

Summer School UNIGE – Scuola di Specialità in Pediatria

Pediatric Research: Quo Vadis? Week 15-18 June 2026

Advancing Healthcare Excellence: research and quality in Medical Simulation for enhanced clinical outcomes

DAY 1 Monday, June 15th 2026 AULA MAGNA ISTITUTO GASLINI
(chs. Andrea Calandrino, Mara Coduri)

MORNING (9-13)

- The role of Simulation in Training and Clinical Practice with Definitions (*Calandrino*)
- Methodologies and Technologies for Training and Performance Assessment (*Calandrino*)
- Simulation Research from Pedagogical and Technical Perspectives (*Calandrino/Coduri*)
- Simulation Research: How to Design an Experimental Study (*Coduri*)
- Practical Session: Digital technologies and their applications in the simulation setting (*Calandrino/Coduri*)

Human Factors, Clinical Risk, and Non-Technical Skills in Pediatrics

DAY 1 Monday, June 15th 2026 AULA MAGNA ISTITUTO GASLINI
(chs. Fabrizio Bracco)

AFTERNOON (14-17)

- What is meant by human factors
- Clinical risk in pediatrics (statistics)
- Non-technical skills (NTS) in general
- Crisis Resource Management (CRM)
- Non-technical skills in pediatrics

- Building a culture of safety

"Moments of practical activity"

An introductory course to R and R Studio
DAY 2 (Tuesday 16th June) AULA MAGNA ISTITUTO GASLINI
(Pieter von Dijkhuizen – Alessandro Consolaro)

MORNING (9-13)

- Introduction to R and R-studio
- Introduction to the R language
- Basic data manipulation, basic functions and conditional execution
- Practical 1

AFTERNOON (14-17)

- Data import
- Loops and apply family
- Advanced data transformations
- Practical 2

A Basic R Programming Course introduces participants to the fundamentals of R, a powerful open-source language widely used for statistical analysis, data visualization, and reproducible research. The course is designed for beginners with no prior programming experience and provides a practical, hands-on approach to learning.

IMPORTANT: participants must download the latest version of R and R Studio

An introductory course to R and R Studio

DAY 2 (Tuesday 16th June) AULA MAGNA ISTITUTO GASLINI
DAY 3 Morning (Wednesday 17th June) AULA E VILLA QUARTARA

(Pieter von Dijkhuizen – Alessandro Consolaro)

MORNING (9-13)

- Data visualization
- Practical 4
- Basic statistics and regression
- Practical 5
- Wrap up and final questions

From data to insights

DAY 3 Afternoon (Wednesday 17th June) AULA E VILLA QUARTARA

AFTERNOON (14-17.30)

- Smart data management: common pitfalls and how REDCap helps (Paolo Uva)
- Advances in WES, WGS and long-read sequencing for rare disease genomics (Michele Iacomino)
- Machine learning as a tool to support clinical diagnosis (Giacomo Cavalca)
- Finding a therapeutic target in the data: proteomics in the study of developmental trauma (Benedetta Salvatori)

Break

- Gut microbiota in pediatric disease: from clinical questions to multi-omics insights (Greta Volpedo)
- Statistical methods for understanding genetic architecture of complex diseases (Carola Di Meo)
- Unraveling cellular complexity through single-cell transcriptomics (Marta Rusmini)

Wrap-up and closing remarks

From bedside to workbench and back again**DAY 4 (Thursday 18th June 2026) AULA MAGNA ISTITUTO GASLINI***(chs. Claudio Bruno and Stefano Volpi)***MORNING (9-13)****1 A pediatrician in research: a fish out of water?**Physician and researcher: burning the two sides of the candle (*Stefano Volpi*)Hard and soft skills in research (*Claudio Bruno*)**2 Is basic science ‘for life’?**How pediatric research can help your practice grow. Gaslini’s Pediatricians share their research experience, past and present (*Francesca Lugani/Chiara Panicucci/Federica Trucco/Luca Arcuri*)**3 Successful projects**Fishing for genes: how to describe a new disease using a zebrafish (*Stefano Volpi*)Emerging technologies in pediatric laboratory medicine (*Isabella Ceccherini*)**AFTERNOON (14-16)****4 Laboratory science application in pediatric medicine**The Pursuit of an Answer: A Question Worth Researching (*Stefano Volpi*)Residents at the beachside (*Enrico Drago/ Serena Palmeri*)**5 Publish or perish**How to survive the jungle: literature update and review (*Riccardo Papa*)How to read a paper (*Federica Trucco*)How to write a paper and publish in competitive journals (*Nicola Disma*)How to write a grant (*Federico Zara*)**6 Meeting with a Pediatric Scientist***Riccardo Castagnoli (Pavia)*



RESPONSABILE SCIENTIFICO

Prof. Mohamad Maghnie

COMITATO SCIENTIFICO

Proff.:

Natascia Di Iorgi

Marta Bassi

Claudio Bruno

Alessandro Consolaro

Clara Malattia

Giuseppa Patti

Luca Antonio Ramenghi

Pasquale Striano

Federica Trucco

Stefano Volpi

Federico Zara

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Enrico Drago

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Greta Volpedo

Isabella Ceccherini

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Michele Iacomino

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