

UNIVERSITÉ CÔTE D'AZUR

ACADEMY OF EXCELLENCE

COMPLEX SYSTEMS



One purpose, one collective success



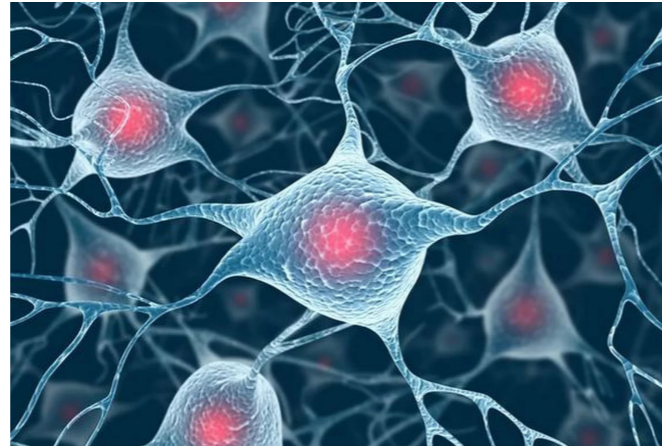
Are you a member of the ComUE* ?

You can benefit from the IDEX activities by applying for **funding for your research projects.**

DISCOVER MORE ABOUT THE COMPLEX SYSTEMS ACADEMY OF EXCELLENCE...

The Foundations of the Academy

This Université Côte d'Azur (UCA) Academy is a result of its UCA^{JEDI} (Joint, Excellent, and Dynamic Initiative) project that received an **Excellence Initiative (IDEX)** award in January 2016, as part of the French national Future Investments Program (PIA). The "Complex Systems" Academy is one of five Academies of Excellence that have been established as part of this project and are a reflection of our scientific ambition. The Academies' primary objective is to **increase the level of research excellence at the UCA by supporting innovative projects and by developing collaborations between different disciplines to promote novel ideas.**



The cortex with its neural networks constitutes the archetype of a complex system.

The Scope of the Academy

With the view that a complex system includes, "any object where the behavior of the whole is not determined in a simple way by the behavior of the individual constituents," the Complex Systems Academy has a broad spectrum of scientific activities that reaches beyond conventional scientific fields. Coverage extends from mathematical modeling to

societal models and also includes the physics of complex environments, extreme phenomena, and networks in the broad sense.

The Academy promotes interactions with biology, chemistry, and economics and includes **at least fifteen local laboratories and represents a scientific community of more than 400 people.**

The Main Challenges for the Academy



Variety and unity of life-forms

The Complex Systems Academy has the following goals:

- To **create and strengthen the links** between teams of different fields and to **combine existing UCA skills in modeling and simulation of complex systems to better address the challenges of today's society.** This work is conducted in association with partners with expertise in health, energy, the environment, materials, and communications.
- To **encourage the identification of common methodological approaches and the emergence of common research themes across transverse fields,** both in basic research and in the transfer of technological expertise.
- To differentiate the UCA by **highlighting the success of the math-physics interface** so as to take advantage of the opportunities and results of this activity on other disciplines.

... A NOTE ON OUR ACTIVITIES

The Academy's Functions

The Complex Systems Academy receives annual IDEX funding of €380k that is used to build transdisciplinarity and to support training and research initiatives (operation, equipment, HR). The Academy contributes to the structuring of the community through the organization of scientific activities and also funds projects by launching various calls for projects each year. It consists of:

- **Two Directors:** Médéric Argentina and Fabrice Planchon;
- **A Program Manager:** Ketty Guillouzouic;
- **A Steering Committee:** representing the members of UCA and the partners of the initiative;
- **A Scientific Council:** representative of the scientific areas within the scope of Academy, chaired by Jérémie Bec.

The details of the members are available on the Academy website



Everything should be made as simple as possible, but not simpler

Albert Einstein



Social networks, the Internet, and urban networks are all complex systems...



<http://app.univ-cotedazur.fr/complexenglish>

The Academy's Actions

The Complex Systems Academy can be solicited to **finance your research projects**, especially during the annual IDEX calls for projects. It can also offer support and advice through the Scientific Council, which **plays the role of facilitator and promotes links with other UCA entities.** For example, the Academy has an important role in the Center of Modeling, Simulation, and Interaction and maintains close privileged relationships with other Academies of Excellence, Reference Centers, and Committees.

RECEIVING IDEX FUNDING GIVES YOU ACCESS TO A SUITE OF FREE SERVICES (*non-exhaustive list*):

- **Welcome Center:** personalized welcome and orientation offered to researchers and instructors after their arrival: support for administrative procedures, social integration, and more;
- **Faculty Club:** offers free accommodation for visiting researchers during meetings, symposia, workshops, and research stays;

- **Office of International Scientific Visibility:** translation and editing services by native English-speaking scientists for the submission of grants and research articles;
- **Center of Modeling, Simulation, and Interactions:** state-of-the-art training in modeling and scientific computation tailored to researchers' needs, linked with the local economic sector;
- **Reference Centers:** support for researchers seeking industry collaborations, including expertise relating to intellectual property rights;
- **Virtual Center for Pedagogical Innovation :** training support for teaching staff to help in the advancement of their courses and administration of the DEMOLA open innovation platform for students and companies.

For all contact details, please consult



<http://univ-cotedazur.fr/en>

*Members of the Community of Universities and Establishments (ComUE): University of Nice Sophia-Antipolis; Côte d'Azur Observatory; CNRS; INRIA; SKEMA Business School; EDHEC Business School; University Hospital Center of Nice; CIRM; Villa Arson; ESRA; Sustainable Design School; Graduate School of Dance, Cannes; Conservatory of Nice.

Focus on projects funded by the Academy

Since 2016, the Academy has supported about 70 projects, each with funding of up to €52k. The total amount distributed is nearly €1 million, and has been allocated according to the following expenditure categories: 55% in operation; 37% in salary and 8% in investment.



Contact

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