

# *Sea and Space*

*from February 28  
to March 4 2022*

*Amphi 310*

*Link :*

<https://www.youtube.com/watch?v=A6Zk-b5eEC4>  
<https://www.youtube.com/c/ENSAPVSofficieel/featured>



Strasbourg,  
école d'architecture

**PARIS  
VAL DE  
SEINE**  
ÉCOLE NATIONALE SUPÉRIEURE  
D'ARCHITECTURE

# SCHEDULE

## 28 February 2022

- 9.00 to 9.30 am Arrive and get seated (coffee at home)  
9.30 am Start
- 9.30 to 9.40 am Welcome – By Director of Faculty Architecture,  
Philippe Bach
- 9.40 to 10.10 am Introduction: The Systemic method in architecture / synthesis  
- Olivier WALTER

### o Workshop Challenges and Opportunities:

- 10.10 to 11.00 am Long-term prospective:  
- Muriel LAFAYE CNES
- 11.00 to 11.45 am Architecture  
- Yazgi DEMİRBAŞ
- 11.45 to 12.30 am Sea and Space  
- Peter WEISS
- 14.00 to 14.45 pm Out of this world architecture – Building for Extreme Environments  
- Barbara IMHOF
- 14.45 to 15.30 pm Design:  
- Phnam BAGLEY
- 15.45 to 16.30 pm ARCHES – Emmanuel DUFRANES

## 1st March 2022

- 9.30 to 10h15 am Human:  
- Christophe CAMUS
- 10.15 to 11.45 am Biomimetism  
- Natasha CHAYAAMOR-HEIL
- 11.45 to 13.15 am Architecture  
- Sylve TRUYMAN  
- Thomas LAGARDE

Intervention Jacques et Sophie ROUGERIE depuis les US

14.00 to 14.30 pm WORKSHOP PREPARATION  
Room 505 (every tuesday) 9h00 / 17h00

## 4th March 2021

14.00 to 17.00 pm PRESENTATION

## INTENTION

We are on the cusp of great change. The mistakes of the past force us to radically evolve in our ways of living and designing our environment, to no longer think of it as a “house”, but as an ecosystem. And there are two places that will become the main challenges of humanity, the sea and space. Each is an unknown place with enormous potential for development, each with common characteristics with regard to human life and the evolution of our technologies.

# INTRODUCERS

WHERE:  
The SCHOOL OF  
ARCHITECTURE  
DE PARIS  
VAL DE SEINE



## ACCÈS RAPIDES À L'ENSA PARIS-VAL DE SEINE

62	Porte de France	3A	Avenue de France		Accès depuis Bibliothèque François Mitterrand
64	Pont de Tolbiac	C	Bibliothèque F. Mitterrand Sortie 5 : Rue des grands moulins		Accès depuis le boulevard des Maréchaux
89	Porte de France	14	Bibliothèque F. Mitterrand Sortie 3 : Rue Goscinny		Rue Française Dolto Rue Marie-Andrée Lagroua
132	Bibliothèque F. Mitterrand		Quai Panhard et Levassor Rue Marie-Andrée Lagroua		
325	Watt				



**Philippe BACH**  
is appointed Chairman of the Board of Directors of the School of Architecture of Strasbourg between 1997 and 2003.  
Director of the National School of Architecture of Strasbourg from 2003 to 2014. Philippe BACH becomes director of the National School of Architecture of Paris-Val de Seine in August 2014.  
He is knight in the order of Arts and Letters.  
He is knight in the order of the Academic Palms.



**Emmanuel DUFRASNES ARCHES**  
assistant professor at ENSAS, member of AMUP research unit. He founded this scientific network and will coordinate it with Denis BRUNEAU (I2M) from the University of Bordeaux between 2017 and 2020. He has more than 10 years of experience in consulting firms in Belgium and France in the field of construction and sustainable development. He is regularly commissioned as an expert on topics related to the construction of positive energy buildings or sustainable urban development. He also acts as a Research Tax Credit Expert on behalf of the Ministry of Higher Education and Research.

# MODERATORS



**Olivier Walter**  
Is Architecte DPLG from Paris Val de Seine in 1995.  
He began teaching at the ENSA Paris Val de Seine immediately after his diploma in a certificate "architecture in extreme environments". Topics ranged from Earth to Space. This certificate was stopped in 2005. He was also a professor at Strate College on space design from 2004 to 2009. He is currently responsible for the ARCHES network for space.



**Sophie ROUGERIE**  
Ecole Nationale Supérieure d'Architecture de Val de Seine, Théories et pratiques de la conception architecturale et urbaine -TPCAU, She is Managing Director at Jacques Rougerie Architectes Associés, as well as a member of the Board of Directors of the Jacques Rougerie Foundation. In 2014, she participated in the creation of the new Nausicaá with Jacques ROUGERIE, the architect of the first Nausicaá.

# SPEAKERS



**Murielle Lafaye**

- Deputy Director (CNES)
- Space Economy Observatory Program Manager
- Prospective Expert and Economic Impacts - Founder and Host of Space'ibles
- Head of Economic Intelligence, CNES
- Spatial forecasting and economic impacts expert
- In charge of Prospective, Strategy and Relations with Ministries
- Applications development coordinator



**Peter Weiss**

President and Founder  
Spartan Space

- Head of Department COMEX S.A. President POWERSEA SAS
- PostDoc : Centre de Physique des Particules de Marseille (CPPM; CNRS/IN2P3 - Aix-Marseille University)
- PhD Candidate : The Hong Kong Polytechnic University
- Project Manager : Cybernetix
- Visiting Researcher : Massachusetts Institute of Technology (MIT)
- DLR - Deutsches Zentrum für Luft- und Raumfahrt DLR



**Yazgi DEMRIBAS**

Young architect, Yazgi DEMRIBAS completed his final degree in spatial architecture at the Ecole Nationale Supérieure d'Architecture de Paris-Belleville in 2019.

She is a member of the "Space Architect" Association.



**Phnam BAGLEY**

Phnam turns science fiction into reality for a better future.

She is a French industrial designer and space architect with 15 years of experience creating cutting-edge hardware in Wearables, Audio, Neurotech/Biohacking, Healthcare, Education, Sports, Transportation, and Aerospace.

She specializes in turning groundbreaking technologies into attainable, intuitive, and beautiful products that help humans become the best versions of themselves.

She speaks internationally on the subject of "Design for a Better Future", covering stories of sustainability, design thinking, education and human flourishing.



**Barbara IMHOF LIQUIFER**

We do not believe in drawing a line between Earth and Space, but rather in identifying and applying 'reciprocities' between terrestrial (Earth) and extra-terrestrial (Orbit, Moon, Mars, etc.) architecture, in the way we design product, transportation and habitation systems for living on and off the planet. The firm takes a multidisciplinary approach to research and design of future systems. It fosters collaboration across disciplines, cultures, and national boundaries. Our portfolio spans a wide variety of projects involving the design and construction of product, habitat and transportation systems for living, working and exploring on Earth (1G), in orbit (0G), on the Moon (1/6G), on Mars (1/3G) and beyond.



**Christophe CAMUS**

Professor of Human and Social Sciences at ENSAB (Rennes), I have also been a researcher at GRIEF (EA 7465) since 2016, associate researcher at LET-LAVUE UMR (ENSA Paris-La Villette).

My research focuses on the sociology of architecture, the practices and professional identity of architects, architectural design and mediations, and finally, the visions and designs of the future of architecture, a problem that led me to to study the construction and housing programs and projects of the underwater space, from the 1960s to today.

Finally, I am co-responsible for the Arts and Creation Pole of the MSHB (Rennes), as well as co-responsible for the ARCHES thematic scientific network, on architectures in extreme environments.



**Jacques Rougerie**

visionary architect born in 1945, pursues his two passions, the Sea and architecture. He bases his research and the structures he builds on the principle of biomimicry, whilst taking sustainable development into account. Jacques Rougerie has built underwater habitats, laboratories, marine research centers, vessels with see-through hulls, subaquatic museums. He has designed underwater villages and structures to raise awareness on the beauty of the sea and its fundamental role in the great history of humanity. He was elected in 2008 at the Institut de France - Academy of Fine Arts.



**Natasha CHAYAAMOR-HEIL** architect, PhD in biomimetic strategy for design and innovation in architecture and researcher at UMR MAP-MAACC 3495 CNRS. Her researches focus on the exploration of several innovative methods to translate principles of nature and implement them in architectural design towards sustainability. She also analyzes how living organisms adapt to their environments and implement the principles for a sustainable built environment.



**Sylve TRUYMAN**  
Architecte

I founded REAL DREAM in 2018: a company specialized in innovations, design and illustrations in the fields of architecture, space and industry.

Our concepts have won several international awards, last year in the USA where we exhibited at NASA's Johnson Space Center our Martian habitat Olympia (1st MarsCityDesign Award). Our biomimetic projects won the «Coup de coeur» Award and the «Mention spéciale du jury» from the J.Rougerie Foundation at the Institut de France. Selenia, is a lunar village inspired by underwater life.



**Thomas LAGARDE**

is an architect / systems engineer who has been working in France in the field of space start-ups for three years. He received his master's degree in spatial architecture science in 2018 from the University of Houston in the ASCIS department.

He has published several articles and participated in several conferences on space habitat including the Deep space gateway workshop, ICES, IAC, ASCE Earth and Space Conference and New Worlds (Austin).

He is involved in several organizations and networks including RST Arches, AIAA Space Architecture technical committee, Mars City Design, Moon Village Association, IAASS and Open Space Makers.



# RST ARCHES - *Le réseau disruptif sur les architectures en milieux extrêmes*

<http://www.arches.urbicoop.eu/>

Relegated for a long time to the field of building sciences, conditioning techniques – ventilation, air-conditioning, lighting, sound or odourisation systems – play a decisive role in the contemporary urban and architectural production. They are fully implemented in commercial architecture, which promotes experiential and sensory marketing. They are developed in accordance with regulations of energy efficiency in buildings that establish new requirements in terms of flux between architecture and environment. They become necessary in inhospitable climates (tropics, deserts, poles), in some constrained spaces (places of care, entertainment, conservation or specific facilities), or in extreme environments (underwater, underground or extra-terrestrial architectures). They naturally question our relation to the environment and to our living spaces, to energy and material flows, and to the visible and invisible technologies that rule our living environments.

## OUR TWO SPONSORS

### Jean-Jacques FAVIER - astronaut



The lines of thought developed within the "ARCHES" Network concern the International Space University (ISU) by their interdisciplinarity, including the SHS that we also deal with in our space-related ecosystem. Different topics are of interest to us, such as spin-offs from the space sector to green techs, and in general the technologies from the laboratories to advance the achievements of the general public on Earth. Our partnership with the Strasbourg School of Architecture (ENSAS) made it possible to associate our partners with partners from all over the world, but also, especially in Alsace and France

### Jacques ROUGERIE - Architect



Throughout my life I gave shape to my dreams and realized them through meetings with men who believed in my vision of a prospective architecture and helped me to implement it. Without their support, many of my projects would not have been possible. Today, it is my duty to help new generations, to give them the benefit of this support that they need to build the future. This is my commitment and that of the Jacques Rougerie Foundation dedicated to space and the sea ... Because it is space and the ocean that will be born the destiny of future civilizations. I will bring my expertise to the "ARCHES" Network.

At the crossroads of architecture, technology, culture and environment, this scientific network "ARCHES" aims to eventually generate knowledge and breakthrough innovations by confronting the boundary conditions generated by extreme environments such as space and planets of the solar system, the oceans and underwater universes, the high mountain, the deserts or the ice caps of our planet, ...