

**9th International Conference on the
Frontiers of Plasma Physics and Technology (FPPT-9)
8-12 April 2019, Hotel Jetwing Blue, Negombo, Sri Lanka**

SCIENTIFIC PROGRAMME

Sunday, 07th April 2019
14.00-17.00 hrs. Registration

Monday, 8rd April 2019

08.30-09.30	Registration	
09.30-10.00	Welcome	
Session 1	Chair: D.A. Jaroszynski, UK	
10.00 -10.30	O. Mykolaichuk Keynote The IAEA, Austria	From fusion science to electricity: Optimising waste management will be a key success factor
10.30-11.00	T. Donne Germany	Challenges on the path towards fusion electricity
11.00-11.30	Tea	
Session 2	Chair: C. Stehlé, France	
11.30-12.00	R. Kaiser UK	Muon Imaging for Nuclear Waste Containers
12.00-12.30	G. N. Throumoulopoulos Greece	Recent advances on magnetic confinement theory
12.30-13.00	W. Miloch Norway	Characterising ionospheric plasma irregularities with rockets and satellites
13.00-14.30	Lunch	
Session 3	Chair: F. Beg, USA	
14.30-14.50	X. P. Lu P.R. China	On a chiral plasma plume
14.50-15.10	C. Deutsch France	Meson-catalyzed fusion in Ultradense plasmas
15.10-15.30	P K Jain Botswana	Further developments in the study of Ni – based super alloys at the University of Botswana
15.30-15.50	B. Rethfeld Germany	Optical properties of excited gold in nonequilibrium
15.50-16.20	Tea	
Session 4	Chair: X. P. Lu, P.R. China	
16.20-16.40	A. Bartnik Poland	EUV induced, low temperature, high density plasmas, created in atomic and molecular gases
16.40-17.00	V.D. Zvorykin Russia	UV laser beam steering in a direct amplification of TW peak power pulses in KRF laser chain and their transportation in atmospheric air

19.00-21.00 WELCOME PARTY

Tuesday, 9th April 2019

Session 5	Chair: M. Perlado, Spain	
09.00-09.30	S.K. Nema India	Non-thermal atmospheric pressure plasma technologies for societal benefits
09.30-10.00	U. Cvelbar Slovenia	Plasma for biomaterials
10.00-10.30	P. Panicker Abu Dhabi	Conversion of waste to energy and raw materials and its valorization using microwave induced plasma gasification
10.30-11.00	P. Yuan P.R. China	The electrical conductivity properties of lightning discharge plasma
11.00-11.30	Tea	
Session 6	Chair: W.J. Miloch, Norway	
11.30-11.50	D.H. Hoffmann Germany	Ion beam plasma interaction with respect to High Energy Density Science and relevance to energy from nuclear fusion-Perspectives at HIAF (China) and FAIR (Germany)
11.50-12.10	F. Pegoraro Italy	From oceanography to plasma physics: The role of Lagrangian coherent structures
12.10-12.30	B. Xie P.R. China	High density γ -ray emission and dense positron production via multi-lasers driven circle target
12.30-12.50	J.T. Mendonça Portugal	The Physics of Light Springs
12.50-14.30	Lunch	
Session 7	Chair: P. Yuan, P.R. China	
14.30-14.50	H. Sakagami Japan	Particle beam energy dependence on core heating property in ion assisted fast ignition
14.50-15.10	B. Zelener Russia	Rydberg matter and ultracold plasma of alkali and alkali-earth metal obtained by magneto-optical trap
15.10-15.30	Ding Li P.R. China	Nonlinear Evolution of Tearing Modes with Resistivity and Hyper-Resistivity
15.30-15.50	S. Zhang P.R. China	Extended Kohn-Sham first-principles molecular dynamics method to consistently study material properties from 0-several thousand electron volts
15.50-16.20	Tea	
Session 8	Chair: C. Deutsch, France	
16.20-16.40	Z. Fan P.R. China	A theoretical model for low-mode asymmetry in ICF implosions
16.40-17.00	W. D. Kraeft Germany	Depression of the ionization potential in dense plasmas
17.00-17.20	C. Dong P.R. China	Fokker-Planck equation for a magnetized plasma

Wednesday, 10th April 2019

Session 9		
Chair: B. Rethfeld, Germany		
09.00-09.30	B. Sharkov Russian Federation	Advanced Accelerator Technologies for Plasma Physics Research
09.30-10.00	D.A. Jaroszynski UK	The laser plasma wakefield accelerator as a versatile radiation source for applications
10.00-10.30	B. Nagler USA	Hot dense iron plasma created by an x-ray free electron laser
10.30-11.00	F. Beg USA	Can magnetic field help to improve energy deposition of relativistic electrons?
11.00-11.30	Tea	
Session 10		
Chair: R. Kaiser, UK		
11.30-11.50	H. Zhuo P.R. China	Observation of Ion-Ion Acoustic Instability in Laser-Plasma Experiment
11.50-12.10	J M Perlado Spain	Thermo-mechanical and Atomistic Assessment of First Wall and Optics in non-protective chamber in Inertial Fusion Energy
12.10-12.30	A. Ravasio France	Structural changes of shock compressed silicates
12.30-12.50	H. Y. Zhou P.R. China	Fluid theory and kinetic simulation of stimulated Raman scattering excited by rotated polarized pump
12.50-14.30	Lunch	
Session 11		
Chair: A. Bret, Spain		
14.30-14.50	M. Mašek Cz. Republic	Computation of X-ray spectra produced by an interaction of ultraintense laser pulse with a counter-propagating relativistic electron beam
14.50-15.10	L. Lancia France	Plasma based laser amplification beyond the joule level
15.10-15.30	Rong Qi P.R. China	Laser driven micro-wire for electron diffraction
15.30-15.50	R. Fedosejevs Canada	MeV Electron and Betatron Production from Wakefield Interactions using Orbital Angular Momentum Laser Pulses
15.50-16.20	Tea	
Session 12		
Chair: C. Zheng, P.R. China		
16.20-16.40	D. Xie P.R. China	Plasma Polarization Grating for Circularly Polarized High-Order Harmonic Generation.
16.40-17.00	A. Fukuyama Japan	Modeling of plasma production and heating by electromagnetic waves including kinetic effects
17.00-18.00	POSTER SESSION Appendix 1	

Thursday, 11th April 2019

Session 13 Chair: S. K. Nema, India		
09.00-09.30	C. Kuranz USA	Creating Astrophysical Conditions in the Laboratory
09.30-10.00	B. Sinha India	Primordial Plasma of Cosmic Quarks
10.00-10.30	F. Haas Brazil	Neutrino oscillations in relativistic degenerate plasmas and extreme astrophysical scenarios
10.30-11.00	B. Shen P.R. China	Physics of relativistic vortex laser
11.00-11.30 Tea		
Session 14 Chair: Z. Fan, P.R. China		
11.30-11.50	C. Stehlé France	Modeling radiative signatures of accretion shocks on young stars: what can be derived from 1d simulations
11.50-12.10	C. Riconda France	Simulations of pair creation in the collision of gamma rays with intense lasers.
12.10-12.30	Q. H. Yuan P.R. China	Non-thermal atmospheric pressure plasma jets driven with dual-frequency power sources
12.30-12.50	M. Manuel USA	B-field Effects on Blast-wave-driven Hydrodynamic Instabilities
12.50-14.30 Lunch		
Session 15 Chair: M. Masek, Cz. Republic		
14.30-14.50	A. Bret Spain	Density jump as a function of magnetic field strength for parallel collisionless shocks in pair plasmas
14.50-15.10	S. Kar UK	Staged ion acceleration from ultrathin foils with sub-ps, near-PW pulses
15.10-15.30	W. H. Ye P.R. China	Thin-shell theory of nonlinear hydrodynamic instability in the spherical geometry
15.30-15.50	D.O. Gericke UK	Stopping power of dense plasmas
15.50-16.20 Tea		
Session 16 Chair: C. Riconda, France		
16.20-16.40	T. Maung Maung Myanmar	National Infrastructure for Nuclear and Radiation Applications in Myanmar
16.40-17.00	L. Q. Shan P.R. China	Kinetic effect of plasma interaction in indirect-drive inertial confinement fusion hohlraum
17.00-17.20	A. Golubev Russia	High-energy proton microscopy for investigation of extreme state of matter

19.00-21.00

BANQUET

Friday, 12th April 2019

Session 17	Chair: D. Gericke, UK	
09.00-09.30	B. M. Hegelich USA	Laser-Plasma interactions with at ultrahigh peak powers
09.30-10.00	T. Ozaki Canada	Attosecond Plasma Dynamics
10.00-10.30	C. Zheng P.R. China	Suppression of stimulated Raman and Brillouin scattering by multi-beam laser with different polarizations in fusion plasmas
10.30-11.00	Ye Tian P.R. China	Laser-driven micro plasma structure for intense radiation and magnetic field
11.00-11.30	Tea	
Session 18	Chair: B. Xie, P.R. China	
11.30-11.50	S. Pikuz Russia	Isochorically heated warm dense matter studied by X-ray emission and absorption spectroscopy
11.50-12.10	H. Sang P.R. China	Thomson Scattering in Combined Laser and Magnetic Fields
Session 19 12.15-13.00	Concluding Session: Chair: P.K. Jain, Botswana Scientific Summary: Chantal Stehlé and Philip Panicker Closing Remark End of FPPT-9	
13.00	Lunch	

Appendix 1

POSTER PRESENTATIONS

- [1] Calculations on energy transport in laser produced plasmas.
Nawal Almalky, Bahaaudin Raffah, Yas Al-Hadeethi
- [2] Kinetic trajectory simulation method for the multi-component magnetized plasma sheath.
Suresh Basnet and Raju Khanal
- [3] Generation of high quality ion beams through the stable radiation pressure acceleration of The near critical density target.
Xueren Hong, Wei-Jun Zhou, Bai-Song Xie, Yang Yang, Li Wang, Jian-Min Tian, Rong-An Tang, And Wen-Shan Duan
- [4] Peaceful use of nuclear science and technology in Myanmar.
Theingi Maung Maung
- [5] Wake formation behind objects in magnetised plasmas.
Wojciech J. Miloch
- [6] Conversion of waste to energy and raw materials and its valorization using microwave Induced plasma.
Philip Panicker
- [7] On the characteristics of argon plasma in a multi-pole line-cusp variable magnetic field.
A. D. Patel, M. Sharma, N. Ramasubramanian, R.Ganesh and P. K. Chattopadhyay
- [8] Fluid analysis of magnetized plasma sheath in a cylindrical geometry.
Rishi Ram Pokhrel, Pramod Kumar Thakur and Raju Khanal
- [9] Thomson scattering in combined laser and magnetic fields.
Hai-Bo Sang, Li Zhao And Bai-Song Xie

[10] Effects of relativistic and channel focusing on q-gaussian laser beam propagating in a preformed parabolic plasma channel.

Liwang, Xue-Renhong, Jian-Ansun, Rong-Antang, Yangyang, Wei-Junzhou, Jian-Mintian, Wen-Shanduan

[11] A class of of exact helically symmetric equilibria with pressure anisotropy and Incompressible flow.

A. Evangelias, A. Kuiroukidis, G. N. Throumoulopoulos

[12] Energy-casimir extented magnetohydrodynamics Equilibria with helical symmetry.

D. A. Kaltsas, G. N. Throumoulopoulos, P. J. Morrison

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