

SCHEDULE OF  
**Université Côte d'Azur COMPLEX DAYS**

8h30-8h45

8h45-9h00

9h00-9h20

**REGISTRATION AND WELCOME COFFEE - PATIO OF BREA ROOM**  
**BRIEF INTRODUCTION TO THE DAY - BREA ROOM**

**Frédérique Bertonecello (CEPAM): Modeling complex systems in Archaeology: general issues and first insights from the ModelAnSet project**  
**BREA ROOM**

**BONNARD ROOM**

**MATISSE ROOM**

**CEZANNE ROOM**

9h25-9h45

**Raphaël Chétrite (JAD):**

*On Gibbs-Shannon Entropy*

9h45-10h05

**Matthieu Bellec (INPHYNI):**

*Experimental evidences of light superfluidity in a nonlinear crystal*

10h05-10h25

**Christophe Den Auwer (ICN):**

*New paradigms in nuclear human decorporation using macromolecular systems*

10h25-10h45

**Hadrien Gascuel (JAD):**

*Synchronization in networks of interacting agents*

**Sylvain Antoniotti (ICN):**

*Complex molecules synthesis made easy*

**Alexandru Dimca (JAD):**

*Polynomial interpolation in higher dimensions*

**Gian-Luca Lippi (INPHYNI):**

*Self-organization and noise in small scale lasers and beyond*

**Emiliano Perez Ipiña (JAD):**

*Modeling bacterial infections*

**Yves D'Angelo (JAD):**

*Dynamics of Multi-Scale Expanding Networks*

**Gianluigi Giustiziero (SKEMA):**

*When Losing a Valuable Resource Enhances Performance: Resource Turnover on Rugged Landscapes*

**Stéphane Lanteri (INRIA):**

*Advanced numerical modeling and simulation of nanoscale light/matter interactions*

**Yannick Baraud (JAD):**

*Robust estimation in statistic*

**COFFEE BREAK - PATIO OF BREA ROOM**

11h15-11h35

**Bruno Cessac (INRIA):**

*Multi scale modeling of the retina*

11h35-11h55

**Luis Gomez Nava (JAD):**

*Emergent collective behaviors induced by imitation*

11h55-12h15

**Robert Grossmann (JAD):**

*Emergent collective dynamics of active particles with alignment-interactions*

12h15-12h35

**Uriel Frisch (LAGRANGE):**

*Bridging the mathematician's and the physicist's current vision of turbulence*

**Christophe Henry (LAGRANGE):**

*Suspensions of non-spherical particles in turbulent flows*

**Yannick Ponty (LAGRANGE):**

*Turbulence fluid-structure Dynamo*

**Martin Krupa (JAD):**

*Models of sequential activation of concepts*

**Cornelia Meinert (ICN):**

*Chiral Biomolecules in Interstellar Space: Detection and Symmetry Characterization*

**André Galligo (JAD):**

*In-plane compressive response of a polycarbonate honeycomb*

**Pavel Kuzhir (INPHYNI):**

*Magnetic filtration of phase separating ferrofluids: first steps towards application to detection of biomolecules*

**Héloïse Méheut (LAGRANGE):**

*Astrophysical disks winds and turbulence*

**Jean-Baptiste Caillau (JAD):**

*Optimal control of slow-fast mechanical systems*

**NETWORKING LUNCH**

14h00-14h20

**Agnese Seminara (INPHYNI): The fundamental drivers of fungal spore liberation in the atmosphere - BREA ROOM**

14h25-14h45

**Thierry Goudon (INRIA):**

*Kinetic models for interacting «particles»*

14h45-15h05

**Olivier Legrand (INPHYNI):**

*Chaotic Reverberation Chambers for Electromagnetic Compatibility*

15h05-15h25

**Romain Veltz (INRIA):**

*On a toy network of neurons interacting through nonlinear dendritic compartments*

15h25-15h45

**Jérémie Bec (LAGRANGE):**

*Dusty turbulence*

15h45-16h05

**Jérôme Golebiowski (ICN):**

*Cracking the code of chemosensory perception using computational tools*

**Frédéric Lesage (MSI):**

*Measurement of temperature and thermal gradients using fiber optic Long Period Gratings (LPG)*

**Paola Goatin (INRIA):**

*Macroscopic models for traffic management*

**Guillaume Labeyrie (INPHYNI):**

*Self-organization in cold atoms*

**Jean-Baptiste Pomet (INRIA):**

*Stability analysis of high frequency nonlinear amplifiers via harmonic identification*

**Florentin Millour (LAGRANGE):**

*Data transmission with an optical link between a nanosatellite and the ground*

**Jacques Blum (JAD):**

*Nudging-based observers for geophysical data assimilation and joint state-parameters estimation*

**Lionel Gil (INPHYNI):**

*A biophysical model mimicking the spontaneous occurrence of waves in developing retina*

**Elie Hachem (MINES Paris Tech):**

*A new numerical framework for phase change, boiling and liquid-vapor interface*

**Matteo Rauzi (IBV):**

*Probing an embryo-scale purse-string mechanism driving ventral furrow formation*

**Marjorie Haond (INRA):**

*Frozen in space: an experimental demonstration of range pinning*

**COFFEE BREAK - PATIO OF BREA ROOM**

16h30-16h50

**Bruno Marcos (JAD):**

*Collisional relaxation of long range interacting systems of particles*

16h50-17h10

**Vincent Calcagno (INRA):**

*Complexity and the stability of ecological systems*

17h10-17h30

**Dario Vincenzi (JAD):**

*Emergence of chaos in a viscous solution of microscopical rods*

17h30-17h50

**Mathias Albert (INPHYNI):**

*Tracking symmetries in systems of one dimensional quantum particles*

17h50-18h10

**Mathieu Desroches (INRIA):**

*Slow-fast transitions to seizure states in the Wendling-Chauvel neural mass model*

**Enrico Formenti (I3S):**

*On the enumeration of 2-polyominoes*

**Laurent Counillon (LP2M):**

*Lithium Isotopic Fractionation by human Na<sup>+</sup>/H<sup>+</sup> exchangers*

**Giovanna Tissoni (INPHYNI):**

*Extreme events in lasers*

**Giorgio Krstulovic (LAGRANGE):**

*Vortex reconnections in classical and quantum fluids*

**Frédéric Hébert (INPHYNI):**

*Discrete quantum systems*

**Médéric Argentina (INPHYNI):**

*Scaling laws for a compliant biomimetic swimmer*

**Elisabeth Lemaire (INPHYNI):**

*Concentrated suspension dynamics: a contact story*

**Madalena Chaves (INRIA):**

*A mathematical control viewpoint on the interactions between mammalian cell cycle and circadian clock*

**Marco Corneli (JAD):**

*Stochastic textual block modeling in dynamic networks*

**Xavier Noblin (INPHYNI):**

*Cavitation avalanche in natural and artificial devices*

18h10-18h30

**Patrick Michel (LAGRANGE):**

*Granular material dynamics and space missions to celestial bodies: a transdisciplinary approach - BREA ROOM*

**CLOSING SPEECH & APERITIF**