

## *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 15<sup>th</sup> 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 15<sup>th</sup> 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 16<sup>th</sup> 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 16<sup>th</sup> June) AULA MAGNA ISTITUTO GASLINI**  
**DAY 3 Morning (Wednesday 17<sup>th</sup> 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 17<sup>th</sup> 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 18<sup>th</sup> 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 benchside *(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

### FACULTY

Andrea Calandrino

Benedetta Salvatori

Carola Di Meo

Chiara Panicucci

Enrico Drago

Fabrizio Bracco

Francesca Lugani

Giacomo Cavalca

Greta Volpedo

Isabella Ceccherini

Luca Arcuri

Mara Coduri

Marta Rusmini

Michele Iacomino

Nicola Disma

Paolo Uva

Pieter Von Dijkhuizen

Riccardo Castagnoli

Riccardo Papa

Serena Palmeri