

SPIG 2020 PROGRAMME (VIRTUAL)

Šabac, Serbia, August 24 – 28, 2020

All indicated times are given in the Central European Time (CET) zone.

Monday 24th August 2020		
SPIG 2020 (day 1)		
<i>PL – Plenary lecture: 35+10 min</i>	<i>TL – Topical lecture: 25+5 min</i>	<i>PR – Progress Report: 15+5 min</i>
17:30-18:15 CET	Opening ceremony	
	Plenary Session 1, Hall A, Chair: L. Č. Popović	
18:15-19:00 CET	Zoran Petrović (Serbia): Review talk on History and Importance of SPIG (dedicated to the 30th jubilee)	

Tuesday 25th August 2020		
SPIG 2020 (day 2)		
	Plenary Session 2, Hall A, Chair: Z. Petrović	
09:00-09:45 CET	Jean-Paul Booth (France): A new look at oxygen plasmas - quantitative spectroscopy for rigorous testing of models	
09:45-10:30 CET	Tőkési Károly (Hungary): Multiple electron scattering in atomic and surfaces collisions	
10:30-11:00 CET	<i>Break & Chat Room</i>	
	Plenary Session 3, Hall A, Chair: A. Milosavljevic	
11:00-11:45 CET	Oskar Asvany (Germany): High-resolution spectroscopy of cation-helium complexes at low temperature	
11:45-12:30 CET	Tony Donne (Germany): Challenges and Progress on the path towards Fusion Electricity	
12:30-14:30 CET	<i>Break</i>	
	Hall A - Parallel Session: Collisions (devoted to R. Janev) <i>Chair: N. Simonović</i>	Hall B - Parallel Session <i>Chair: B. Obradović</i>
14:30-15:00 CET	Predrag Krstic (USA): Vibrationally resolved collisions of hydrogen ions and molecule	Mario Janda (Slovakia): The transient spark discharge driving circuit optimizations for enhanced NOx generation
15:00-15:30 CET	Tasko P. Grozdanov (Serbia): Dynamical adiabatic theory of atomic collisions	Eric Giglio (France): Ion transport through insulating capillaries: Self-organized focusing revealed
15:30-16:00 CET	Nataša N. Nedeljković (Serbia): Two-state vector model for the ion-surface interaction: foundation and application	Suvasthika Indrajith (France): Effects of ionizing radiations on the reactivity inside clusters of linear hydrocarbons: polymerization vs. cyclization [15:30-15:50]
16:00-16:30 CET	Roberto Celiberto (Italy): Electron-molecule collisions in fusion plasmas: a long-standing collaboration with Professor Ratko Janev	Dragan M. Pavlović (Serbia): Plasma channel evolution in the triggered lightning discharges [15:50-16:10]

		Aliaksandra Kazak (Belarus): The atmospheric pressure air plasma jets for innovative medical applications [16:10-16:30]
16:30-17:00 CET	<i>Break & Chat Room</i>	
	Hall A - Parallel Session Collisions (devoted to R. Janev) <i>Chair: T. Grozdanov</i>	Hall B - Parallel Session 4. GENERAL PLASMAS <i>Chair: I. Savić</i>
17:00-17:30 CET	Song Bin Zhang (China): Quantum collision dynamics involving plasma shielding effects with Prof. Ratko Janev	Miroslava Vukčević (Serbia): Soliton structures in different astrophysical systems [17:00-17:20]
17:30-18:00 CET	Yue Ying Qi (China): Atomic structure and dynamic process in ideal and non-ideal plasma with Prof. Ratko Janev	Nikola Veselinović (Serbia): Correlation analysis of solar wind parameters and secondary cosmic rays flux [17:20-17:40]
18:00-18:30 CET	Ronald McCarroll (France): Adiabatic Representation of Atomic Collision Processes	Đorđe Savić (Serbia): Modeling broad line polarization in active galactic nuclei [17:40-18:00]
18:30-20:00 CET	Poster session (I) - Virtual poster presentation – <i>Hall A</i> (<i>Chair: N. Cvetanović</i>) [*Optional: 3min presentation of posters]	

Wednesday 26th August SPIG 2020 (day 3)		
<i>PL – Plenary lecture: 35+10 min</i>	<i>TL – Topical lecture: 25+5 min</i>	<i>PR – Progress Report: 15+5 min</i>
	Plenary Session 4, Hall A, Chair: B. Marinković	
09:00-09:45 CET	K.-D. Weltmann (Germany): Physical Applications in Life Science	
09:45-10:30 CET	Nigel Mason (UK): New frontiers in Atomic and Molecular Physics	
10:30-11:00 CET	<i>Break & Chat Room</i>	
	Hall A - Parallel Session 3. LOW TEMPERATURE PLASMAS <i>Chair: G. Poparić</i>	Hall B - Parallel Session 1. ATOMIC COLLISION PROCESSES <i>Chair: M. S. Dimitrijević</i>
11:00-11:30 CET	Nikša Krstulović (Croatia): Cavity Ring-Down Spectroscopy as a Tool for Plasma Diagnostics	Miloš Ranković (Czech Republic): Electron collisions with dielectric gases considered as SF6 replacement
11:30-12:00 CET	Daiji Kato (Japan): Compact electron beam ion trap for spectroscopy of multiple charged ions	Nikolay Shvetsov-Shilovskiy (Germany): Semiclassical two-step model for strong-field ionization: Further developments and applications
12:00-12:20 CET	Sanja Živković (Serbia): Analytical capabilities of TEA CO2 laser based LIBS setup	Dejan Miličević (Serbia); Study of structural modifications in poly(L-lactide) (PLLA) induced by high-energy radiation
12:30-14:30 CET	<i>Break /SPIG Committee meeting at 13h</i>	

	Hall A - Parallel Session 4. GENERAL PLASMAS <i>Chair: D. Marić</i>	
14:30-15:00 CET	Gregor Primc (Slovenia): Probing neutral oxygen atoms by laser-optic catalytic sensor	
15:00-15:20 CET	Ivan Krstić (Serbia): Spectroscopic investigation of discharge and afterglow phase of microsecond pulsed glow discharge	
15:20-15:40 CET	Jelena Marjanović (Serbia): Breakdown and characteristics of non-equilibrium low-pressure DC discharges in vapours of liquids	

Thursday 27th August 2020 SPIG 2020 (day 4)		
<i>PL – Plenary lecture: 35+10 min</i>	<i>TL – Topical lecture: 25+5 min</i>	<i>PR – Progress Report: 15+5 min</i>
	Plenary Session 5, Hall A, Chair: M. Ivković	
09:00-09:45 CET	Masaharu Shiratani (Japan): Materials Processing with Low Pressure Plasma: Present Issues and Possible Solutions	
09:45-10:30 CET	Sibylle Günter (Germany): The two concepts of magnetic confinement: tokamak and stellarator	
10:30-11:00 CET	<i>Break & Chat Room</i>	
	Plenary Session 6, Hall A, Chair: D. Ilić	
11:00-11:45 CET	Netzer Hagai (Israel): Following Supermassive Black Holes Over Cosmic Time	
11:45-12:30 CET	Dimitri Batani (France): Current status of the laser fusion research and the shock ignition approach	
12:30-14:00 CET	<i>Break</i>	
	Hall A - Parallel Session 4. GENERAL PLASMAS <i>Chair: M. Škorić</i>	Hall B - Parallel Session 3. LOW TEMPERATURE PLASMAS <i>Chair: M. Kuraica</i>
14:00-14:30 CET	Alicja Domaracka (France): Ion processing of astrophysical ices	Andrew Gibson (Germany): Numerical simulation-based optimisation of plasma sources for medical applications
14:30-15:00 CET	Sebastijan Brezinsek (Germany): Plasma-wall interaction in W7-X operating with graphite divertor	Marie-Lise Dubernet (France): VAMDC – Results and Perspective
15:00-15:20 CET	Damir Devetak (Germany): Dissipative phenomena in QCD plasma state created in heavy ion collisions	Željko Mladenović (Serbia): Atmospheric pressure helium plasma jet propagating in humid air – influence of water vapour on chemical composition and plasma parameters CANCELED
15:20-15:40 CET	<i>Break & Chat Room</i>	

	Hall A - Parallel Session 4. GENERAL PLASMAS <i>Chair: S. Tošić</i>	Hall B - Parallel Session 2. PARTICLE AND LASER BEAM INTERACTION WITH SOLIDS <i>Chair: Z. Mišković</i>
15:40-16:10 CET	Joël Rosato (France): Spectroscopic modeling for the investigation of magnetic fusion plasmas and stars with magnetic field	Régis Bisson (France): Simulating plasma-wall interaction in fusion reactors with beam-surface experiments
16:10-16:40 CET	Masanori Nunami (Japan): Turbulence simulations for stellarator plasma transport	Kamran Akbari (Spain): Relativistic Theory of the Interaction of Two-Dimensional Materials with Moving Charged Particles [16:00-16:20]
16:40-17:00 CET	<i>Break & Chat Room</i>	
	Hall A - Parallel Session 3. LOW TEMPERATURE PLASMAS <i>Chair: S. Djurović</i>	Hall B - Parallel Session 1. ATOMIC COLLISION PROCESSES <i>Chair: I. Mančev</i>
17:00-17:30 CET	Augusto Stancampiano (France): Plasma jets and multijets in contact with liquids in biomedical experiments: electro fluid dynamic and reactive species distribution	Dmitry Voloshin (Russia): PIC MCC and fluid simulation of processing plasmas: collision radiative models and ion energy distribution functions
17:30-17:50 CET	N. Ben Nessib (Saudi Arabia): The Fully Relativistic Multiconfiguration Dirac-Hartree-Fock Method for Atomic Structure Calculations for Multiply Charged Ions: The Example of Ca XV	Ramón L. Panadés-Barrueta (France): On the automatic computation of global (intermolecular) potential energy surfaces for quantum dynamical simulations
17:50-18:10 CET	Aleksandra Nina (Serbia): Propagation of electromagnetic waves in perturbed lower ionospheric plasma	Luca Vialetto (Netherlands): Monte Carlo flux modelling of electron kinetics in CO ₂
18:10-20:00 CET	Poster session (2) - Virtual poster presentations - Hall A (<i>Chair: N. Cvetanović</i>) [*Optional: 3min presentation of posters]	

Friday 28th August 2020 SPIG 2020 (day 5)		
PL – Plenary lecture: 35+10 min	TL – Topical lecture: 25+5 min	PR – Progress Report: 15+5 min
	Hall A - Parallel Session 4. GENERAL PLASMAS <i>Chair: V. Srećković</i>	Hall B - Parallel Session 1. ATOMIC COLLISION PROCESSES <i>Chair: M. Trtica</i>
9:00-9:30 CET	Jovan Milošević (Norway): Quark gluon plasma in an early phase of the Universe and in the laboratory	Tiago Silva (Portugal): A detailed reaction mechanism set for vibrational chemistry in CO ₂ plasmas
9:30-9:50 CET	Andjelka Kovačević (Serbia): Rise of LSST - detection of oscillations in AGN emission light curves at different cosmological scales	Jasper Peschel (Sweden): Dissociation dynamics of the diamondoid adamantane upon photoionization by XUV femtosecond pulses
9:50-10:10 CET	Jelena Petrović (Serbia): The evolution of stellar interiors in massive binary systems	Ilija Simonović (Serbia): Kinetic and fluid modelling of non-equilibrium transport of charged-particle swarms in

		neutral gases and nonpolar liquids
10:10-10:30 CET	Aleksandra Ćiprijanović (Serbia): Multi-messenger studies of cosmic ray acceleration in galaxy cluster accretion shocks	Ana Silva (Netherlands): A reaction mechanism for vibrationally cold CO ₂ plasmas
10:30-10:50 CET	Nikolai Bezuglov (Russia): Penning ionization processes involving cold Rydberg alkali metal atoms	Abeer Almodlej (Saudi Arabia): The Modified Semi-Empirical Stark Broadening method of calculations: The example of Alkali like ions
11:00-11:30 CET	<i>Break & Chat Room</i>	
	<i>Plenary Session 7, Hall A, Chair: D. Borka</i>	
11:30-12:15 CET	Dragan Huterer (USA): Dark Matter and Dark Energy: Gases that Dominate the Universe	
12:15-13:00 CET	Jaime de Urquijo (Mexico): The measurement of electron and ion swarms transport and reactivity: Current state and future challenges CANCELED	
13:00-13:30 CET	<i>Discussion & Chat Room (D. Ilić, V. Srecković)</i>	
13:30 CET	<i>Closing of the conference</i>	