

# 13 Bulgarian-Serbian Astronomical Conference

## PROGRAM

Monday 03.10.22

09:00-10:30 Registration and coffee break

10:30-10:40 Official opening

Evgeni Semkov, Milan Dimitrijević

10:40-12:30 Morning session. Chair: Milan Dimitrijević

10:40 – 11:00 Evgeni Semkov - The new 1.5-meter robotic telescope at the Rozhen Observatory

11:00 – 11:20 Rumen Bachev - Recent achievements at Belogradchik Observatory

11:20 – 11:40 Goran Damljanovic - Gaia Alerts and Bulgarian-Serbian cooperation from 2014 to 2022

11:40 – 12:10 Oliver Vince - Satus of Vidojevica 20 years after its founding (will be presented by Miljana Jovanovic)

12:10 – 12:30 Vladimir Bozhilov - The „Space Education for Bulgaria” (SpaceEdu4BG) Project

14:00-16:00 Afternoon session 1. Chair: Evgeni Semkov

14:00 – 14:30 Alok Gupta - Multi-wavelength variability and QPOs in Blazars

14:30 – 14:50 Miljana Jovanović - Comparison and control stars around quasars suitable for the ICRF – GAIA CRF link

14:50 – 15:10 Milen Minev - A photometric study of high-redshift quasars

15:10 – 15:40 Stanislav Milošević - Dark matter haloes in galaxy mergers

16:00-16:30 Coffee break

16:30-19:00 Afternoon session 2. Chair: Evgeni Semkov

16:30 – 17:00 Anatoly Miroshnichenko - B[e] star CI Cam in the optical range

17:00 – 17:30 Krystian Ilkiewicz - Flickering in polars

17:30 – 18:00 Svetla Tsvetkova - The large-scale magnetic fields of the M dwarf double-line spectroscopic binary FK Aqr

18:00-19:00 Poster session

18:00 Gabriela Zidarova - Long-term multicolor photometry of YSOs in the field of the open cluster Trumpler 37

18:03 Tsvetan Georgiev - Representation of asymmetric data distributions by intergrams instead histograms

18:06 Tsvetan Georgiev - Revealing of repeating structures in time series by structure length selection

18:09 Miroslav Moyseev - Photometric variability in star formation regions

18:12 Momchil Dechev - Bilateral Bulgarian-Indian project “Eruptions, flows and waves in solar atmosphere and their role in space weather”: Overview of the results

18:15 Asen Mutafov - High-energy UV irradiance is dangerous to Earth's biological species

18:18 Zorica Cvetković - Bulgarian-Serbian Cooperation: CCD Observations of Visual Double Stars in the Period 2004-2022

18:21 Lyuba Slavcheva-Mihova - The application of the X-ray vs. UV luminosity relation for quasars

18:24 Boyko Mihov - Jet parameters for the blazar BL Lacertae

18:27 Daniela Boneva - On the disc's density distribution and temperature variations of two binary stars with compact objects

18:30 Goran Damljanovic - Processing double stars images using Machine Learning

18:33 Momchil Dechev - Different Type Prominence Eruptions Associated with CMEs

18:36 Jakub Tokarek – Searching for hierarchical systems in the Gaia Data Release 3

18:39 Rumiana Bojilova - Investigation of the sunrise effect in the ionosphere

## Tuesday 04.10.22

### 09:30-11:00 Morning session 1 Chair: Zoran Simić

09:30 – 10:00 Sava Donkov - Thermodynamics of fluid elements in the context of saturated isothermal turbulence in Molecular Clouds

10:00 – 10:25 Milan Dimitrijević - Stark broadening of Fe XXV lines for neutron stars and their environment investigations

10:25 – 10:40 Magdalena Christova - Analysis of calculated Stark broadening parameters of singly ionized silicon lines

10:40 – 11:00 Svetoslav Botev - Properties of Milky way globular clusters associated with X-ray sources

11:00-11:30 *Coffee break*

### 11:30-12:50 Morning session 2 Chair: Rositsa Miteva

11:30 – 12:00 Bojan Arbutina - Low-mass Contact Close Binary Systems and Their Stability

12:00 – 12:20 Krasimira Yankova - The active zone mobility in a magnetized disk with advection

12:20 – 12:50 Dejan Urosevic - Supernovae throughout the history

14:30-16:00 Afternoon session 1 *Chair: Milica Vučetić*

14:30 – 15:00 Renada Konstantinova-Antova - Magnetic fields and activity in AGB and other evolved giant stars

15:00 – 15:20 Kiril Stoyanov - Optical spectroscopy and X-ray observations of the D-type symbiotic star EF Aql

15:20 – 15:40 Zoran Simić - Impact broadening parameters for some transition metals in A type star

15:40 – 16:00 Petia Yanchulova - Dust Extinction, 3D Structure, and Stellar Properties from Resolved Stars in Nearby Galaxies

16:00-16:30 *Coffee break*

16:30-18:10 Afternoon session 2 *Chair: Galin Borisov*

16:30 – 16:50 Lubomir Iliev - The carousel of cycles of a prototype Be/shell star Pleione

16:50 – 17:10 Svetlana Boeva - Negative superhumps in cataclysmic variables

17:10 – 17:30 Vladislav Marchev - For optical flickering in symbiotic star MWC 560

Wednesday 05.10.22

09:30-11:00 Morning session 1 *Chair: Lubomir Iliev*

10:00 – 10:20 Ognyan Kounchev - Generalized Smoothing splines for data analysis in Astronomy

10:20 – 10:40 Stefan Stefanov - The tilted accretion disc of LS Cam

10:40 – 11:10 Daniela Kirilova - Several cosmological nucleosynthesis constraints on neutrino and new physics

11:10-11:40 *Coffee break*

11:40-12:50 Morning session 2 *Chair: Dejan Urosevic*

11:40 – 12:10 Milica Vučetić - Supernova remnants - perspective from NAO Rozhen

12:10 – 12:50 Todor Veltchev - Power-law tails of the density distribution in star-forming clouds: possible effects of rotation and/or thermodynamics

12:50 – 13:00 Photo of conference participants

14:00-18:30 Excursion

19:30 Conference dinner

Thursday 06.10.22

09:30-11:00 Morning session 1 *Chair: Renada Konstantinova-Antova*

09:30 – 10:00 Rositsa Miteva - Solar radio bursts associated with in situ observed energetic protons and electrons.

10:00 – 10:30 Nikola Petrov - Optical observations of the solar chromosphere by NAO Rozhen.

10:30 – 10:40 Tsvetan Tsvetkov - Online Catalog of Solar Activity Events of Solar Cycle 24.

11:00-11:30 *Coffee break*

11:30-12:30 Morning session 2 *Chair Alok Gupta*

11:30 – 11:50 Yovelina Zinkova - Daytime sky polarization effect.

11:50 – 12:10 Galin Borisov - Physical and dynamical properties of selected Earth co-orbital asteroids.

12:10 – 12:30 Elena Vchkova-Bebekovska - Modeling asteroid shapes using BNAO Rozhen and AS Vidojevica photometric data in combination with sparse data.

14:30-16:00 Afternoon session 1 *Chair: Kiril Stoyanov*

14:30 – 14:50 Rumen Shkevov - Wave-particle resonant interactions in heliosphere periphery.

14:50 – 15:10 Yavor Chapanov - Wavelet Coherence of Total Solar Irradiance and Atlantic Climate.

15:10 – 15:40 Rumen G. Bogdanovski - INDIGO framework.

15:40 – 16:00 Grozdan Shirov - Analysis of meteorological observations for Bulgaria (1905-2022).

16:00-16:30 *Coffee break*

16:30-19:00 Afternoon session 2 *Chair: Kiril Stoyanov*

16:30 – 17:00 Tanyu Bonev - Mankind's first attempt to change the orbit of an asteroid.

17:40-19:00 Open discussion for future cooperation