

## Scientific Program

Sunday, September 24

13:30 Bus leaves from the Trieste-Ronchi Airport  
14:15 Bus picks up participants at ICTP  
14:30 Bus picks up participants at the train station of Trieste

18:30-19:30 Registration and welcome drink in Lošinj

Monday, September 25

09:00-09:30 Registration

### Opening Session (chairman: Giovanni Vladilo)

09:30-09:45 **Franco Bradamante** (ECSAC)  
*Welcome from ECSAC*  
09:45-10:00 *Welcome address of local authorities*  
10:00-10:10 **Raffaele Saladino** (President of the Italian Astrobiology Society)  
*Welcome address*  
10:10-10:30 **Stefano Fantoni** (Fondazione Internazionale Trieste)  
*ESOF: towards Trieste 2020*

10:30-11:00 Coffee break

11:00-11:20 **Fabio Pagan** (INAF-OATs)  
*Conferences on Life in the Universe at Trieste*  
11:20-11:30 **Giovanni Vladilo** (INAF-OATs, Trieste)  
*Introducing the XVII ECSAC Conference*  
11:30-12:10 **Antonio Lazcano** (Colegio Nacional & UNAM, Mexico)  
*Life in the Universe: a short history of a big question*

Lunch break

### Session 1: Prebiotic chemistry (chairman: Marco Fulle)

16:00-16:40 **Izaskun Jimenez-Serra** (Queen Mary Univ. London)  
*Prebiotic chemistry in the ISM: from Cold Cores to Galactic Center Clouds*  
16:40-17:20 **John Brucato** (INAF-OA Arcetri, Florence)  
*Mineral-biomolecules interactions: detect organic compounds in space*

17:20-17:40 Coffee break

17:40-18:20 **Dimitrios Skouteris** (Scuola Normale Superiore, Pisa)  
*Formation mechanisms of prebiotic molecules in the interstellar medium*  
18:20-19:00 **Cristina Puzzarini** (Univ. of Bologna, Bologna)  
*Prebiotic molecules in interstellar space: rotational spectroscopy and quantum chemistry*

**Session 2: Origin and early evolution of life** (chairman: Raffaele Saladino)

- 09:00-09:40 **Ernesto di Mauro** ("La Sapienza" Univ., Rome, Italy)  
*From one-carbon atom formamide to pre-biogenic systems the path is tenuous but continuous*
- 09:40-10:20 **Antonio Lazcano** (Colegio Nacional & UNAM, Mexico)  
*Prebiotic evolution and the RNA world*

10:20-10:50 Coffee break

- 10:50-11:30 **Omer Markovitch** (Univ. of Groningen, The Netherlands)  
*Chemical Evolution in a Pre-RNA World*
- 11:30-12:10 **Tommaso Fraccia** (Univ. of Milano, Italy)  
*Liquid Crystal Self-Assembly of dNTPs and rNTPs as Autocatalytic Pathway for Ribozymes Formation*

Lunch break

- 16:00-16:40 **Irma Lozada-Chavez** (Univ. of Leipzig, Germany)  
*Differential evolution of noncoding DNA across eukaryotes and its close relationship with complex multicellularity*

**Session 3: Life in extreme environments** (chairman: John Brucato)

- 16:40-17:20 **Andrea Strazzulli** (Univ. Federico II, Naples, Italy)  
*An eventful life in the hot springs: hyperthermophilic microbiome variations during seasonal and geophysical events*

17:20-17:40 Coffee break

- 17:40-18:20 **Sergey Bulat** (Petersburg Nuclear Physics Inst., Saint-Petersburg-Gatchina, Russia)  
*The search for life in the subglacial Lake Vostok in Antarctica*
- 18:20-19:00 **Andrea Baucon** (Univ. of Modena, Italy & Geopark Naturtejo, Portugal)  
*Organism-substrate interactions: from the Adriatic Sea to Mars*

**Session 4: Astrobiology in the Solar System** (chairman: Fabio Pagan)

- 09:00-09:40 **Marco Fulle** (INAF-OATs, Trieste, Italy)  
*The Rosetta Mission: Overview*
- 09:40-10:20 **Kathrin Altwegg** (Univ. of Bern, Switzerland)  
*Organics in comet 67P/Churyomov-Gerasimenko and its relation with Earth*

10:20-10:50 Coffee break

Wednesday, September 27 (continued)

- 10:50-11:30 **Rosalba Bonaccorsi** (NASA, Ames Research Center/ SETI Institute)  
*High, Low, Hot, and Cold Extremes and the Search for Life in the Solar System*
- 11:30-12:10 **Miguel Chavez** (INAOE, Puebla, Mexico)  
*Astrobiology with the Large Millimeter Telescope*

Lunch break

14:15-19:30 Boat trip or alternative excursion

Thursday, September 28

**Session 5: Life studies *in silico*** (chairman: Giovanni Vladilo)

- 09:00-09:40 **Marco Saitta** (Univ. Sorbonne, Paris)  
*From quantum computational physics to the origins of life*
- 09:40-10:10 **Ali Hassanali** (ICTP - Trieste)  
*Aqueous solutions in Silico: Water, Ions, Protons & Proteins*

10:10-10:30 Coffee break

**Session 6: Protoplanetary disks and astrobiology** (chairman: Antonello Provenzale)

- 10:30-11:10 **Giovanni Dipierro** (Univ. of Leicester, UK)  
*Protoplanetary discs in the ALMA era*
- 11:10-11:50 **Cecile Favre** (INAF-OA Arcetri, Florence)  
*Organic molecules in protoplanetary disks*

**Session 7: Exoplanets and life beyond the Solar System** (chairman: Fabio Pagan)

- 11:50-12:30 **Alessandro Sozzetti** (INAF-OATo, Torino)  
*The Quest for Terrestrial, Habitable Worlds*

Lunch break

- 16:00-16:40 **Giuseppina Micela** (INAF-OAPa, Palermo)  
*Planetary atmospheres and host stars*
- 16:40-17:20 **Isabella Pagano** (INAF-OACt, Catania)  
*CHEOPS and PLATO: the ESA roadmap to detect and characterize extrasolar planets*

17:20-17:40 Coffee break

**Session 8: Planetary climate and habitability** (chairman: Laura Silva)

- 17:40-18:20 **Giovanni Vladilo** (INAF-OATs, Trieste)  
*On the challenge of defining temperature criteria of habitability*

**Special Event** (chairman: Franco Bradamante)

- 18:20-18:50 **Stefano Ruffo** (SISSA, Trieste)  
*Refugee Scientists: Global and Local Perspectives*

20:00 Conference dinner at restaurant Marina (Veli Lošinj)

**Session 8: Planetary climate and habitability (cont.)** (chairman: [Laura Silva](#))

09:00-09:40 **Antonello Provenzale** (IGG-CNR, Pisa, Italy)

*The living planet: geosphere-biosphere interactions in the Earth System dynamics*

09:40-10:20 **Giuseppe Murante** (INAF-OATs, Trieste)

*Exploring the climate parameter space of rocky planets*

**Closing session** (chairman: [Ernesto di Mauro](#))

10:20-10:50 Open questions – Conference summary

10:50-11:20 Coffee break

12:00 Bus leaves to Trieste and Ronchi airport

Please note that the duration of the trip is uncertain because a ferry must be taken to the mainland and a non-Schengen border must be crossed. The approximate estimate of the trip duration is 4 hours to the train station of Trieste and 5 hours to the Ronchi Airport.