# Monday 20 March

| Time (CET) | |
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| **Introduction** | |
| 09:30 | Welcome and logistics |
| 09:40 | ESA Solar System and Exoplanet missions<br>*Gaitee Hussain, ESA* |
| **Planetary formation & evolution** | |
| 10:00 | Using planet forming disks to unravel planet formation in the Solar System (Invited)<br>*Inga Kamp, University of Groningen* |
| 10:30 | A Comprehensive and Self-consistent Model of Terrestrial Planet Formation in the Solar System<br>*Nader Haghighipour, University of Hawaii* |
| 10:45 | The mass-dependence of disc lifetimes leads to differences in the planets formed<br>*Susanne Pfalzner, Forschuungszentrum Jülich* |
| 11:00 | Coffee Break |
| 11:30 | Measurements of dust in the solar system as messengers for planetary science<br>*Veerle Sterken, Physics Department, IPA* |
| 11:45 | Birth and destruction in protoplanetary disks: dust production by planetesimal collisions<br>*Diego Turrini, INAF* |
| 12:00 | Gas-phase chemistry in the Jovian Circumplanetary Disk<br>*Antoine Schneeberger, LAM* |
| 12:15 | How long was the solar system in a stellar cluster?<br>*Phoebe Stainton, Liverpool John Moores University* |
| 12:30 | Imprints of birth: the effects of stellar encounters in the birth cluster on Super-Earth planetary systems<br>*Christina Schoettler, Imperial College London* |
| 12:45 | Galilean moon formation in a water-depleted environment<br>*Olivier Mousis, LAM* |
| 13:00 | Lunch Break |
| 14:00 | Unveiling early accretion from the laboratory study of carbonaceous chondrites: clues for ongoing processes in protoplanetary disks (Invited)<br>*Josep Trigo-Rodríguez, CSIC-IEEC* |
| 14:30 | Using Gaia to Find The Youngest Planets from the Prime Kepler Mission<br>*Luke Bouma, Caltech* |

## Planetary system architecture, dynamics, stability

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| 14:45 | The demographics of small exoplanets (Invited)<br>*Rafael Luque, University of Chicago* |
| 15:15 | Dynamical constraints on extrasolar systems<br>*Anne-Sophie Libert, University of Namur* |
| 15:30 | Exoplanetary System Architectures inferred from Kepler Systems of Multiple Transiting Planets<br>*Darin Ragozzine, Brigham Young University* |
| 15:45 | Planetesimal Belts in Wide Binaries: A Kozai Origin for Transiting Exocometary Material?<br>*Steven Young, Cambridge University* |
| 16:00 | Coffee Break |
| 16:30 | Investigating Exoplanet Dynamics through Transit Timing Variations<br>*Ing-Guey Jiang, National Tsing Hua University* |
| 16:45 | Confirming and characterizing new mean motion resonances in the Kepler and TESS catalogues<br>*Mariah MacDonald, The College of New Jersey* |
| 17:00 | YSES and WiSPiT: direct imaging surveys for young gas giant exoplanets<br>*Matthew Kenworthy, Leiden Observatory* |
| 17:15 | Hidden Figures: unveiling stellar companions to exoplanets hosts<br>*Mariangela Bonavita, The Open University* |
| 17:30 | The LISA mission: hunting planets in the Milky Way and beyond<br>*Camilla Danielski, IAA - CSIC* |
| 17:45 | End of Day 1 |

**18:00 Reception**

# Tuesday 21 March

| Time (CET) | |
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| 09:00 | Synergies/Recap |
| **Stellar/solar activity and interaction with planet** | |
| 09:15 | Stellar magnetic fields, stellar winds, and their impact on exoplanets (Invited)<br>*Sudeshna Boro Saikia, University of Vienna* |
| 09:45 | The host star as a crucial factor for the prevalence of Earth-like Habitats<br>*Manuel Scherf, Austrian Academy of Sciences* |
| 10:00 | The interaction of Mars's ionosphere with the solar wind and crustal magnetic fields<br>*David Andrews, Swedish Institute of Space Physics* |
| 10:15 | Magnetic interaction of stellar coronal mass ejections with the atmosphere of close-in exoplanets: comparison with Ly-alpha transits<br>*Gopal Hazra, University of Vienna* |
| 10:30 | The Sun as a testbed for understanding stellar variability and improving exoplanet confirmation and characterisation (Invited)<br>*Heather Cegla, University of Warwick* |
| 11:00 | Coffee Break |
| 11:30 | High-resolution spectroscopic follow-up of known exoplanet-hosts and candidates: star-planet connection<br>*Edita Stonkute, Vilnius University* |
| 11:45 | Studying and finding planets via star-planet interactions<br>*Robert Kavanagh, ASTRON* |
| **Ionospheres, magnetospheres, plasma environment** | |
| 12:00 | Investigating the influence of the 2007 Martian global dust storm on the bow shock and induced magnetospheric boundary<br>*Catherine Regan, University College London* |
| 12:15 | The Implications of Electrical Conductivity Models of Uranus and Neptune<br>*Deniz Soyuer, University of Zurich* |
| 12:30 | Degenerate induced magnetospheres: from Venus and Mars to exoplanets<br>*Stas Barabash, Swedish Institute of Space Physics* |
| 12:45 | Investigating the role of crustal magnetic fields on Mars' ionospheric dynamics with MARSIS-Mars Express<br>*Dikshita Meggi, University of Leicester* |
| 13:00 | Lunch |

## Habitability & exobiology

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| 14:00 | Life and habitability (Invited)<br>*Charles Cockell, U. Edinburg* |
| 14:30 | Inward transport of comets as a source of habitable zone dust<br>*Jessica Rigley, University of Cambridge* |
| 14:45 | Relevance of initial radioactive heat budgets and the loss of primordial atmospheres for the evolution of Earth-like habitats<br>*Helmut Lammer, Space Research Institute* |
| 15:00 | Extraterrestrial life may be relatively common but oh so difficult to detect!<br>*Frances Westall, CNRS-Centre de Biophysique Moléculaire* |
| 15:15 | Studying the impact of cosmic rays on the atmosphere of TRAPPIST-1e with the model suite INCREASE<br>*Konstantin Herbst, Christian-Albrechts-Universität zu Kiel* |
| 15:30 | The effect of galactic kinematics on exoplanet systems and their potential habitability<br>*Scarlett Royle, Liverpool John Moores University* |
| 15:45 | Posters |
| 16:00 | Coffee Break |
| 16:30 | Poster session |
| 18:00 | End of Day 2 |

# Wednesday 22 March

| Time (CET) | |
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| 09:00 | Synergies/Recap |
| **Atmospheres (I)** | |
| 09:15 | Exoplanet atmospheres from space: From the era of HST and Spitzer to the era JWST and Ariel (Invited)<br>*Quentin Changeat, ESA* |
| 09:45 | Results from the JWST Transiting Exoplanet Community Early Release Science Program<br>*Nicolas Crouzet, Leiden University* |
| 10:00 | Planetary Atmosphere Model Constraints and Lessons from JWST Transiting Exoplanet ERS observations<br>*Jayesh Goyal, NISER* |
| 10:15 | Characterising exoplanetary atmospheres with the CRIRES+ instrument on VLT<br>*Linn Boldt-Christmas, Uppsala University* |
| 10:30 | Detection of Barium in the atmospheres of the ultra-hot gas giants WASP-76b and WASP-121b<br>*Tomás Azevedo Silva, IA - Inst. de Astrofísica e Ciências do Espaço* |
| 10:45 | Searching different molecules on JWST's WASP-39b data via CC<br>*Emma Esparza-Borges, Instituto de Astrofísica de Canarias (IAC)* |
| 11:00 | Coffee Break |
| **Atmospheres (II)** | |
| 11:30 | From Titan to hot super-Earths : Building a HCN vertical distribution reference for hot super-Earths<br>*Miriam Rengel, Max-Planck-Institut für Sonnensystemforschung* |
| 11:45 | Venus as a natural laboratory to infer observational prospects of close-in-orbit rocky exoplanets with a 3D model<br>*Gabriella Gilli, Instituto de Astrofisica de Andalucia (IAA-CSIC)* |
| 12:00 | 'Modeling microscopes' and 'macroscopic parameterizations' for planetary atmospheres: lessons from solar system studies and challenges for exoplanets<br>*Aymeric Spiga, LMD / Sorbonne Université* |
| 12:15 | The Pursuit of a Meticulous Chemical Survey of Atmospheres<br>*Billy Edwards, SRON* |
| 12:30 | Storms and convection formation on (Exo)Neptune revealed by a cloud resolving model<br>*Noé Clément, Laboratoire d'Astrophysique de Bordeaux* |
| 12:45 | Modeling the atmosphere of Hot Jupiter using the generic Planetary Climate Model: The impact of clouds on atmospheric dynamics and observables<br>*Lucas Teinturier, LESIA/LMD* |
| 13:00 | Lunch |

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| 14:00 | Variabilities of clouds and chemistry in the Venus atmosphere<br>*Wencheng Shao, Technical University of Denmark* |
| 14:15 | On biosignatures and tracers of life<br>*Inge Loes ten Kate, Utrecht University* |
| 14:30 | Planetary Atmospheres: Solar System / Exoplanet Connections (Invited)<br>*Jonathan Fortney, UCSC* |
| 15:00 | End of Day 3 |

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| **17:00** | **Guided Visit and Conference Dinner - Programme here** |

# Thursday 23 March

| Time (CET) | |
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| 09:30 | Synergies/Recap |
| **Atmospheres (III)** | |
| 09:45 | Impacts of Cosmic Dust in the Atmospheres of Mars and Venus (Invited)<br>*John Plane, U. Leeds* |
| 10:15 | The Era of Non-Transiting Habitable Zone Terrestrial Planets Around M-dwarfs<br>*Ravi Kopparapu, NASA Goddard Space Flight Center* |
| 10:30 | Post-formation H-He envelopes in super-Earths<br>*Marit Mol Lous, University of Zurich / University of Bern* |
| 10:45 | Linking the atmospheric composition of giant planets to their native disc chemistry<br>*Elenia Pacetti, INAF - IAPS* |
| 11:00 | Coffee Break |
| 11:30 | Synergies between Venus and exo-Venus like worlds<br>*Michael Way, NASA Goddard Institute for Space Studies* |
| 11:45 | The curious case of high-metallicity and high C/O atmosphere of the hot Jupiter tau Bootis b<br>*Vatsal Panwar, University of Warwick* |
| 12:00 | Observations and modeling of Jupiter's atmospheric composition and dynamics in preparation of the JUICE mission<br>*Thibault Cavalié, Laboratoire d'Astrophysique de Bordeaux* |
| 12:15 | Towards a new era in giant exoplanet characterisation<br>*Simon Müller, University of Zürich* |
| 12:30 | Searching for signatures of X-ray induced chemistry in the spectra of exoplanetary atmospheres<br>*Daniele Locci, INAF-OAPa* |
| 12:45 | The spectral history of exoplanet atmospheres due to extreme escape,<br>*Amy Louca, Leiden Observatory* |
| 13:00 | Lunch |
| **Surface geological & geophysical processes** | |
| 14:00 | Vertical distribution of near-surface water vapor on Mars<br>*Elise Wright Knutsen, Université Paris-Saclay, CNRS* |
| 14:15 | Redistribution of radiogenic heat sources and volatiles from mantle to crust is controlled by planet size<br>*Julia M. Schmidt, Freie Universität Berlin* |
| 14:30 | Hemispheric tectonics and magma oceanography of ultrashort period rocky exoplanets<br>*Tim Lichtenberg, University of Groningen* |

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| 14:45 | Physics of plasma–surface–exosphere–dust coupling at the lunar surface for future exploration programmes<br>*Yoshifumi Futaana, Swedish Institute of Space Physics* |
| 15:00 | Potential long-term presence of liquid water on exomoons orbiting free-floating planets<br>*Giulia Roccetti, European Southern Observatory (ESO)* |
| 15:15 | Terrestrial Planet Atmospheres are Connected to Their Interiors (Invited)<br>*Laura Schaefer, Standford University* |
| 15:45 | Posters |
| 16:00 | Coffee Break |
| 16:30 | Poster session |
| 18:00 | End of Day 4 |

# Friday 24 March

| Time (CET) | |
|---|---|
| 09:00 | Synergies/Recap |
| **Interior structure & processes** | |
| 09:15 | Origin and Interiors of Giant Planets: The Solar System and Beyond (Invited)<br>*Ravit Helled, University of Zurich* |
| 09:45 | Empirical Structure Models of Uranus and Neptune<br>*Benno Neuenschwander, University of Zurich* |
| 10:00 | Interior of Jupiter and new equations of state: what consequences for exoplanets?<br>*Saburo Howard, Université Côte d'Azur, CNRS* |
| 10:15 | Inhomogeneous interior models for Jupiter and Exoplanets<br>*Yamila Miguel, Leiden Observatory/SRON* |
| 10:30 | Diverse interior and surface evolution paths of rocky planets (Invited)<br>*Lena Noack, Freie Universität Berlin* |
| 11:00 | Coffee Break |
| 11:30 | Investigating Enceladus' plumes dynamics through laboratory experiments<br>*Fabrizio Giordano, Delft University of Technology* |
| 11:45 | Adding Context to the Interior Structures of Jupiter and Saturn with the Bulk Compositions of Cool, Giant Exoplanets<br>*Paul Dalba, University of California Santa Cruz* |
| **Future missions** | |
| 12:00 | JUICE (Jupiter Icy Moon Explorer): status report<br>*Olivier Witasse, ESA* |
| 12:15 | The LIFE initiative - atmospheric characterization of terrestrial exoplanets in the mid-infrared with a large space-based nulling interferometer<br>*Sascha Quanz, ETH Zurich* |
| 12:30 | Bio Inspired Exploration Robot for Enceladus<br>*Tom Mooijman, TU Delft* |
| 12:45 | **Concluding remarks** |
| 13:15 | End of Symposium |