

Start	Duration	Finish	Room 1 (THEATERZAAL)	Chair	Room 2 (ZAGERIJ)	Chair	Room 3 (EXPO 1)	Chair	
08:15	00:45	09:00	Registration						
09:05	00:25	09:30	Plenary talk by Martin Zwick & Luc Joudrier (ESA) - Rosalind Franklin Rover @ THEATERZAAL						
09:30	00:10	09:40	Logistics Break						
			Session 5a - Planetary Robotics 4		Session 5b - On-ground Validation and Verification		Session 5c - Planning and Autonomy 1		
09:40	00:20	10:00	Paper 42 CoRob-X: Demonstration of a Cooperative Robot Team in Extensive Field Tests Thomas Vögele German Aerospace Center (DLR)	Gianfranco Visentin	Paper 22 Verification and Validation of Autonomous Systems Konstantinos Kapellos Solenix Engineering GmbH	Gunter Just	Paper 55 PerSim: Perception for Planetary Propection and Internal Simulation Siddhant Kadwe DFKI	Martin Azkarate	
10:00	00:20	10:20	Paper 44 REALMS 2 - Resilient Exploration And Lunar Mapping System 2 Dave van der Meet University Of Luxembourg		Paper 52 TRL6 demonstration of the SFR mission Mobility concept on a LEON4 processor Piotr Weclewski AIRBUS DS		Paper 69 AI-enabled Computer Vision Framework for Automated Knowledge Extraction in Planetary Rover Operations Steven Kay GMV		
10:20	00:20	10:40	Paper 62 The ARCHES Mount Etna DataSet (AMEDS): A planetary rover data collection in a lunar analogue environment Willem Suter ESA		Paper 54 Experimental Verification of Robotic Landing and Locomotion on Asteroids Baris Yalcin Snt Spacer - University Of Luxembourg		Paper 70 Enabling Autonomy and Operations for Lunar Surface Missions: An Overview of Demonstrated Capabilities Matt Cross Mission Control		
10:40	00:20	11:00	Paper 86 Controlled Sliding Locomotion for Legged Rovers on Steep Terrain during Space Exploration Claudio Semini Istituto Italiano di Tecnologia (IIT)		Paper 67 A planar air-bearing microgravity simulator for validation of robotic capture operations Mateusz Wojtunik Centrum Badań Kosmicznych PAN (CBK)		Paper 87 Autonomous cooperation of intelligent heterogeneous robots in realistic planetary and lunar exploration scenarios Tristan Schnell Forschungszentrum Informatik (FZI)		
11:00	00:20	11:20	Coffee Break @ Foyer						
			Session 6a - Manipulators and End-Effectors 1		Session 6b - Control and Automation		Session 6c - Planning and Autonomy 2		
11:30	00:20	11:50	Paper 71 STAARK - Affordable and Mission-Agnostic Robotic Arm Jan Dentler Redwire Space Europe	Thomas Wolf	Paper 57 Decoupled Linear Model Predictive Controller for planar free-floating robotic platform with binary input constraints: A comparison of binary input constraints formulations Franeek Stark University of Lübeck	Martti Vilella	Paper 41 Autonomous Operational Scheduling on CogniSat-6 Based on Onboard Artificial Intelligence David Rijlaarsdam Ubotica Technologies	Thomas Krüger	
11:50	00:20	12:10	Paper 80 Design and Validation of a Modular Multi-arm Relocatable Robot for in-space Servicing and large Structure Assembly Mathieu Deremetz Space Applications Services (SAS)		Paper 58 AUV trajectory optimization with hydrodynamic forces for Icy Moon Exploration Lukas Rust DFKI		Paper 104 AIPlan4EU: Planning and Scheduling for Space Applications Konstantinos Kapellos NRB		
12:10	00:20	12:30	Paper 101 The VISPA robotic manipulator - a Versatile In-Space and Planetary Arm to support a new space ecosystem Elie Allouis AIRBUS DS		Paper 66 Motion Controller for the TITAN Robotic Manipulator Dedicated for On-Orbit Servicing Operations Mateusz Wojtunik Centrum Badań Kosmicznych PAN (CBK)		Paper 27 Expanding and Maturing Dynamic Targeting Steve Chien JPL		
12:30	00:20	12:50	Paper 90 Advancements in Satellite Docking Systems for In-Orbit Servicing: Addressing Challenges and Standardizing Technologies Christina Ortega AVS		Paper 61 LQR for Free-Floating Robots: Theory and Experiments Shubham Vyas DFKI		Paper 95 Deep reinforcement learning for reactive IOS space manipulator operations Lorenzo Capra Politecnico di Milano		
12:50	01:10	14:00	Lunch @ FOYER & KETELHUIS						
			Session 7a - Field Testing		Session 7b - Localisation and Mapping		Session 7c - Sensors and Perception		
14:00	00:20	14:20	Paper 68 Design and planning of Field Trials for the Integrated Breadboard 3 (IBB3): towards the demonstration of an integrated rover system in the SFR mission context Robert Marc AIRBUS DS	Tim Wiese	Paper 16 ALPER: Vision based Absolute Localisation for Planetary Exploration Rovers Thierry Germa Magellium	Martin Zwick	Paper 14 A Flash-LIDAR for In-Orbit Servicing Anders Hansen SINTEF	Armin Wedder	
14:20	00:20	14:40	Paper 72 Roving on Mt. Etna a practical guide – Experiences and lessons learnt from a field campaign for an analog mission Thomas Krüger ESA		Paper 43 Comparison study of the accuracy of SLAM techniques and sensor selection for lunar exploration Dave van der Meer University Of Luxembourg		Paper 40 Towards sensing and perception for autonomous berthing – force-torque sensor and an algorithm for the gripping point pose estimation Pawel Paško Piap Space		
14:40	00:20	15:00	Paper 76 Rover data acquisition in Bardenas Reales Levin Gerdes ESA		Paper 82 Risk VDBMapping – Enriched Volumetric Information for Risk Aware Missions Lennart Puck Forschungszentrum Informatik (FZI)		Paper 17 Compact high-resolution 3D real-time imaging for robotic vision with sub-mm accuracy Jens Thielemann SINTEF		
15:00	00:20	15:20	Coffee Break @ Foyer						
			Session 8a - Planetary Robotics 5		Session 8b - Robotic Frameworks		Session 8c - Planning and Autonomy 3		
15:20	00:20	15:40	Paper 88 DynRPAT: A Novel Parametric Analytical Tool to Efficiently Simulate High-Speed or Low-Gravity Locomotion Conditions for Planetary Exploration Rovers Charles Lambelet Beyond Gravity	Michel Delpelch	Paper 23 The Lunar Rover Mini: a Versatile, Open-Source Mobile Robotic Platform for Educational and Experimental Purposes Sam Bekkers German Aerospace Center (DLR)	Martti Vilella	Paper 98 Autonomous Robotic Arm Manipulation for Planetary Missions using Causal Machine Learning Cian McDonnell Cranfield University	Martin Azkarate	
15:40	00:20	16:00	Paper 46 Mobility on the Surface of Phobos for the MMX Rover - Simulation-aided Movement planning Fabian Buse German Aerospace Center (DLR)		Paper 75 A Real-Time computer architecture based on a client-server approach for a Multi-arm Robot Manipulation (MARM) Platform. Davide Antonucci Italian Institute of Technology (IIT)		Paper 81 TITAN-Development of self-lifting manipulator for on-orbit servicing and debris removal Pawel Paško PIAP Space		
16:00	00:10	16:10	Logistics Break						
16:10	00:25	16:35	Plenary Talk by Steve Chien (JPL) - Mars 2020 Onboard Planner @ THEATERZAAL						
16:40	01:00	17:40	Posters & Exhibitions & Drinks @ FOYER						
17:40	00:20	18:00	Logistics Break - Moving to Grand Café de Burcht						
18:00	03:00	21:00	Dinner @ Grand Café de Burcht (Burgsteeg 14, Leiden)						