YOUNG PROFESSIONAL NETWORK EVENT 8:00

9:00

13:30

AUDITORIUM

Keynote Lecture

Integration of Biological Life Support Systems into Future Human Space Missions Michael T. FLYNN (Advanced Water Recycling Group Lead, NASA Ames Research Center, USA

AUDITORIUM CINE 3 Track 1: Eating and Breathing in Space Track 2: Paving the Path to Circular Systems for Space and Earth **Networking Meetings (as needed basis) 3.3 Terrestrial Applications 1.3 On-board Food Production and Preparation** Chairs: Stefania de Pascale (University of Naples Federico II), Giorgio Boscheri (Thales Chairs: Jeremy Pruvost (University of Nantes), Antoinette Kazbar (University of Alenia Space Italia) Wageningen) Process Development for Waste Valorisation (continued) KEETA: A Novel Development of Self-Sustainable Insect-Based Protein The various applications and development of ESA greywater recycling 09h45 and 3D Food Production System for Crewed Deep Space Missions technology, Pierre MAGNES, FIRMUS, France Chanud SITHIPREEDANANT, Chulabhorn Royal Academy. Thailand Technology Transfer for Terrestrial Applications New Space Economy: Value Creation Avenues for the Agri-Food Results From ESA OSIP Activity: Deep-Space Food Production Based on Industry 10h00 Single-Cell Protein Production by Means of Gas Fermentation Catherine THANNIPPILLY ALEX, ESA BIC Baden Württemberg, Kim KUTVONEN, Solar Foods Oyj, Finland Germany Technology Transfer of The Nutrient Harvester: From Research to an MELiSSA Feeder: Biomass Harvesting System for Food Preparation 10h15 On-Site Urine Resource Recovery Product Rastislav KRAMPL, BioX Technologies, Slovakia Michel RIECHMANN, EAWAG / OGMO, Switzerland Waterneutral and Sewageless Buildings Limnospira - Lipidom and Pathways 10h30 Rastislav KRAMPL, BioX Technologies, Slovakia Peter SCHEER, SEMILLA SANITATION, the Netherlands Closed-loop Projects for Spatial Applications Research Towards a Novel Biomanufactory-Based BLSS System Using Fast 2D NMR for Deciphering Lipidic Extracts of Microalgae Giant Reed (Arundo Donax) as a Multifunctional Clonal Propagated 10h45 Iris HALLEGOUET, CEISAM laboratory of Nantes Université, France Biotech Space-Plant Candidate Orsolya MEIER, University of Debrecen, Hungary TICTACS: A Fresh Perspective on Closed Ecological Systems through 11h00 Citizen Science Patrick GROVE, The Spring Institute for Forests on the Moon, France Closed-loop Projects for Spatial Applications (continued) Luna Rapa The Body Gardeners 11h15 Giorgia PONTETTI, G & A Engineering S.r.l., Italy Frederik DESCHUYTTER, Belgium Texture in Space: Exploring the Sensory Dimensions of Cream Cheese Exploring the Efficacy of Bioregenerative Life Support Systems: Space-11h30 Derived Innovations for Climate-Resilient Agri-Food Systems on Earth for Optimal Astronaut Nutrition Claudia GONZALEZ VIEJO, University of Melbourne, Australia Catherine THANNIPPILLY ALEX, Infinite Roots, Germany **ESA Terrestrial Applications Activities** Future Foods for Future Space Flights: 3D Printing Solutions for 20 Years of Real-life operations of the MELiSSA GWTU at Concordia 11h45 Astronaut Meal Diversity to Combat Menu Fatigue Station, Antarctica Sigfredo FUENTES, University of Melbourne, Australia Nina PURVIS, European Space Agency Towards Cooking in Space Conditions: the Development of an Innovative Cooking Processor to Produce Fresh Food in Space for Long Inspiring the Next Generation: Life Support Systems Solution from 12h00 **Duration Missions (the TasteInSpace project)** Space for Earth Training Course Dorothée GOFFIN, University of Liège, Smart Gastronomy Lab, Elena Maria CAMPANARO, ESA/ESTEC, the Netherlands Belgium From orbit to Earth: Bioregenerative systems for sustainable food and 12h15 water in space and on Earth Riccardo CAPOLLA / Fabio MAGRASSI, STAM srl, Italy **ESA BASS Programme Opportunities** 12h30 **Arnaud RUNGE, ESA/ESTEC, the Netherlands AUDITORIUM Keynote Lecture** 12:45 Circular Approaches in Terrestrial Applications and Management of Complex Microbial Communities Martin HARTMANN (Senior Scientist in Microbial Ecology and Sustainable Agriculture, ETH Zurich, Switzerland)

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Closing Ceremony

Organized by the MELiSSA Foundation

Robert LINDNER (Head of Life Support and Physical Sciences Instrumentation Section, ESA)

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