

Preliminary Program: 9th International Conference on the Physics of Dusty Plasmas - ICPDP
2020

25.05.2020

14:00-17:00 Registration of conference participants

17:00-20:00 Welcome party

26.05.2020

10:00-10:20 Welcome & Introduction (V.E. Fortov, L.M. Zelenyi, H. Thomas)

Dusty plasmas in nature

10:20-10:50 Jeans instability and self-gravitating dusty clouds (Khare Avinash – keynote talk)

10:50-11:20 Space dust detection with antennas and Faraday cups / Experiments on charging of dust by positrons (Jiří Pavlů – keynote talk)

11:20-11:50 Coffee break

11:50-12:15 Cosmic dust in molecular clouds and protoplanetary disks (A. Ivlev – solicited talk)

12:15-12:40 Strong negative potentials at the surfaces of cosmic bodies and their impact on dust grain motion (N.D. Borisov – solicited talk)

12:40-13:00 Contributed oral talk

13:00-14:00 Lunch break

14:00-14:30 To be announced (Mihály Horányi – keynote talk)

14:30-15:00 Studies on dusty plasmas at the Moon/Mars (A.V. Zakharov – keynote talk)

15:00-15:25 To be announced (T. Stubbs – solicited talk)

15:25-15:50 Dusty ionosphere of the Earth (I. Mann – solicited talk)

15:50-16:20 Coffee break

16:20-16:40 Contributed oral talk

16:40-17:00 Contributed oral talk

17:00-17:20 Contributed oral talk

17:20-17:40 Contributed oral talk

17:40-18:00 Contributed oral talk

18:00-20:00 Poster Session 1

27.05.2020

Experimental research on dusty plasmas

10:00-10:30 Statistical physics experiments performed using dusty plasmas (John A. Goree – keynote talk)

10:30-10:55 Anisotropic complex plasmas under microgravity: Waves and 3D structure (Mikhail Pustynnik – solicited talk)

10:55-11:20 Interfacial phenomena in binary complex plasmas: experiments and simulations (Chengran Du – solicited talk)

11:20-11:50 Coffee break

11:50-12:20 Coulomb dust structures in superfluid helium (Oleg F. Petrov – keynote talk)

12:20-12:45 Active Brownian particles in gas discharges plasma at room and cryogenic temperatures (Mikhail Vasiliev – solicited talk)

12:45-13:10 Effective interaction between dust particles in a gas discharge plasma (Evgenii Lisin – solicited talk)

13:10-14:10 Lunch break

14:10-14:35 An optically trapped microparticle as a tool for measurements in an rf sheath (V. Schneider, H. Kersten – solicited talk)

14:35-15:00 Reactive plasmas and nanoparticle growth and dynamics (Maxime Mikikian – solicited talk)

15:00-15:25 Plasma polarization behind a dust particle in an external electric field (Gennadii Sukhinin – solicited talk)

15:25-15:45 Contributed oral talk

15:45-16:15 Coffee break

16:15-16:35 Contributed oral talk

16:35-16:55 Contributed oral talk

16:55-17:15 Contributed oral talk

17:15-17:35 Contributed oral talk

17:35-17:55 Contributed oral talk

18:00-20:00 Poster Session 2

28.05.2020

Dusty plasmas under the action of magnetic field

10:00-10:30 New insights into pattern formation in the Magnetized Dusty Plasma Experiment (MDPX) (Edward Thomas, Jr. – keynote talk)

10:30-10:55 Dusty plasmas under strong magnetic fields (Andre Melzer – solicited talk)

10:55-11:20 Dusty plasmas in conditions of a glow discharge under the magnetic field up to 2 T (Victor Yu. Karasev – solicited talk)

11:20-11:50 Coffee break

11:50-12:15 Metal dust in dense and magnetized plasmas (Svetlana Ratynskaia – solicited talk)

12:15-12:35 Contributed oral talk

12:35-12:55 Contributed oral talk

12:55-13:55 Lunch break

14:00-18:00 Excursion

19:00-23:00 Conference dinner

29.05.2020

Theory and modeling of dusty plasmas

10:00-10:30 Fluctuation electrodynamics of dusty plasmas and effective grain interactions (Anatoly G. Zagorodny – keynote talk)

10:30-10:55 Coherent excitations and extreme amplitude events in dust acoustic waves: from weakly disordered to wave turbulence (Po-Chen Lin, Lin I – solicited talk)

10:55-11:20 Thermodynamic stability of dusty plasmas (Anatolii Filippov – solicited talk)

11:20-11:50 Coffee break

11:50-12:15 Progress in understanding plasma-particle interactions from microgravity experiments (Sergey Khrapak – solicited talk)

12:15-12:40 Structural state formation within PK-4 dusty plasmas (Truell Hyde – solicited talk)

12:40-13:05 Collective Ion Drag Force (Alexander M. Ignatov – solicited talk)

13:05-14:05 Lunch break

14:05-14:30 Complex plasmas simulation at extreme conditions (Tlekkabul Ramazanov – solicited talk)

14:30-14:50 Contributed oral talk

14:50-15:10 Contributed oral talk

15:10-15:30 Contributed oral talk

15:30-15:50 Contributed oral talk

15:50-16:20 Coffee break

16:20-18:00 Award procedure (Best Student Poster Awards; Young Investigator Awards; Stardust Award). Conference closing (V.E. Fortov, L.M. Zelenyi, H. Thomas)