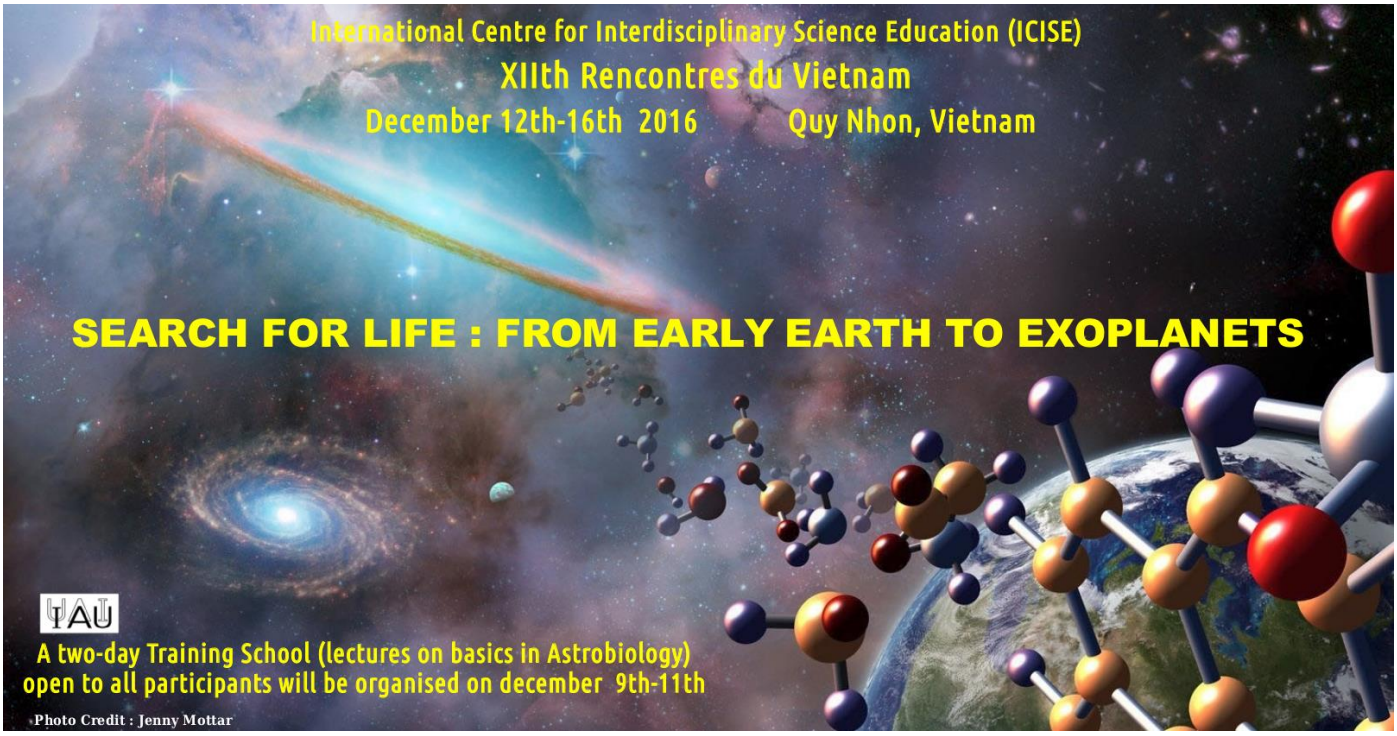

Training School Program *(Friday 9th – Sunday 11th)*

Chairs: M. Gargaud and N. Prantzos

Friday 9th		**Astrophysics and Astrochemistry**
1:00 - 2:30	**Nikos Prantzos**	**Nucleosynthesis and galactic chemical evolution**
2:30 – 3:00		***Coffee break and informal discussion***
3:00 - 4:30	**Masatoshi Ohishi**	**Astrochemistry**
Saturday 10th		**Planetology, Geosciences and Chemistry**
8:00 - 9:30	**Nader Haghighpour**	**Solar System Formation**
9:30 – 10:00		***Coffee break and informal discussion***
10:00- 11:30	**Alain Lecavellier**	**Exoplanets**
11:30–1:00 pm		***Lunch***
1:00 - 2:30	**Hervé Martin**	**Early Earth geosphere**
2:30 – 3:00		***Coffee break and informal discussion***
3:00 - 4:30	**Carlos Briones**	**Pre-biotic chemistry**
Sunday 11		**Geosciences and Life Sciences**
8:00 - 9:30	**Daniele Pinti**	**Early Earth atmosphere/hydrosphere**
9:30 – 10:00		***Coffee break and informal discussion***
10:00- 11:30	**Carlos Briones**	**RNA world and early life**
11:30–1:00 pm		***Lunch***
1:00 – 5:00		***Afternoon free***

5:00 – 7:00	***Conference registration***
7:00 - 9:00	***Welcome Cocktail of the Conference***

Conference Program *(Monday 12th – Friday 17th)*

Monday 12th : Astrophysics/astrochemistry

8:00-9.00 am	**Director ICISE President of the Province Ambassador of France Conference Chairs**	**Opening talks**
9:00 – 9:40	**Nader Haghighipour**	**The Unique Unifying Power of Research on the Origin of Life and its Existence in the Universe**
9:40-10.10	**COFFEE BREAK**	***Group Photo***
CHAIR: Ohishi Masatoshi		
10:10-10:40	**José Cernicharo**	**Molecules in space, from cold dark cores to high mass star forming regions**
10:40-11:10	**Sun Kwok**	**Relationship between stellar synthesized complex organics and solar system organics**
11:10-11:30	**Dimitris Stamatellos**	**Young protoplanetary discs and their role in planet formation and evolution**
11:30-11:50	**Hideaki Fujiwara**	**Dust in Warm Debris Disks**
11:50-12:10	**Sin-iti Sirono**	**Sintering of icy dust aggregates and its effects on collision**
12.10-1:30 pm	**LUNCH**	
CHAIR: Hervé Cottin		
1:30 - 2:00	**Manuel Güdel**	**Conditions for habitability: young stars and their environment**
2:00 - 2:20	**Theresa Lüfting**	**Young stars magnetic fields and their influence on the habitability of surrounding planets**
2:20 - 2:40	**Hideko Nomura**	**CO gas depletion and formation of organic molecules in protoplanetary disks**
2:40 – 3:10	**COFFEE BREAK**	
CHAIR: José Cernicharo		
3:10 - 3:40	**Yoko Kebukawa**	**Carbonaceous meteorites and the origins of organic matter**
3:40 - 4:10	**Hervé Cottin**	**Comets organic content and astrobiology, (re)assessment for comet 67P after the Rosetta mission**
4:10 - 4:30	**Grazina Tautvaisiene**	**CNO abundances in stars of open clusters as tracers of stellar life**
4:30 - 4:50	**Ji-Wei Xie**	**Orbits of Planetary Systems: an Eccentricity Dichotomy, a Common relation and the Prevalence of Circular Orbits.**

Tuesday 13th : Early Earth

CHAIR: Ramon Brasser		
8:00 - 8:30 am	Axel Hofmann	Early Earth surface processes 3.5 to 3.0 Ga ago
8:30 - 9:00	Hervé Martin	Was the growth of Earth continental crust continuous or episodic? Implications for the evolution of life
9:00 - 9:20	Benjamin Charnay	3D modeling of climate, carbon cycle and photochemistry on the early Earth
9:20 - 9:40	Barbara Stracke	On the habitability of a stagnant-lid Earth
9:40 – 10:10	COFFEE BREAK	
CHAIR: Daniele Pinti		
10:10 - 10:40	Ramon Brasser	Late veneer and late accretion to the terrestrial planets
10:40 - 11:00	Miguel Angel Montoya-Pérez	Characterization chemical and morphological of olivine barred chondrule and meteorite classification by nondestructive spectroscopy techniques
11:00 - 11:20	Zan Peeters	Large inclusions of organic carbon in meteorites: an application for nanoSIMS in Astrobiology
11:20 - 11:40	Kota Naito	Statistical study on micrometer-sized organic inclusions in meteorites
11:40 – 1:00 pm	LUNCH	
CHAIR: Axel Hofman		
1:00 - 1:30	Takeshi Kakegawa	Evidence of early life at >3.7 Ga Isua Supracrustal Belt in Greenland: its implication to origin of life
1:30 - 2:00	Yiliang Li	Looking for a new biomarker for the earliest oxygenic photosynthesis on Earth
2:00 - 2:20	Sally Potter-McIntyre	Progressive diagenetic alteration of macro- and microscopic biosignatures in ancient springs and spring-fed lacustrine environments
2:20 – 2:50	COFFEE BREAK	
CHAIR: Hervé Martin		
2:50 - 3:20	Daniele Pinti	Noble gas and nitrogen isotopes from inclusions of the > 3.8 Ga Nuvvuagittuq Belt, Northern Quebec
3:20 – 3:50	Jean Pierre Bibring	Mars and Earth co-evolution
3:50 - 4:10	Julio Fernández	Impacts of giant comets and asteroids on Earth. An assessment of their relative contribution to the overall impact rate
4:10 - 4:30	Jaganmoy Jodder	Probing into the Palaeoarchaean record of the Singhbhum Craton (India) in search for vestiges of life older than 3.5 Ga.

Late afternoon Poster session (4:30 – 5:30): 11 posters

Mijumo Bessho	Reconstruction of ancestral proteins based on molecular phylogenetic analysis
Zachary Duca	Operation of pneumatically-actuated membrane-based microdevices designed for in situ analysis of extraterrestrial organic molecules after prolonged storage and at negative gravity
Birgit Loibnegger	A dynamical study on exocomets and their importance in water transport to the habitable zone
Alicia Negron-Mendoza	Stability of glyceraldehyde in a high radiation field. Chemical evolution implications
Alicia Negron-Mendoza	Adsorption of histidine after ultraviolet irradiation onto calcite in simulated calcite-rich Archaean environment
Lucy Norman	Evidence for four of the earliest primitive species of predatory animals in the Neoproterozic Doushantuo Formation
Sandra Ramos	Life and it's definitions
Takahiro Sasamoto	How many amino acid alphabets were used for primitive proteins?—Elucidation of the smallest amino acid sets for stable and active proteins.
Anna Suzuki	Greenhouse effects on terrestrial planets with various atmospheres
Grazina Tautvaisiene	On-ground spectroscopic and photometric survey for the PLATO exoplanetary research space mission
Bowen Zhang	Estimating the pH environment of the last universal common ancestor by reconstructing and characterizing ancestral proteins

Wednesday 14th : Life in the Universe, societal impacts and ethical issues

CHAIR: Daniel Rouan		
8:00 - 8:30	**Jorge Vago, by *Jean Pierre Bibring***	**Search for life signatures on Mars**
8:30 - 9:00	**Jesùs Martinez-Frias**	**Ethics and space exploration: from geoethics to astrobioethics**
9:00 - 9:20	**Kelly Smith**	**Life as a Statistical Kind**
9:20 - 9:40	**Howard Smith**	**We are Probably Alone in the Universe - Some Ethical, Philosophical and Religious Issues**
9:40 – 10:10	**COFFEE BREAK**	
CHAIR: Manuel Guedel		
10:10 - 10:40	**Charley Lineweaver**	**The Galactic Habitable Zone and a Gaian Bottleneck: The physics, chemistry and biology of habitability**
10:40 - 11:10	**Nikos Prantzos**	**On the Galactic habitable zone**
11:10 - 11:30	**Paul Mason**	**Habitability in the Local Universe**
11:30 – 1:00pm	**LUNCH**	

Afternoon : excursion

Thursday 15th: Prebiotic chemistry/early life

CHAIR: Dougal Ritson		
8:00 - 8:30	Carlos Briones	The systems perspective at the origins of life
8:30 - 9:00	Albert Fahrenbach	Radiolytic Synthesis of RNA Precursors
9:00 - 9:20	Kuhan Chandru	Broad Screen of Oligomerisable Molecules Reveals Unexpected Pathways to Prebiotically Accessing Large Dynamic Combinatorial Libraries
9:20 – 09:50	COFFEE BREAK	
CHAIR: Carlos Briones		
09:50-10:20	Dougal Ritson	Was the citric acid cycle a biotic or prebiotic invention?
10:20-10:50	Satoshi Akanuma	Thermophilicity of early life inferred by the resurrection of ancient proteins
10:50-11:10	Kathryn Lanier	Reading the ribosome: The history of rRNA
11:10-11:30	Nicholas Kovacs	Frozen in Time: The History of Proteins
11:30-1:00 pm	LUNCH	
CHAIR: Hervé Cottin		
1:00 - 1:20	Ana Lopez Sepulcre	Formamide (NH2CHO) in space: a key precursor of pre-biotic chemistry
1:20 - 1:40	Ruth-Sophie Taubner	Testing the Habitability of Saturn's Moon Enceladus in an Interdisciplinary Attempt
1:40 - 2:00	Lucy Norman	Compartimentalisation Strategies for Hydrocarbon-based Biota on Titan
2:00 - 2:20	Daniel Boice	Phosphorous Chemistry in Comets and Astrobiology
2:20 – 2:50	COFFEE BREAK	
CHAIR : Jesus Martinez-Frias		
2:50 – 4:00	Muriel Gargaud Hervé Cottin Charley Lineweaver	Training and Education in Astrobiology (followed by general discussion)

3:20 pm : Public conference for children/undergraduates (N. Prantzos) (in parallel)

***7:00 pm* : Conference dinner**

Friday 16th: Planetology + space exploration

CHAIR: Nader Haghighipour		
8:00 - 8:30	Alain Lecavellier	Exoplanetary systems
8:30 - 9:00	Hajime Yano	Astrobiology-driven Space Missions and Experiments: From the low Earth Orbit to the Ocean Worlds
9:00 - 9:20	Daniel Rouan	Exoplanet characterization with JWST
9:20 - 9:40	Surangkhana Rukdee	TARdYS an upcoming exoplanet hunter for the southern hemisphere
9:40 – 10:10	COFFEE BREAK	
CHAIR: Alain Lecavellier		
10:10-10:40	François Forget	Planetary climates, habitability and liquid water
10:40-11:00	Amri Wandel	On the possibility of evolution and detectability of life on Proxima b
11:00-11:20	Ludmila Carone	The Trappist-1 planets: 3 worlds and even more possible climate states
11:20-11:40	Paul Mollière	The imprint of formation on planetary spectra
11:40-1:00 pm	LUNCH	
CHAIR: François Forget		
1:00 - 1:30	Sean Raymond, by *Ramon Brasser*	Terrestrial planet formation at home and abroad
1:30 - 1:50	Martin Turbet	How could Early Mars have been habitable?
1:50 - 2:10	Ngoc Truong	Origin of Phobos and Deimos by Giant Impact: Lessons from Terrestrial Tektites
2:10 - 2:30	George Tan	Exploration missions to Mars
2:30 – 3:00	COFFEE BREAK	
3:00 - 3:20	Stephane Mazevet	Ab initio equation of states for planetary and exoplanetary modeling
3:20 - 3:40	Tetsuya Hara	On the Evolutionary History of the Water Ocean on Venus
3:40 – 4:00	SHORT BREAK	
CHAIR: Muriel Gargaud and Nikos Prantzos		
4:00 - 5:00		General discussion and Concluding remarks