

# Programme of 14th SCSLSA

Venue: Zepter Hotel “Drina”, Bajina Bašta, Serbia

**The time zone is CEST**

**Monday, June 19, 2023**

16:00 - *Arrival*  
16:00 - 17:00 *Registration*  
  
17:00 - 17:30 *Opening ceremony*  
*Nataša Bon ,Luka Č. Popović & Sylvie Sahal Bréchet*

## **DATABASES AND SPECTRAL LINE SHAPES FROM LABORATORY TO SPACE PLASMA**

Chair: **S. Sahal-Bréchet**

17:30 - 18:00 ***Branislav Marinković, Serbia*** Collisional databases within VAMDC: Synergy with COST Action RADAM  
18:00 - 18:30 ***Yuri Ralchenko, USA*** NIST Atomic Databases: data evaluation, uncertainties, online tools  
18:30 - 21:30 *Welcome reception*

# Tuesday, June 20, 2023

## SPECTRAL LINE SHAPES AND ASTROPHYSICAL PHENOMENA

Chair: **L. Č. Popović**

9:30 - 10:00	<b>Alexei Moiseev,</b> <i>Russia</i>	Radio jets and ionization cones in Seyfert galaxies
10:00 - 10:30	<b>Raj Prince,</b> <i>Poland</i>	Dissecting Mg II and Fe II emission lines in intermediate redshift quasars with SALT
10:30 - 11:00	<b>Patrice Theule,</b> <i>France</i>	Diagnostic emission lines in the Early Universe
11:00 - 11:30	<i>Coffee break</i>	

## EMISSION LINES IN ACTIVE GALAXIES AND NEBULAE

Chair: **E. Stambulchik**

11:30 - 12:00	<b>Elena Shablovinskaya,</b> <i>Chile</i>	Optical spectropolarimetry of AGN: Insights on accretion disk, BLR and dust sublimation
12:00 - 12:30	<b>Djordje Savić,</b> <i>Belgium</i>	Probing the BLR geometry for quadruply lensed quasar Q2237+0305 with microlensing time series
12:30 - 12:50	<b>Eugene Malygin,</b> <i>Russia</i>	Polarimetric reverberation mapping of AGNs in medium-band filters
12:50 - 13:10	<b>Edi Bon,</b> <i>Serbia</i>	Optical reverberation mapping of the Fe II lines in NGC 4051
13:10 - 13:30	<b>Francesco Di Mille,</b> <i>Chile</i>	Nebular Spectroscopy of the enigmatic Sanduleak's star in the LMC
<b>13:30 - 15:00</b>	<i>Lunch</i>	

Tuesday, June 20, 2023 \*continuing\*

## SPECTRAL LINE PHENOMENA IN LABORATORY PLASMAS AND STARS

Chair: **M. S. Dimitrijević**

15:00 - 15:30	<b>Frank Rosmej,</b> <i>France</i>	X-Ray free electron laser driven resonance pumping of spectral lines of highly charged ions in dense plasmas
15:30 - 16:00	<b>Mohamed Kubiti,</b> <i>France</i>	Application of deep-learning to line spectra in magnetic fusion plasmas
16:00 - 16:20	<i>Evgeny Stambulchik,</i> <i>Israel</i>	Analysis of magnetic-field distribution of a white dwarf
16:20 - 16:40	<i>Sylvie Saha-Bréchet,</i> <i>France</i>	The Feshbach resonances applied to the calculation of Stark broadening of ionized spectral lines: An example of interdisciplinary research
16:40 - 16:55	<i>Abubaker Ahmed</i> <i>Siddig, Saudi Arabia</i>	Systematic atomic structure of the neutral cobalt atom (Co I)
16:55 - 17:10	<i>Lamia Abu El</i> <i>Maati, Egypt</i>	Calculations of energy levels, oscillator strengths, transition probabilities and lifetimes of the C-like ion K XIV
17:10 - 17:40	<i>Coffee break</i>	

## POSTER SESSION: SPECTRAL LINES IN ASTROPHYSICAL AND LABORATORY PLASMA

Chair: **N. Bon**

17:40 - 18:40     *Poster session*             *3 min presentations*

# Wednesday, June 21, 2023

## SURVEYS AND SPECTRAL LINE VARIABILITY IN EXTRAGALACTIC OBJECTS

Chair: **D. Ilić**

9:30 - 10:00	<b><i>Maria Charisi,</i></b> <b><i>USA</i></b>	Multi-messenger searches for supermassive black hole binaries
10:00 - 10:30	<b><i>Marco Berton,</i></b> <b><i>Chile</i></b>	Exploring the jet-BLR connection: flare-induced variability in the optical emission lines
10:30- 10:50	<b><i>Nataša Bon,</i></b> <b><i>Serbia</i></b>	Variability of AGN in the context of the main sequence of quasars
10:50 - 11:10	<b><i>Paola Marziani,</i></b> <b><i>Italy</i></b>	Metal content along the quasar main sequence
11:10 - 11:30	<b><i>Yu-Yang Songsheng,</i></b> <b><i>China</i></b>	Resolving close binaries of supermassive black holes in the era of optical interferometry
12:00 -	<b><i>Conference excursion</i></b>	

# Thursday, June 22, 2023

## ATOMIC PARAMETERS AND SPECTRAL LINE SHAPES

Chair: **R. Stamm**

9:30 - 10:00	<b>Annette Calisti,</b> <i>France</i>	Study of the statistical and radiative properties of dense plasmas
10:00 - 10:30	<b>Nikola Cvetanović,</b> <i>Serbia</i>	Complex line shapes in non-thermal laboratory plasma
10:30 - 10:45	<i>Zoran Simić,</i> <i>Serbia</i>	Triply ionized Molybdenum lines in the spectra of the DA-type and the DO-type white dwarfs
10:45 - 11:00	<i>Milan S.</i> <i>Dimitrijević,</i> <i>Serbia</i>	On the Stark broadening of Ga II spectral lines
11:00 - 11:30	<i>Coffee break</i>	

## SPECTRAL LINE PHENOMENA IN EXTRAGALACTIC OBJECTS

Chair: **A. Moiseev**

11:30 - 12:00	<b>Giustina Vietri,</b> <i>Italy</i>	Extremely high-velocity UV outflows in the most luminous QSOs at cosmic noon: discovery, implications & perspectives
12:00 - 12:30	<b>Konrad Tristram,</b> <i>Chile</i>	What the submm spectral line emission in the nucleus of the Circinus galaxy tells us about accretion and feedback in AGN
12:30 - 12:50	<i>Sladjana Knezevic,</i> <i>Serbia</i>	Outflow morphology in the active galactic nucleus of Circinus galaxy
12:50 - 13:10	<i>Majda Smole,</i> <i>Serbia</i>	Reducing the run time of MCRT simulations with help of INLA
13:10 - 13:30	<i>Maria S. Kirsanova,</i> <i>Russia</i>	3D structure of expanding HII regions
13:30 - 15:00	<i>Lunch break</i>	

Thursday, June 22, 2023 \*continuing\*

## SPECTRAL LINE PHENOMENA IN EXTRAGALACTIC OBJECTS

Chair: **E. Bon**

15:00 - 15:30	<b>Lovro Palaversa,</b> <i>Croatia</i>	Gaia as an AGN discovery machine
15:30 - 16:00	<b>Swayamtrupta Panda,</b> <i>Brazil</i>	Emission line regions in active galaxies: selected studies in spectral line variability in the era of JWST and LSST
16:00 - 16:20	<b>Marta Fatović,</b> <i>Croatia</i>	Periodic variability of Stripe 82 quasar light curves and associated changes in Mg II emission line profiles
16:20 - 16:40	<b>Elena Shablovinskaya,</b> <i>Chile</i>	Intraday variations of polarization vector in blazars: A key to the optical jet structure?
16:40 - 17:00	<b>Nemanja Rakić,</b> <i>R.Srpska, B&amp;H</i>	Fantastic fits of AGN spectra with “fantasy”python code
17:00 - 17:30	<i>Coffee break</i>	

## SPECTRAL LINE SHAPES IN DIFFERENT SPACE CONDITIONS

Chair: **S. Simic**

17:30 - 18:00	<b>Oleg Egorov,</b> <i>Germany</i>	Kinematics of the ionized gas in nearby galaxies as diagnostics of the energy balance between ISM and massive stars
18:00 - 18:15	<b>Karolina Plakitina,</b> <i>Russia</i>	Exploring the spectra and molecular complexity of hot cores in RCW 120
18:15 - 18:30	<b>Priyanka Jalan,</b> <i>Poland</i>	Convolution neural network to characterize the Voigt profile of the Lyman-alpha forest absorbers
18:30 - 18:45	<b>Milica Vučetić,</b> <i>Serbia</i>	Study of faint emission sources and massive stars in IC1613 galaxy
18:45 - 19:00	<b>Sladjana Knežević,</b> <i>Serbia</i>	Studying shock and ambient ISM properties in Balmer-dominated supernova remnants
20:00 -	<i>Conference Dinner</i>	

# Friday, June 23, 2023

## SPECTRAL LINE RESEARCH: NEW FRONTIERS

Chair: **V. Srecković**

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|---------------|---|--|
| 09:30 - 10:00 | <b><i>Ibtissem Hannachi,</i></b><br><i>France</i> | Computer simulations of the effect of oscillating electric fields on line shapes |
| 10:00 - 10:20 | <b><i>Ivan Traparić,</i></b><br><i>Serbia</i>     | Stark broadening modeling with ML and AI algorithms                              |
| 10:20 - 10:50 | <i>Coffee break</i>                               |  |

## SPECTRAL LINE VARIABILITY AND OTHER CHARACTERISTICS IN AGNs

Chair: **P. Marziani**

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|---------------|--|---|
| 10:50 - 11:20 | <b><i>Predrag Jovanović,</i></b><br><i>Serbia</i>        | Optical and X-ray counterpart of subparsec supermassive binary black holes              |
| 11:20 - 11:40 | <b><i>Dragana Ilić,</i></b><br><i>Serbia</i>             | Long-term monitoring of broad-line AGN  |
| 11:40 - 11:55 | <b><i>Alice Deconto-Machado,</i></b><br><i>Spain</i>     | On the quasar Main Sequence at high redshift: AGN outflows and radioloudness relations  |
| 11:55 - 12:10 | <b><i>Denimara Dias dos Santos,</i></b><br><i>Brazil</i> | Joint analysis of the iron emission in the optical and near-infrared spectrum of I Zw 1 |
| 12:10 - 12:30 | <i>Official closing of the conference</i>                |   |
| 12:30 - 14:00 | <i>Lunch break</i>                                       |   |
| 14:15         | <i>Departure</i>   |   |

## POSTERS

P01	<i>Magdalena Christova &amp; Milan S. Dimitrijević</i>	Application of Stark broadening of Al IV spectral lines in astrophysics
P02	<i>Aleksandrina Smirnova</i>	Enigmatic emission structure around the narrow-line Seyfert 1 galaxy Mrk 783
P03	<i>Roland Stamm, Ibtisem Hannachi, J. Rosato, Y. Marandet</i>	Strong distortions of line shapes in periodic electric fields
P04	<i>Jelena Kovačević-Dojčinović, Ivan Dojčinović, Luka Č. Popović</i>	The intrinsic reddening in AGNs Type 1.9: influence to the black hole mass estimation
P05	<i>Benedetta Della Barba et al.</i>	Optical properties of two complementary samples of intermediate Seyfert galaxies
P06	<i>Vladimir A. Srecković, S. Tošić and V. Vujčić</i>	Dataset for electron-impact processes involving hydrogen and alkali molecular ions
P07	<i>Kolarski, A., Srecković V. and Mijić Z.</i>	The influence of Solar X-rays: modeling atmosphere
P08	<i>Kolarski, A., Veselinović, N., Srecković, V. A., Mijic, Z., Savić M. and Dragić A.</i>	Multi instrumental investigation of the powerful solar flares impact on the ionosphere: case study
P09	<i>Arturs Cinins, Milan S. Dimitrijević, Vladimir A. Srecković, Martins Bruvelis, Kaspars Miculis, Nikolai N. Bezuglov and Aigars Ekers</i>	Visualization of adiabatic dark states under two-photon excitation of sodium atoms
P10	<i>Zlatko Majlinger, Milan S. Dimitrijević, Vladimir Srecković</i>	Initial Stark width investigation of Te II spectral lines and their importance in astrophysical applications
P11	<i>Karla Garnica Luna, D. Dultzin, P. Marziani, S. Panda</i>	A spectral energy distribution for extreme population A sources
P12	<i>Sladjana Marčeta-Mandić, Jelena Kovačević-Dojčinović, Luka Č. Popović</i>	The Connection Between the Broad Emission Line Properties and Stellar Velocity Dispersion in Sample of AGNs Type 1
P13,	<i>Miljana Jovanović, Goran Damljanović</i>	Optical Spectral Variability of 12 Blazars