10 minutes)*

**Presenter:** Dr JONUŠAUSKAS, Linas (Femtika)

**Session Classification:** Industry Engagement and R&D

Contribution ID: **83**

Type: **not specified**

## **CMS Tier2 development in Latvia**

*Monday, 28 June 2021 14:30 (10 minutes)*

**Presenter:** DATI GROUP

**Session Classification:** Industry Engagement and R&D

Contribution ID: **84**

Type: **not specified**

## **ILO experience - industry engagement in Lithuania**

*Monday, 28 June 2021 14:50 (10 minutes)*

**Presenter:** JELINSKAS, Adomas (Lithuanian Innovation Center)

**Session Classification:** Industry Engagement and R&D

Contribution ID: **85**

Type: **not specified**

## **To be announced ...**

**Session Classification:** Industry Engagement and R&D

Contribution ID: **86**

Type: **not specified**

## To be announced ...

**Session Classification:** Industry Engagement and R&D

Contribution ID: 87

Type: **not specified**

## **The Baltic Teacher Programme @ CERN**

*Monday, 28 June 2021 15:45 (15 minutes)*

**Presenter:** WIENER, Jeff (CERN)

**Session Classification:** National Activities and Education

Contribution ID: **88**

Type: **not specified**

## **CERN related physics teaching at Tartu Univeristy**

*Monday, 28 June 2021 16:25 (10 minutes)*

**Presenter:** JÄRV, Laur (University of Tartu)

**Session Classification:** National Activities and Education

Contribution ID: **89**

Type: **not specified**

## **Baltic School of High-Energy Physics and Accelerator Technologies**

*Monday, 28 June 2021 16:45 (10 minutes)*

**Presenter:** Dr DREIMANIS, Karlis (Riga Technical University (LV))

**Session Classification:** National Activities and Education



Contribution ID: **90**

Type: **not specified**

## **Assembly and technical check-up - Day 2**

*Tuesday, 29 June 2021 08:45 (15 minutes)*

Contribution ID: **91**

Type: **not specified**

## Q&A for Keynote Speech

*Tuesday, 29 June 2021 09:45 (10 minutes)*

Contribution ID: 92

Type: **not specified**

## **TBC - TalTech contribution**

**Session Classification:** Accelerator Technologies & Societal Applications

Contribution ID: 93

Type: **not specified**

## **TBC - Ye Wang contribution**

**Session Classification:** Advanced Technologies: Accelerators

Contribution ID: **94**

Type: **not specified**

## **Assembly and technical check-up - Day 3**

*Wednesday, 30 June 2021 08:45 (15 minutes)*

Contribution ID: **96**

Type: **not specified**

## Closing Remarks

*Wednesday, 30 June 2021 17:10 (5 minutes)*

Contribution ID: 97

Type: **not specified**

## HEP-EX @ NICPB, Tallinn

*Tuesday, 29 June 2021 11:15 (15 minutes)*

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

**Session Classification:** High Energy Physics & Atomic Physics: Experiment

Contribution ID: 98

Type: **not specified**

## **Rebirth of Medical Cyclotron facility in Latvia- Kodolmedicīnas centrs**

*Monday, 28 June 2021 11:50 (10 minutes)*

**Co-author:** Mr KUZMINSKIS, Māris

**Presenters:** Mr KUZMINSKIS, Māris; SIA "KODOLMEDICĪNAS CENTRS"; KUSIŅŠ, Toms

**Session Classification:** Industry Engagement and R&D