#### Monday, October 16th

2 p.m. - 5:45 p.m. Check in at IESC

5:45 p.m. - 6 p.m. Welcome word by Thomas LECUIT (Institut de Biologie du

Développement, France) and Rosa COSSART (Institut de

Neurobiologie de la Méditerranée, France)

6 p.m. - 7 p.m. Keynote Conference - Adrienne Fairhall (University of

Washington, USA)

7 p.m. - 8 p.m. Welcome drink at IESC

8 p.m. Dinner in Cargese

### Tuesday, October 17th

9 a.m. - 9:40 a.m. Dmitriy Aronov (Zuckerman Institute, Columbia University,

USA)

Using food-caching birds to study the neuroscience of

episodic memory

9:40 a.m. - 10:20 a.m. Laura Lee Colgin (Center for Learning and Memory, The

University of Texas at Austin, USA)

Coordination of populations of hippocampal place cells by

theta rhythms and sharp wave-ripples

10:20 a.m. - 10:50 a.m. Coffee break

10:50 a.m. - 11:30 a.m. | Jay Groves (Department of Chemistry, University of California

Berkeley, USA)

Visualizing signaling output from the LAT protein

condensate during T cell activation at the single molecule

level

11:30 a.m. - 12:10 a.m. Pierre Sens (Institut Curie, France)

Physical principles of cell volume and density regulation

12:10 p.m. - 2 p.m. **Lunch Break** 



2 p.m 2:40 p.m.	Madan Rao (National Centre for Biological Sciences (TIFR), Bangalore) Decoding and Encoding of Molecular Information: the umwelt of the cell
2:40 p.m 3 p.m.	Allyson Quinn Ryan (Max Planck Institute for Molecular Cell Biology and Genetics) napari-toska: An Open-Source GUI for Topological Skeleton Analysis
3 p.m 3:20 p.m.	Nicolas Levernier (CPT, Inmed, CENTURI, France)  Dimensionality reduction and its application to study  spatial navigation
3:20 p.m 5 p.m.	Coffee Break and Poster Session
5:20 p.m 6 p.m.	Pierre Ronceray (CINaM, CENTURI, France) From trajectories to models: learning the stochastic dynamics of living systems
8 p.m.	Dinner in Cargese



#### Wednesday, October 18th

9 a.m 9:40 a.m.	Pavel Tolar (Collège de Franc	e, Paris, France)
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Regulation of long-term retention of vaccine antigens by

follicular dendritic cells

9:40 a.m. - 10 a.m. Lama Awada (LAI, CIML, CENTURI, France)

Imprint of mechanical forces on antibody affinity

maturation in B cell immune responses

10 a.m. - 10:20 a.m. Marc Karnat (CPT, CENTURI, France)

A spontaneous flows rheometer to probe the

viscoelasticity of living tissues

10:20 a.m. - 10:50 a.m. **Coffee Break** 

10:50 a.m. - 11:10 a.m. Ivar Noordstra (Institute for Molecular Bioscience, The

University of Queensland, Australia)

An E-cadherin-actin clutch translates the mechanical force of cortical flow for cell-cell contact to inhibit epithelial cell

locomotion

11:10 a.m. - 11:30 a.m. | Mingming Wu (Biological and Environmental Engineering,

Cornell University, USA)

Self-organization in biological systems

11:30 a.m. - 11:50 p.m. | Maria Pappa (Friedrich Miescher Institute for Biomedical

Research, Switzerland)

Rac1 GTPase as a regulator of the oscillation dynamics in

the mouse presomitic mesoderm

11:50 a.m. - 12:30 p.m. | Cecile Sykes (Laboratoire de Physique de l'Ecole Normale

Supérieure, France)

Active actin networks drive membrane deformation,

intracellular propulsion, and nucleus actuation.

12:30 p.m. - 2 p.m. **Lunch Break** 

2 p.m. - 5 p.m. Free time

8 p.m. Dinner in Cargese



### Thursday, October 19th

10·20 a m - 10·50 a m

12:10 p.m. - 2 p.m.

9 a.m 9:40 a.m.	Clement Sire (Université de Toulouse III- Paul Sabatie, France)
	Measuring and modeling social interactions in fish schools
	and applications: machine learning, robot-fish, virtual
	reality for fish, drones

9:40 a.m 10 a.m.	Tarun Mascarenhas (Max Planck School Matter to Life, Max
	Planck Institute for Complex Systems, Germany)
	Decision Making in Stochastic Chemical Systems

10 a.m 10:20 a.m.	Anne-Lena Moor (Max Planck Institute of Molecular
	Cellbiology and Genetics and Center for Systems Biology,
	Germany)

Dynamic Information Transfer in Stochastic Biochemical Networks

10.20 4	10.50 4.111.	Conce Break	
10.50 2 22	11,20 2 22	Andrea Cayagna (Institute for Campley Systems	NIat

Coffee Break

**Lunch Break** 

10:50 a.m. - 11:30 a.m. Andrea Cavagna (Institute for Complex Systems, National Research Council, Italy)

Natural swarms in 3.99 dimensions

11:30 a.m. - 11:50 a.m. Michele Castellana (Institut Curie, France)

Maximum-entropy formalism for time-delayed interactions

11:50 a.m. - 12:10 p.m. Jeremie Perrin (TAGC, CENTURI, France)

Data driven Random Walk with Restart: Learning a diffusive model of intra-cellular signaling

model of intra-cellular signaling

2 p.m. - 2:40 p.m.

Lorenzo Fontolan (Inmed, CPT, CENTURI, France)

High-dimensional feedforward amplification in recurrent
neural networks



2:40 p.m. - 3 p.m. Anais Baudot (Marseille Medical Genetics, France)

Network-based data integration for genetic diseases

3 p.m. - 3:20 p.m. Nadine Ben Boina (I2M, France)

The most permissive semantics as a tool to refine Boolean

models.

3:20 p.m. - 3:40 p.m. Ulysse Herbach (INRIA Nancy- Grand Est, Université de

Lorraine, France)

Gene expression and regulatory networks: bridging the gap between mechanistic modeling and statistical

learning

3:40 p.m. - 4:20 p.m. Alain Barrat (Centre de Physique Théorique, France)

Beyond static networks: structures in temporal networks

and hypergraphs

4:20 p.m. - 5:40 p.m. Coffee Break & Poster Prize

5:40 p.m. - 6 p.m. **Conclusion** 

7:30 p.m. Barbecue party at IESC

# Friday, October 20th

9 a.m. - 10 a.m. Check out in IESC

10 a.m. Shuttle from IESC to Ajaccio Airport

