

Agnese Seminara

Professoressa Ordinaria

ISTRUZIONE E FORMAZIONE

2007 Dottorato in fisica

Transport and diffusion in complex flows

Dottorato in cotutela

Université de Nice, **Francia**

2004 Laurea vecchio ordinamento in fisica

Ruolo della turbolenza nella microfisica delle nuvole calde

Votazione 110/110 cum laude

Università degli studi di Genova, **Italia**

ESPERIENZA ACCADEMICA

2021-ongoing

Professoressa Ordinaria

Teaching and research in fluid dynamics, biology and machine learning

University of Genoa, Italy

2019-2021

Directrice de recherche

CNRS, Nice, France

2013-2019

Chargée de recherche

CNRS, Nice, France

2012-2013

Instructor Applied Mathematics

Harvard University, Cambridge, USA

2011-2012

Marie Curie International Outgoing Postdoctoral fellow

Institut Pasteur, Paris, France

2018-2011

Marie Curie International Outgoing Postdoctoral fellow

Harvard University, Cambridge, USA

INCARICHI ACCADEMICI

[2023-presente](#)

Consiglio Scientifico Fondazione Alma Dal Co & Alma Dal Co Fellowship
Alma Dal Co Foundation

[2024-2028](#)

Membro eletto IUTAM
IUTAM Congress

[2024-ongoing](#)

Membro eletto Accademia Ligure di Scienze e lettere
Accademia Ligure di Scienze e Lettere

[2021-2022](#)

Membro CNRS National Hiring Committee, section 02
CNRS, France

[2018-](#)

Membro consiglio scientifico
International Research Network "Prediction Adaptation and Navigation"

[2018-2023](#)

Membro Consiglio scientifico
Institut d'études scientifiques, Cargèse, France

[2015-2017](#)

Membro Consiglio Scientifico (conseil academique)
Université Côte d'Azur, Nice, France

TITOLI

PRINCIPALI SEMINARI

[Ha presentato oltre 80 interventi su invito e 25 interventi proposti in venue nazionali e internazionali, e 12 corsi su invito a scuole avanzate.](#)

Corsi su invito a scuole internazionali (selezione)

[2025](#) Mathematics of Machine Learning, IMPA, Rio de Janeiro, Brazil

[2023](#) Theoretical biophysics summer school, Les Houches, France

[2023](#) Learning and navigating dynamical systems, Gran Sasso Science Institute, L'aquila, Italy

[2023](#) Theoretical biophysics advanced school, Boulder, USA

[2018](#) System neurophysics, Quantitative biology School, KITP, Santa Barbara, USA

[2018](#) Multiscale integration in biological systems Advanced course, Institut Curie Paris, France

Interventi su invito (selezione)

[2025](#) Theory and Concepts in biology, Symposium, EMBL, Heidelberg, Germany

[2024](#) Biophysics of Fungal Spore Dispersal and its relevance to plant disease, Conference, FABI-ICTP, Pretoria, South Africa

[2024](#) Cracking the Olfactory Code, Conference, NSF, ICTP, Trieste, Italy

[2024](#) American Physical Society APS, March Meeting, Minneapolis, USA
[2023](#) Italian Society of Statistical Physics, Conference, Parma, Italy
[2023](#) Olfactory navigation, Conference, Janelia, USA
[2021](#) SMEEB21 Stochastic Models and Experiments in Ecology, Conference, Venice, Italy
[2020](#) Dutch KNAW biophysics meeting, Conference, Amsterdam, Netherlands
[2020](#) ISOT International Symposium on olfaction and taste, Symposium, Portland, USA
[2019](#) Towards the physics of complex behavior Symposium, CUNY Grad Center, New York, USA
[2017](#) Frontiers in olfaction, Conference, ICTP, Trieste, Italy
[2015](#) Sensing information and decision at the cellular level, Conference, ICTP, Trieste, Italy
[2015](#) Deconstructing the sense of smell Conference, KITP, Santa Barbara, USA
[2014](#) International Mycological Society, International conference, Bangkok, Thailand

INCARICHI DI INSEGNAMENTO O DI RICERCA (FELLOWSHIP) PRESSO QUALIFICATI ATENEI E ISTITUTI DI RICERCA ESTERI O SOVRANAZIONALI (SELEZIONE)

[2024 – current](#) Turbulence and turbulent modeling
Instructor, Mechanical Engineering M.Sc.
University of Genoa, Italy

[2023 – current](#) Fluid Mechanics
Instructor, Mechanical Engineering B.Sc.
University of Genoa, Italy

[2022 – current](#) Mechanics of biological tissue
Instructor, Bioengineering M. Sc.
University of Genoa, Italy

[2022](#) A tour of reinforcement learning and applications
Instructor, Environmental Engineering PhD
University of Genoa, Italy

[2014](#) Applied Mathematics AM105
TA, Graduate School of Arts and Sciences
Harvard University, Cambridge, USA

[2012](#) Applied Mathematics AM201
Instructor, Graduate School of Arts and Sciences
Harvard University, Cambridge, USA

[2008-2011](#) Marie Curie postdoctoral fellow
Postdoc
Harvard University, Cambridge, USA & Institut Pasteur, Paris, Francia

[Fall 2013 – yearly](#) Visiting Scholar
Visiting scholar
Harvard University, Cambridge, USA

RESPONSABILITÀ SCIENTIFICA PER PROGETTI DI RICERCA INTERNAZIONALI E NAZIONALI, AMMESSI AL FINANZIAMENTO SULLA BASE DI BANDI COMPETITIVI CHE PREVEDANO LA REVISIONE TRA PARI

2021 ERC Consolidator grant RIDING

Physics informed machine learning to sense and navigate turbulent environments
European research council, PI

2020 NIH RO1

Navigation with complex odor dynamics: computational principles and neural circuit
implementation in mice
National Institutes of Health, co-PI

2021 European office of aerospace research and development

Machine learning approaches to navigate turbulence
AFOSR, co-PI

2019 ANR DynCelPol

Dynamics of cell polarity establishment
Agence Nationale de la recherche, co-PI

2019 CNRS MITI

Lipid transport in health and disease
CNRS, Mission pour les initiatives transverses et interdisciplinaires, co-PI

2018 CNRS PICS 2FORECAST

Weather forecasting by the fungi: stochastic strategies for spore liberation
CNRS, Projet international de cooperation scientifique, PI

2017 Thomas Jefferson Fund

Olfactory navigation using naturally fluctuating odor cues
FACE Foundation, co-PI

DIREZIONE O PARTECIPAZIONE A COMITATI EDITORIALI DI RIVISTE, COLLANE EDITORIALI, ENCICLOPEDIA E
TRATTATI DI RICONOSCIUTO PRESTIGIO

2019 – ongoing Editor peer reviewed journal

Reviewing Editor
eLife

2016 – 2019 Editor peer reviewed journal

Reviewing Editor
Fungal Ecology

2013 – ongoing Reviewer peer reviewed journals: *Nature Physics*; *Nature Communication*;
Proceedings of the National Academy of Science; *eLife*; *Physical Review Letters*; *Physical
Review B*; *Physical Review E*; *Journ Stat Phys*; *Scientific Reports*; *Fungal Ecology*; *PLOS
Computational Biology*; *Mycologia*; *Proceedings of the Royal Society B*; *Fungal Ecology*;
Ecology; *SciPost*.

2013 – ongoing Reviewer international funding schemes: European Research Council; Human
Frontiers in Science Program; German Science Foundation; CNRS (PEPS, Momentum,
MECANOBIO); IDEX UCAJEDI; Institut Pasteur ACIP; IDEX Sorbonne Université.

PREMI E RICONOSCIMENTI PER L'ATTIVITÀ SCIENTIFICA, INCLUSA L'AFFILIAZIONE AD ACCADEMIE DI
RICONOSCIUTO PRESTIGIO NEL SETTORE (SELEZIONE)

[2024](#) Accademia Ligure Scienze e lettere

[2020](#) ERC Consolidator grant

[2018](#) Research and PhD Supervision Award CNRS (PEDR)

[2017](#) Bronze Medal CNRS

[2012](#) Rita Levi Montalcini young investigator award (declined)

[2008](#) Marie Curie International Outgoing Fellowship

[2006](#) L'Oréal Italia–Unesco fellowship for women in science