

**Agenda for PhD school and Workshop "ASPECTS OF SYMMETRY"**  
**(November 8-12, 2021)**

All times are given in CET

School: **November 8,9**

07:25-07:30 Opening of the school: Ulf-G. Meißner

Chair: Akaki Rusetsky

07:30-09:00 Lecture 1: Ulf-G. Meißner, "Symmetries and their realization"

09:30-11:00 Lecture 2: Andreas Wirzba, "Strong CP problem"

12:00-13:30 Lecture 3: Jörg Pretz, "Polarization measurements for Electric Dipole Moment and Axion/ALP searches"

Students

**November 8**

Chair: Revaz Shanidze

14:30-14:50 Tamar Zakareishvili, "Measurement of the production cross-section of  $J/\psi$  and  $\psi(2S)$  mesons at high transverse momentum in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector"

14:50-15:10 Irakli Lomidze, "Development of the monitoring software for the JEDI polarimeter (JePo) optimization at COSY"

15:10-15:30 Gogita Papalashvili, "The KM3NeT project and Tier2 computing at Tbilisi State University"

15:30-15:50 Sergey Tumasyan, "Higher order QCD corrections for neutral B-meson oscillations"

**November 9**

Chair: Sergey Krivonos

14:30-14:50 Vahid Taghiloo, "Symmetries at Null Boundaries in a linear approach"

14:50-15:10 Alexandre Gurchumelia, "Split octonionic Dirac equation"

15:10-15:30 Erik Khastyan, "Non-compact complex projective spaces as a phase space of integrable systems: supersymmetric extensions"

15:30-15:50 Mher Davtyan, "The role of light polarization and related effects in Maxwell fish eye refractive profile"

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Workshop: **November 10**  
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07:55-08:00 Opening of the Workshop: Ulf-G. Meißner

Chair: Ulf-G. Meißner

08:00-08:30 Thomas Mannel, "Anomalies in B Decays: The first hint at physics beyond the standard model?"

08:30-09:00 Bastian Kubis, "Precision tests of fundamental symmetries with eta and eta' decays"

09:00-09:30 Keri Vos, "The story of Vcb - continued"

Chair: Thomas Mannel

10:00-10:30 Marcel Golz, "BSM in rare charm decays"

10:30-11:00 Aleksey Rusov, "Probing new physics in  $b \rightarrow d$  transitions"

11:00-11:30 Merab Gogberashvili, "Symmetries of the entropy balance condition for the universe"

Chair: Akaki Rusetsky

12:30-13:00 Tom Luu, "Constraining BSM physics on the Lattice"

13:00-13:30 Thomas Vonk, "Axions in Baryon Chiral Perturbation Theory"

13:30-14:00 Zohreh Davoudi, "Lattice QCD, Fundamental Symmetries, and Neutrinoless Double Beta Decay"

14:00-14:20 Tinatin Supatashvili, "On the Wilson loops in 2D tight-binding models"

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Workshop: **November 11**  
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Chair: Tom Luu

08:00-08:30 Archil Kobakhidze, "Gravitational instantons, CP asymmetry and companion axions"

08:30-09:00 Zurab Berezhiani, "Can antimatter be produced in cosmos and (perhaps) in laboratory?"

09:00-09:30 Jordi de Vries, "Resolving the strong CP problem with the EDM portfolio"

Chair: Andro Kacharava

10:00-10:30 Gino Isidori, "Flavor anomalies and the flavor puzzle"

10:30-11:00 Jörg Pretz, "Electric Dipole Moment Measurements at Storage Rings"

11:00-11:30 David Mchedlishvili, "SMART|EDM\_Lab: Contribution to the Electric Dipole Moment (EDM) Measurements at COSY"

Chair: Gogi Jorjadze

- 12:30-12:50 Otar Javakhishvili, "Pellet target development for the EDM search experiment at storage ring COSY"  
12:50-13:10 Revaz Beradze, "LIGO signals from mirror world"  
13:10-13:30 Giorgi Chanturia, "A two-potential formalism for the pion vector form factor"  
13:30-13:50 Lado Razmadze, "Topology and symmetry in carbon nanoribbons"  
13:50-14:10 Hovhannes Demirchian, "Separability of Klein-Gordon equation on near horizon extremal Myers-Perry black hole"  
14:10-14:30 Mariam Abuladze, "Study of Prompt Gamma emission in  $C^{12}(p, p'\gamma) C^{12}$  nuclear reactions close to a Bragg Peak"

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Workshop: **November 12**  
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Chair: Ruben Mkrtchyan

- 08:00-08:30 M.M. Sheikh-Jabbari, "Null Boundary Thermodynamics"  
08:30-09:00 Mirian Tsulaia, "N=1 Linearized Supergravities in Various Dimensions"  
09:00-09:30 Karapet Mkrtchyan, "Democratic formulation of non-linear Electrodynamics"

Chair: Hrachia Babujian

- 10:00-10:30 Gor Sarkissian, "Elliptic, hyperbolic, complex gamma functions and physics in the various dimensions"  
10:30-11:00 Farhang Loran, "Transfer matrix formulation of stationary scattering in two- and three-dimensional quantum mechanics"  
11:00-11:30 Hasmik Poghosyan, "RG flows between  $W_3$  minimal models"

Chair: Ruben Manvelyan

- 12:30-13:00 Stepan Sidorov, "Spin multiplets of supersymmetric mechanics"  
13:00-13:30 Nikolay Kozyrev, "Super-Schwarzian mechanics"  
13:30-13:50 Maneh Avetisyan, "Paving a way from the refined CS to the topological strings"  
13:50-14:10 Melik Karapetyan, "Commutator of higher spin gauge transformation"