Cursos de Verano 2022

SANTANDER

ESCUELA

XVIII International School of Astrobiology «Josep Comas i Solà». Searching for Life on Mars: Techniques and Challenges

June 27 - July 1

DIRECTORS

Rosaly M. Lopes
Jet Propulsion Laboratory, NASA, USA
Víctor Parro
Centro de Astrobiología, CAB (INTA-CSIC), Spain

ORGANIZATION

Carlos Briones
Centro de Astrobiología, CAB (INTA-CSIC), Spain

Ciencia y Tecnología

Solicitud Online

Para cualquier incidencia técnica con la solicitud puede enviar un correo electrónico a: **cau@uimp.es**

Plazos

Solicitud de becas
- Hasta el día 3 de mayo

Apertura de matrícula
- Desde el 20 de abril de 2022 (plazas limitadas)

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Contacto

- De 9:00 a 14:00 h.
- De 16:00 a 18:00 h. (excepto viernes)

Hasta el 17 de junio

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Campus de Las Llamas
Avda. de los Castros, 42
39005 Santander
942 29 87 00

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28040 Madrid
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A partir del 20 de junio

SANTANDER
Palacio de la Magdalena
39005 Santander
942 29 88 00

alumnos@uimp.es

Monday, June 27

10:00 - 11:30 Welcome lectures
Rosaly M. Lopes
Jet Propulsion Laboratory, NASA, USA
Víctor Parro
Centro de Astrobiología, CAB (INTA-CSIC), Spain

11:30 - 13:00 Microbial life in extreme environments
Mike Malaska
Jet Propulsion Laboratory, NASA, USA

15:30 - 17:00 Habitable environments on ancient Mars
Melissa Rice
Western Washington University, USA

Tuesday, June 28

09:00 - 19:00 Field Trip to Zumaia Flysch (whole day)

Wednesday, June 29

10:00 - 11:30 The Martian atmosphere and its importance for habitability
José Antonio Rodríguez Manfredi
Centro de Astrobiología, CAB (INTA-CSIC), Spain

11:30 - 13:00 Biosignatures for alien life
Mike Malaska

15:30 - 17:00 Searching for life on Mars with the Mars2020 Perseverance rover and sample return from Jezero crater
Melissa Rice

19:00 - 20:00 En busca de vida en Marte: nuevas misiones y nuevos retos
José Antonio Rodríguez Manfredi
Carlos Briones
(Open Lecture, in Spanish)

Thursday, June 30

10:00 - 11:30 Biosignatures of the oldest terrestrial microorganisms as analogues for biosignatures of Martian life
Frances Westall
CNRS, France

11:30 - 13:00 Mars Environmental Dynamics Analyzer (MEDA): Perseverance´s instrument for characterizing the atmosphere
José Antonio Rodríguez Manfredi

15:30 - 17:00 Searching for life on Mars with the ExoMars mission
Frances Westall

Friday, July 1

10:00 - 11:30 Student presentations
11:30 - 12:00 Synthesis + diplomas

The 2022 Summer School will review and assess the types of techniques that are necessary for detection of biosignatures on Mars, including Raman spectroscopy, the isotopic and chirality analyses that ESA Rosalind Franklin rover will perform, and the advanced techniques needed to analyze samples both in-situ and in Earth-based laboratories. The central question will be "how can we unequivocally detect biosignatures on Mars?" and the discussions will involve in-situ rovers (including NASA Perseverance), sample collecting and return, laboratory analyses on Earth, and the experiments that future human explorers may be able to perform. The lectures will be focused on instrumentation, techniques, and the science they provide. In addition to them, during the week the students will participate in discussions about the theme, prepare and present group projects, and take part in an excursion to a relevant geological site near Santander.

Código 6546 – Tarifa C – 1 ECTS

CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY PROGRAM
CSIC INTA
EXCELENCIA MARÍA DE MAEZTU

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