

SUMMER SCHOOL 2025

PHD NEUROSCIENCE



I: JUNE 30TH - JULY 04TH

II: SEPTEMBER 22ND TO 26TH

**GENOVA UNIVERSITY
& TEAMS**



UNIVERSITÀ DEGLI STUDI
DI GENOVA



ISTITUTO
ITALIANO DI
TECNOLOGIA



Join the Teams Channel of Summer School

Coordinator of
Neuroscience PhD
Prof. Lino Nobili

topics:

MON - 30 JUNE

PHD DAY

WED - 02 JULY

**GENE THERAPIES IN
NEUROSCIENCE**

THUR - 03 JULY

STATISTIC IN LIFE SCIENCE

FRI - 04 JULY

PHD DAY

MON - 22 SEPT

A.I IN BIOMEDICINE

TUE - 23 SEPT

MOTOR & SPORT SCIENCE

WED - 24 SEPT

SLEEP & CONSCIOUSNESS

THUR - 25 SEPT

ART & NEUROSCIENCE

FRI - 26 SEPT

**ROBOTIC, WEREABLE &
MONITORING TECHNOLOGIES**

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NEUROSCIENCE SUMMER SCHOOL 2025



MONDAY - JUNE 30TH PHD STUDENTS DAY

**SPEAKERS: PhD Students of Clinical Neuroscience,
Neuroscience and Neurotechnologies and Motor & Sport
Science - II and III year**

An event dedicated to celebrating the research, progress, and contributions of our doctoral candidates.

Today's program is designed to offer a platform for PhD students to present their work, exchange ideas, and engage in meaningful discussions with peers and faculty members. Through presentations, we aim to foster an environment of academic exchange and interdisciplinary dialogue.

The PhD Day is not only an opportunity to showcase ongoing research, but also a moment to strengthen our academic community, encourage collaboration, and support the professional growth of young researchers.



**AULA 1 - POLO DIDATTICO
BIOMEDICO (EX SAIWA)**

c.so Gastaldi 161, Genova



09 AM - 05 PM



UNIVERSITÀ DEGLI STUDI
DI GENOVA





Starting time 9.00

Beatrice Pistolato	Investigating the proprioceptive system of Octopus vulgaris arm musculature
Janina Röckner	Quantifying muscle activation and deformation in Octopus vulgaris stereotypical motion
Niccolò Mattiello	Assessing hippocampal connectivity through eGRASP technique
Cesare Bortolami	All-optical neuronal circuit interrogation with reduced crosstalk between imaging and photostimulation

Break 10.20 – 10.40

Andjela Zlatanovic	Cellular and molecular determinants of behavioral flexibility and inflexibility in adaptive behavior
Sofia Barile	Deciphering astrocytic involvement in valence processing within the dorsal raphe nucleus
Giorgio Letti	Do astrocytic calcium signals display allocentric head direction tuning in the hippocampus of freely moving mice?

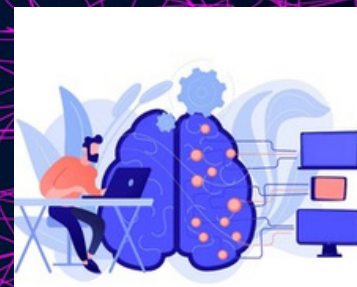
Elisabetta Sarasso The neural correlates of bradykinesia and the effect of upper limb rehabilitation on brain activity in Parkinson's disease

Break 12.30 – 14.00

Alessandra La Terra	The transcriptional repressor REST is protective in a mouse model of MS
Cristina Schenone	Impact of anodal tDCS and virtual reality on cognitive dysfunction in MS
Eleonora Cornacchia	Activation of somatostatin-expressing AgRP neurons in Experimental autoimmune encephalomyelitis revealed by RNAscope
Mattia Camera	Myelin Lipidome in CMT1A Disease

Break 15.20 – 15.40

Natalia Turrini	CaMKII- α Deficiency Disrupts Neurobehavioral Function and Neuronal Maturation: A Translational Model for Schizophrenia
Alessandra Cucinelli	KCC2 pharmacological targeting for reversing cognitive deficits in elderliness.
Sara Massucco	Prevalence and Features of Motor, Extrapyramidal, and Cognitive Involvement in RFC1 Disease: A Systematic Review and Meta-Analysis



Neurotechnologies

Chairs:

**Maria Ester Canepa,
Tomaso Gianorio,
Niccolò Mattiello**



Neurodegeneration

Chairs:

**Rachele Simeon,
Elisabetta Sarasso,
Pietro Mattioli**

NEUROSCIENCE SUMMER SCHOOL 2025



**AULA 1 POLO DIDATTICO
BIOMEDICO (EX SAIWA)**

c.so Gastaldi 161, Genova



10:30 AM - 04 PM

WEDNESDAY- JULY 2ND

GENE THERAPIES IN NEUROSCIENCE

CHAIR: Prof. Paola Mandich

10:30 AM

Opening Session and Presentation of the Day's Agenda

10:45 - 11:45 AM

Precision Medicine approaches in genetic disorders: handle with care

Prof. Federico Zara, Università di Genova, Istituto G.Gaslini

12:00 - 01:00 AM/PM

**Duchenne Muscular Dystrophy.
Natural history, novel therapies and unmet needs**

Prof. Claudio Bruno, Università di Genova, Istituto G.Gaslini

02:30 - 4:00 PM

Gene therapies for epilepsy

Prof. Gabriele Lignani, Institute of Neurology, University College London, UK

NEUROSCIENCE SUMMER SCHOOL 2025



**AULA 1 POLO DIDATTICO
BIOMEDICO (EX SAIWA)**

c.so Gastaldi 161, Genova



09 AM - 05 PM

THURSDAY- JULY 3RD

STATISTICS IN LIFE SCIENCE

PROF. MARIA PIA SORMANI

University of Genova

FROM 09 AM - MORNING

fondamenti di statistica e RedCap per la raccolta dati

FROM 2 PM - AFTERNOON

sessione pratica di analisi statistica dei dati (Jamovi e R)

**IMPORTANTE: PORTARE IL PROPRIO PC PER LA PARTE
PRATICA DELLA SESSIONE**



UNIVERSITÀ DEGLI STUDI
DI GENOVA



NEUROSCIENCE SUMMER SCHOOL 2025



FRIDAY - JULY 4TH

PHD STUDENTS DAY

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Science - II and III year**

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**AULA 2 POLO DIDATTICO
BIOMEDICO (EX SAIWA)**

c.so Gastaldi 161, Genova



09 AM - 05 PM



UNIVERSITÀ DEGLI STUDI
DI GENOVA





Starting time 9.00

Caterina Canevari	Differential modulation of presynaptic voltage gated Ca ²⁺ channels in excitatory synapses by Synapsin II
Pietro Mattioli	Brain metabolism evaluation and post-processing in the field of sleep and epilepsy
Alessia Frulli	Beyond the risks: exploring the positive influence of social media on adolescent mental health in psychiatric contexts
Marco Veneruso	Neurophysiological Signatures of Non-REM Sleep Parasomnias in Children and Adults

Break 10.20 – 11

Lisastella Morinelli	From darkness to light: what to do to uncover a TDark gene
Tomaso Gianiorio	Development of bioimpedance device for retina assisted injection
Matteo Parodi	Data dimensionality reduction techniques: PCA and NMF.
Simone Giubbolini	Data reproducibility: news and numbers

Break 12.30 – 14.00

Martina Servetti	Method about the generation of pluripotent stem cells, induced glutamatergic neurons and retinal organoids
Vincenzo Daniele Boccia	Neuroimaging – The example of MS
Gianluca Bertoni	Perceived factors influencing the success of pain neuroscience education in chronic musculoskeletal pain: a meta-synthesis of qualitative studies
Filippo Recenti	Association between metabolic conditions, physical activity, and self-efficacy following a first-line exercise and education intervention for osteoarthritis
Matteo Iurato	Detecting changes in upper limb kinematics during Activities of Daily Living through Inertial Measurement Units: a comparison between young and elderly



Neurodevelopment

Chairs:

**Giacomo Mazzoni
Marco Veneruso**



Methodologies

Chairs:

**Raffaella Grimaldi
Lisastella Morinelli**



Rehabilitation

Chairs:

**Giovanni Rosario Giacalone
Cristina Schenone**

The organizing committee:

Elisabetta Sarasso, Cristina Schenone, Niccolò Mattiello, Tomaso Gianiorio, Alessia Frulli, Marco Veneruso, Pietro Mattioli, Lisastella Morinelli.

A special thanks to Eleonora Eugenia Broggi