

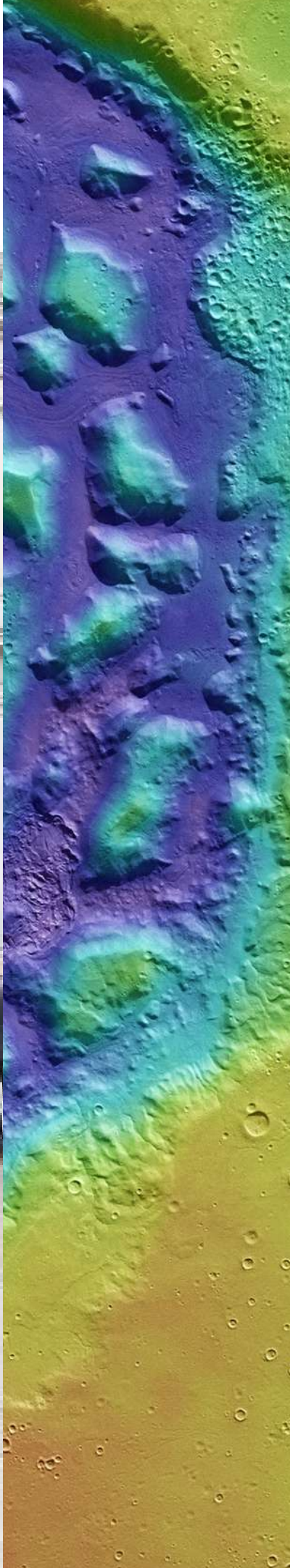
# Switch <sup>to</sup> Space 3

Organised by YouSpace

**19 October 2022**  
**Egmont Palace, Brussels**  
**With a possibility to attend**  
**plenary sessions online**

**Careers - Opportunities -**  
**Expand your knowledge**

[www.switchtospace.org](http://www.switchtospace.org)





# What is Switch to Space?

The largest event in Belgium dedicated to  
**students and young professionals**  
interested in developing careers in the space  
sector

The theme of the Switch to Space 3

# Space Exploration: the Moon & Mars

**+ 600  
participants**

Students, young  
professionals, experienced  
professionals

**+ 50  
speakers**

Captivating presentations  
by Belgium's leading space  
experts

**+ 20 potential  
employers**

Representatives of leading  
Belgium space companies



# What's in it for you?



## Plenary sessions

Captivating presentations by Belgium's leading space experts.



## Meetings

Most sponsors will have representatives assigned to their booth.



## Speed dating

One-to-one conversation with representatives of major organisations in Belgium.



## 7 engaging topics

Get an in-depth knowledge on the subject you are interested in.



## CV corner

Apply for an internship or a job offer, submit your CV to potential employers.



## Cocktail

An opportunity to network, share ideas and have a good time with like-minded people

# Programme

# Plenary sessions

09:00 – 9:20

## Opening of the event

The Chair of YouSpace and Switch to Space Dominique Tilmans. Testimonials from students & young professionals: Benoît Devries, Cem Berk Senel, Antonio Gil Bonnet, Elisa Tasev, Guillaume Noiset, Corneel Bogaert, Emma Buckinx.

09:20 – 10:20

## Panel 1 The role of Europe and Belgium in the Moon & Mars Exploration?

Speakers: Didier Schmitt (ESA), Stella Tkatchova (EIC programme Manager for Space), Thomas Dermine (Belgian State Secretary for Recovery, Strategic Investments & Science Policy).

10:25 – 11:25

## Panel 2 The place of Belgian industry in the Moon & Mars gateway

Speakers: Bart Desoete (OIP), Federico Rossi (Telespazio), Frank Preud'Homme (QinetiQ), Ina Maller (Thales Alienia Space), Richard Aked (SAS), Koen Puimège (Antwerp Space) and Olivier Dupont (Lambda-X).

11:30 – 12:30

## Panel 3 How can we benefit from Moon & Mars Exploration technologies?

Speakers: Frank De Winne (Head of the European Astronaut Centre), Koen Vriesacker (Technology Transfer Broker for the Belgian Space Solutions Center), Jan Van Baelen (The Lunar Grid), Mieke Sterken (Education & Outreach coordinator at Polar Fondation).

16:40 – 18:00

## Plenary evening

The evolution of Space Exploration - point of view of Astronauts: Frank de Winne, Dirk Frimout, Charles Bolden, Richard Chappell, Robert Thirk, Anna Fischer.



# Lunch break

(12:40 – 14:30)

## CV corner

Pin your CV, look at available jobs and internships.

## Meetings

Most sponsors will have representatives assigned to their booth.

## Speed dating

Apply for an internship or a job offer, submit your CV to potential employers.



# Topic 1

14:30 – 16:30

## To the Moon & Mars

### **Going to Mars and the Moon needs studies in micro-gravity and experiments on the Moon first**

Carlo Lorio, Senior Researcher at Université libre de Bruxelles (ULB) and Adjunct Professor at York University

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### **Understanding Mars from Mars Sample Return**

Vinciane Debaille, FNRS Senior Researcher at Université libre de Bruxelles (ULB)

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### **Understanding Mars from interior and rotation measurement**

Sébastien Le Maistre, FED'tWIN Researcher at Royal Observatory and Université catholique de Louvain (UCLouvain)

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### **Understanding Mars and the Moon evolution from their crater**

Philippe Claeys, Full Professor at Vrije Universiteit Brussel (VUB)

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### **Understanding the origin and early evolution of life on Earth, and Mars?**

Emmanuelle Javaux, Professeure ordinaire/full professor at the Geology Department Director of Early Life Traces & Evolution-Astrobiology laboratory Director of UR ASTROBIOLOGY at Université de Liège (ULiège)

# Topic 2

14:30 – 16:30

## Telescopes: Unravelling the mysteries of the Universe

### **Imaging planetary systems with the Extremely Large Telescope: challenges and promises**

Olivier Absil, FNRS senior research associate at STAR Institute ULiège

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### **The James Webb Space Telescope**

Bart Vandenbussche, Research manager at the Institute of Astronomy KU Leuven

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### **The Science of the Einstein Telescope**

Giacomo Bruno, Professor of physics at IRMP UCLouvain

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### **Focus on the E-test activities at CSL: A new radiative cooling concept**

Cédric Lenaerts, Project manager CSL

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### **A new look on the Universe**

Gwenhaël de Wasseige, Franqui assistant Professor of physics at IRMP UCLouvain



# Topic 3

14:30 – 16:30



## Space Technologies for Moon & Mars

### **Nuclear propulsion for the missions on Mars**

Vincent Massaut (Nuclear Electro-Mechanical Engineer at SCK.CEN)

Gert Pille (Nuclear-mechanical engineer at Tractebel)

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### **Liquid rocket propulsion Switch to New Space**

Vincent Ledoux (Space Program at Safran Aero Boosters)

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### **The CNES Spaceship: preparing the future of space exploration**

Romain Charles (PHD student at CNES)

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### **The future of Lunar Communications and Navigation Services: Moonlight project**

Nicola De Quatro (Head of Engineering and Innovation at Telespazio Belgium)

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### **NOMAD instrument for Mars atmospheric analysis (searching for traces of life)**

Stefan Lesschaeve (Head of the optical engineering team at OIP Sensor systems and lead system engineer for the CLIM instrument)

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### **How Radio Wave technology, Boiled Eggs and the Inner Structure of Mars are Related**

Mattias Genbrugge (Project Manager at Antwerp Space)

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### **Technical challenges for compact optics in space missions**

Serena Bollis (Optical System Engineer at Lambda-X)

# Topic 4

14:30 – 16:30

## Astronauts 2.0: 21st century Explorers to Mars

### **Space: the next frontier in tissue engineering**

Kevin Tabury (Dr Eng in space radiobiology at SCK.CEN)

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### **Astronaut cardiac function monitoring, an investigator's journey; from fundamental research to medical applications on earth, and the launch of a startup!**

Pierre-François Migeotte (Chief Executive Officer at HeartKinetics/ULB)

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### **Space rewires the brains of astronauts**

Prof Dr Floris L Wuyts (Head of Lab for Equilibrium Investigations and Aerospace (LEIA), Vertigo expert – European Institute for Otolaryngology HNS, St Augustinus Hospital – Wilrijk – Belgium)

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### **Grip: dexterous manipulation in microgravity**

Philippe Lefèvre (Full Professor of Biomedical Engineering at UCL)

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### **Life Support Technology for long term human space missions**

Dries Demey (Senior Systems Engineer at QinetiQ)



# Topic 5

14:30 – 16:30

## Using local resources on Planets to live

### **Space Resources Technology Needs and Systems Overview**

Diego Urbina (Team Lead, Future Projects and Exploration at SAS)

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### **Using in situ resources for food, water and oxygen production in space and on other planets**

Dr. Ir. Natalie Leys (Bioengineer & Radiation biologist & Space researcher at SCK CEN)

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### **Support Programme and the contribution of the Space resources activities to the Lunar Economy**

Lari Cujko (ESRIC – Startup Program Lead)

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### **Grip: dexterous manipulation in microgravity**

Philippe Lefèvre (Full Professor of Biomedical Engineering at UCL)

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### **The challenges for space law in view of future missions to Mars**

Kevin Madders (c/o King's College London Dickson Poon School of Law)

# Topic 6

14:30 – 16:30

## Protect & Defend our Planets

### **HERA mission and Juventas cubesat**

Mehdi Scoubeau (Systems Engineer at GOMspace)

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### **Aerothermodynamic simulation of atmospheric entry phenomena**

Pierre Schrooyen (Senior Research Engineer at CENAero)

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### **Directed-energy: a versatile technology for space applications**

André Fuzfa (Professor & Research Fellow at the Centre for Particle Physics and Phenomenology at Unamur)

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### **How smallsats can participate in a responsive planetary defense system**

Jean-Emmanuel Roty (Space System Engineer at Aerospacelab)

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### **Sustainability as a keystone in the future of space industry**

Olivier De Goeij (Responsable Filière – Programs Manager at ThalesAlenia)  
Nicolas Chapuis (Head of Engineering for Power space equipments)

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### **Planetary defense from a software system perspective**

Joffrey Coheur (Software System Engineer at Spacebel)

# Topic 7

14:30 – 16:30

## Space humanities / Leaving the cradle of humanity

René Oosterlink (Professor Space Law at UGent)

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Guerric de Crombrughe (Chief Product Officer ConstellR)

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Jean-François Mayence (Polymath Lawyer)

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Stéphanie Roland (Cosmic-inspired Artist)

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Marie Gueguen (Multiverse Philosopher)



# Cocktail

(18:00 - ...)

Networking & Fun  
All participants are  
invited to the evening  
cocktail

# Sponsors



Belgium



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# Register now!

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