

40th PSSI National Symposium

on
Plasma Science and Technology

"Plasma for Sustainable Future"



Important Contact Information: PLASMA 2025

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Schedule Day-1 (27-12-2025)

Time	Session -1		Venue
8.00 AM	Registration		LHC Ground floor
8.45 AM - 10.00 AM	Inauguration		LHC-CR- 211
10.00 AM - 11.00 AM	Sponsor presentation session-Session 1 Chair: Prof. A K Das Ozone Crop Innovate Private Limited (15 Mins) ATOS Instruments Marketing Services (15 Mins) Bruker Optics (10 Mins) Agnira Sanlayan Pvt. Ltd. (10 Mins)		LHC- CR-211
11.00 AM - 11.20 AM	Group photo followed by High-Tea break		LHC Ground Floor
Session-2			
Time	Session-2A-Next generation Tokomak systems Session Chair: Prof. S K Dutta	Venue	Session-2B-Plasma for Sustainable Technology Session Chair: Prof. Ram Prakash
11.20 AM - 1.05 PM	Talk 1: Prof. Avinash Khare Title: A new type of divertor for tokamak Talk 2: Prof. Joydeep Ghosh Title: Nuclear Fusion: From dream to reality! Oral 1: FST 1, Kishore Mishra Oral 2: FST 2, Maya Padivattath Sponsor: Eltech Engineers Pvt. Ltd.	LHC- CR-101	Talk 1: Prof. Peter Bruggeman Title: Plasma-Liquid Interactions for Water Treatment Talk 2: Prof. Shihabudheen M.Maliyekkal Title: Hybrid Plasma Technologies for Advanced Wastewater Treatment Oral 3: PTA 1, P S N Sai Srikar Oral 4: PTA 2, Tejaswi Rana Sponsor: SIMCO Global Technology & System Ltd.
1.05 PM- 2.00 PM	Lunch Break		LHC Ground Floor

Session-3

Time	Session-3A Laser and Fusion Plasma Session Chair: Prof. Punit Kumar	Venue	Session-3B-Fundamentals of Plasmas Session chair: Prof. Arun Tangirala	Venue
2.00 PM - 3.50 PM	<p>Talk 1: Prof. Amita Das Title: Novel regime of Laser Plasma Interaction</p> <p>Talk 2: Prof. Mainak Bandyopadhyay Title: Negative Ion Source Plasma and Its Extracted Beam:Research activities and oppurtunities at IPR</p> <p>Oral 5: FST 3, Prachi Jain</p> <p>Oral 6: FST 4, Geetha D</p> <p>Oral 7: TMS 1, Vishwa Bandhu Pathak</p>	LHC-CR-101	<p>Talk 1: Prof. M. V. Kartikeyan Title: Gyrotrons for Plasma Heating and Other Applications</p> <p>Talk 2: Prof. Sudeep Bhattacharjee Title: Thermodynamics of plasmas confined by a dipole magnet</p> <p>Oral 8: FPD 1, Anuravi Sharma</p> <p>Oral 9: FPD 2, Prakash S Shrivastav</p> <p>Oral 10: FPD 3, Deepak Rajpurohit</p>	LHC-CR-211
3.50 PM-5.15 PM	Poster Session-1: ASP_P_01 to ASP_P_36 + FPD_P_01 to FPD_P_75 + TMS_P_01 to TMS_P_10 (With a Tea Break)			LHC Ground Floor

Session-4

Time	Session-4A AMP data, Modelling and Simulation Session Chair: Prof. P C Deshmukh	Venue	Session-4B-Plasma Dynamics and Applications Session Chair: Prof. Rajesh Srivastava	Venue
5.15 PM - 7.35 PM	<p>Talk 1: Prof. B. K. Sahoo Title: What is in the choice of a many body method</p> <p>Talk 2: Prof. Animesh Kuley Title: Global Gyrokinetic simulation of fusion Plasmas</p> <p>Talk 3: Dr. Santanu Karmakar Title: Gyrotron and its applications for plasma heating</p> <p>Oral 11: TMS 2, Shanila M</p> <p>Oral 12: TMS 3, Sripan Mondal</p> <p>Oral 13: TMS 4, Mohammad Yasir</p>	LHC-CR-101	<p>Talk 1: Dr. Sushil Kumar Singh Title: Experimental Study of Laser-Plasma Interaction Using Sub-nanosecond Kilo-Joule Class Laser</p> <p>Talk 2: Dr. Apeksha Madhukar Title: Flexible surface Dielectric Barrier Discharge for Next-gen plasma application</p> <p>Oral 14: PTA 3, Renu Bahl</p> <p>Oral 15: FPD 4, Satish Babu Thota</p> <p>Oral 16: FPD 5, Suryasunil Rath</p> <p>Talk 3: Prof. Ahmad Hamdan Title: Dynamics of nano-second pulsed discharges close to a liquid surface (Online)</p>	LHC-CR-211
7.35 PM- 9.00 PM	Dinner			LHC Ground Floor

Schedule Day-2 (28-12-2025)

Session-5

Time	Session- 5A High-Temperature and Fusion-Relevant Plasmas Session Chair: Dr. Raj Singh	Venue	Session- 5B Plasma for Space Science & Technology Session Chair: Prof. D N Gupta	Venue
9: 00 AM - 11: 20 AM	<p>Talk 1: Dr. Srikumar Ghorui Title: A Unique Non-Divergent Plasma Beam for Plasma Material Interaction Under Fusion Relevant Conditions: A BARC Development</p> <p>Talk 2: Dr. J. Padma Nilaya Title: Plasma Research at BARC: Present and Future</p> <p>Talk 3: Prof. K Ramchandran Title: Thermal Plasma Simulations</p> <p>Oral 17: ASP 1, Manthan Verma</p> <p>Oral 18: ASP 2, Ravinder Bhambhu</p> <p>Oral 19: ASP 3, Pratik Patel</p>	LHC-CR-101	<p>Talk 1: Mr. K. M. Shanbhogue Title: Plasma Thrusters for Space Science and Technology Applications</p> <p>Talk 2: Prof. Umesh Kadhane Title: Plasma induced processes in the evolution of organics in space</p> <p>Oral 20: CDT 1, Vajitha G</p> <p>Oral 21: CDT 2, Nani Medicherla</p> <p>Oral 22: CDT 3, Sanjay C Andola</p> <p>Oral 23: CDT 4, Ramesh Patel</p> <p>Oral 24: CDT 5, Deepak Tripathy</p>	LHC-CR-211
11.20 AM- 1.00 PM	<p>Poster Session-II: FST_P_01 to FST_P_82 + CDT_P_01 to CDT_P_28 + TMS_P_11 to TMS_P_20 (Total 120) (With a Tea Break in Parallel)</p>			
1.00 PM- 2.00 PM	Lunch Break			

Session-6

Time	Session - 6A Exotic & Dusty Plasma Session Chair: Prof. Swatantra Pratap Singh	Venue	Session - 6B Quantum computing & AI/ML in Plasma Session Chair: Prof. S Aravinda	Venue
2.00 PM - 4.05 PM	<p>Talk 1: Dr. Prashant K Singh Title: Compact, femtosecond laser driven plasma accelerator</p> <p>Talk 2: Dr. Surabhi Jaiswal Title: Revisiting plasma crystal and structural transition phenomena</p>	LHC-CR-101	<p>Talk 1: Dr. Srinivasa Prasanna V Title: Quantum algorithms and computation</p> <p>Talk 2: Prof. P.K. Karmakar Title: Normal acoustic modes in degenerate quantum plasmas</p>	LHC-CR-211
2.00 PM- 4.05 PM	<p>Talk 3: Prof. Sanat Tiwari Title: Dusty plasma turbulence in DC discharge plasma</p> <p>Oral 25: ASP 4, Sanjay Kumar</p> <p>Oral 26: ASP 5, Atherv Saxena</p>	LHC-CR-101	<p>Talk 3: Prof. Jan Trieschmann Title: Data-Integrated Physical Simulation and Machine Learning Analysis: The Case of Plasma Processing of SiO_x /Cu Memristive Devices (Online)</p> <p>Oral 27: PTA 4, Dipanjana Hazra Nayak</p> <p>Oral 28: PTA 5, Sankaran K. J</p>	LHC-CR-211
4.05 PM- 5.20 PM	Poster Session-III: PTA_P_01 to PTA_P_82 + TMS_21 to TMS_P_58 (Total 120) (With a Tea Break in Parallel)			
5.20 PM- 7.00 PM	Buti Award Presentation Session			
7.00 PM- 9.00 PM	Cultural event followed by Conference Gala dinner			

Schedule Day-3 (29-12-2025)

Session-7

Time	Session-7A Astrophysical Plasmas Session Chair: Prof. Ramesh Narayanan	Venue	Session- 7B Emerging Technologies of Plasma Session Chair: Prof. Pramod Gopinath	Venue
9:00 AM - 11.15 AM	<p>Talk 1: Prof. Ram Prasad Prajapati Title: Kinetic And Fluid Descriptions of Jeans Instability In Collisionless Kappa- Distributed Suprathermal Plasmas</p> <p>Talk 2: Prof. Nishant K. Singh Title: Solar magnetic fields and their effects on the surface gravity mode</p> <p>Talk 3: Dr. Kirit Makwana Title: Wave modes and intermittency in plasma turbulence of the solar wind</p> <p>Talk 4: Dr. Rajib Kar Title: Cold Plasma for Solid Radioactive Waste Treatment</p> <p>Oral 29: ASP 6, Swarniv Chandra</p>	LHC-CR-101	<p>Talk 1: Prof. Lakshminarayana Rao Title: Plasma activated water and it's application in medicine and agriculture</p> <p>Talk 2: Dr. Shashi Ranjan Title: RGA Reactor for Nitrogen fixation</p> <p>Talk 3: Dr. Venu Anand Title: Cold Atmospheric Plasma-Generation to Applications</p> <p>Oral 30: PTA 6, Pushparaj Gandhi Tadavarthi</p> <p>Oral 31: PTA 7, Ram Prakash Lamba</p>	LHC-CR-211
11.15 AM - 11.30 AM	Tea break			

Session-8

Time	Session- 8A Multi-disciplinary Topics Session Chair: Prof. Abhishek Jha	Venue	Session- 8B Cold Plasma Applications Session Chair: Prof. Vinay Majety	Venue
11.30 AM - 1: 00 PM	<p>Talk 1: Dr. Nishant Sirse Title: Tailoring and controlling plasma properties in radio frequency capacitive discharges for semiconductor processing applications</p> <p>Talk 2: Dr. Vishant Gahlaut Title: Critical Aspects on Thermal Management of TWTs for Space Applications</p> <p>Talk 3: Prof. Lalit Kumar Title: Integrated RF and Plasma Modeling of a 2.45 GHz ECR Plasma Source</p>	LHC-CR-101	<p>Talk 1: Dr. Trivikram Nallamilli Title: Role of cold plasma in improvement of techno functional properties of plant proteins</p> <p>Talk 2: Prof. Subrahmanyam Title: Plasma Catalysis for CO₂ Conversion to Value-Added Products</p> <p>Talk 3: Dr. S Rajendra Nath Reddy Title: Use of cold plasma in agriculture & horticulture: A boon for smallholder organic farmers</p>	LHC-CR-211
1.00 PM- 2.00 PM	Lunch Break			
2:00 PM- 3:00 PM	<p>Session-9 Session Chair: Prof. Arun Sarma, Director-General, Nectar Parvez Guzdar Award Talk (30 Mins) (ONLINE)</p> <p>Jaidutt Saraswati Sodha Award Talk (30 Mins)</p>			
3:00 PM - 4:00 PM	Panel Discussion, PSSI GBM, Award distribution and concluding Session			
4: 00 PM	Conference Closure			



PLASMA-2025



IIT TIRUPATI CAMPUS MAP

SYMBOLS

- A : IIT GATE
- B : SYMPOSIUM VENUE (LHC)
- C : GUEST HOUSE
- D : HOSTEL ACCOMMODATION
- E : SOUTH GATE IIT



DISTANCE (APPROX.)

- A TO B : 500 METERS
- B TO D : 200 METERS
- B TO C : 300 METERS
- B TO E : 2000 METERS



[GOOGLE MAP LINK \(SYMPOSIUM VENUE\)](#)