

**Session Program**

Jul 8 - 12, 2025

**BPU 12 Congress**

***Interdisciplinary Physics, Mathematical and Computational  
Methods***

Politechnica Univ  
Splaiul Independenței 313, București 060042

## Wed, July 9

3:00 PM

### Interdisciplinary Physics, Mathematical and Computational Methods

Session | Location: Politechnica Univ, Splaiul Independenței 313, București 060042

3:00 – 3:20 PM

#### Decoding the Geodynamo: Quantitative Dependence of Magnetic Field Diagnostics on Dimensionless Control Parameters

Speaker

Klaudio Peqini

3:20 – 3:40 PM

#### UAV LiDAR and Photogrammetry for Accurate 3D Mapping and Modeling in Environmental Physics

Speaker

Dr Sprincean Veaceslav

3:40 – 4:00 PM

#### Generalization of a special class of interacting 2d BF models to an arbitrary even spacetime dimension from a BRST cohomology-based approach

Speakers

Prof. Constantin Bizdadea, Eugen-Mihaita Cioroianu, Solange-Odile Saliu

4:00 – 4:20 PM

#### Hamiltonian origins of a special class of interacting BF models in an arbitrary even spacetime dimension

Speakers

Constantin Bizdadea, Prof. Eugen-Mihaita Cioroianu, Solange-Odile Saliu

4:20 – 4:35 PM

#### Geometric structures for various fermionic fields from a Faddeev-Jackiw argument

Speaker

Stefan Manolescu

4:35 – 4:55 PM

#### Vortices and water waves

Speaker

Rossen Ivanov

5:00 PM

5:30 PM

### Interdisciplinary Physics, Mathematical and Computational Methods

Session | Location: Politechnica Univ, Splaiul Independenței 313, București 060042

5:30 – 5:50 PM

#### Balkan Web of Physics 2025

Speaker

Goran Djordjević

5:50 – 6:10 PM

#### Spectra of Optical Magnons in Bulk Iron

Speaker

Dr Elena Angelova

6:10 – 6:30 PM

#### Inversion Algorithms for Boriçi – Creutz fermions

**Speaker**  
Rudina Osmanaj (Zeqirllari)

6:30 - 6:45 PM **Smart Driving Assistant: Real-time Safety Distance and RPM Guidance**

**Speaker**  
Nicolae Florian

6:45 - 7:00 PM

**Traffic Modeling using Neural Networks: Convolution Neural Network - Long Short Term Memory**

**Speaker**  
Nicolae Florian

7:30 PM

## Thu, July 10

5:30 PM

### Interdisciplinary Physics, Mathematical and Computational Methods

Session | Location: Politechnica Univ, Splaiul Independenței 313, București 060042

5:50 – 6:10 PM

**Spin 1 particle with two additional electromagnetic characteristics in presence of the both magnetic and electric fields**

**Speaker**

Alexander Chichurin

6:10 – 6:25 PM

**Linear Hamiltonians in generators of the Jacobi group  $GJ_n(\mathbb{R})$  on the extended Siegel-Jacobi domain  $X \sim J_n$**

**Speaker**

Stefan Berceanu

7:00 PM