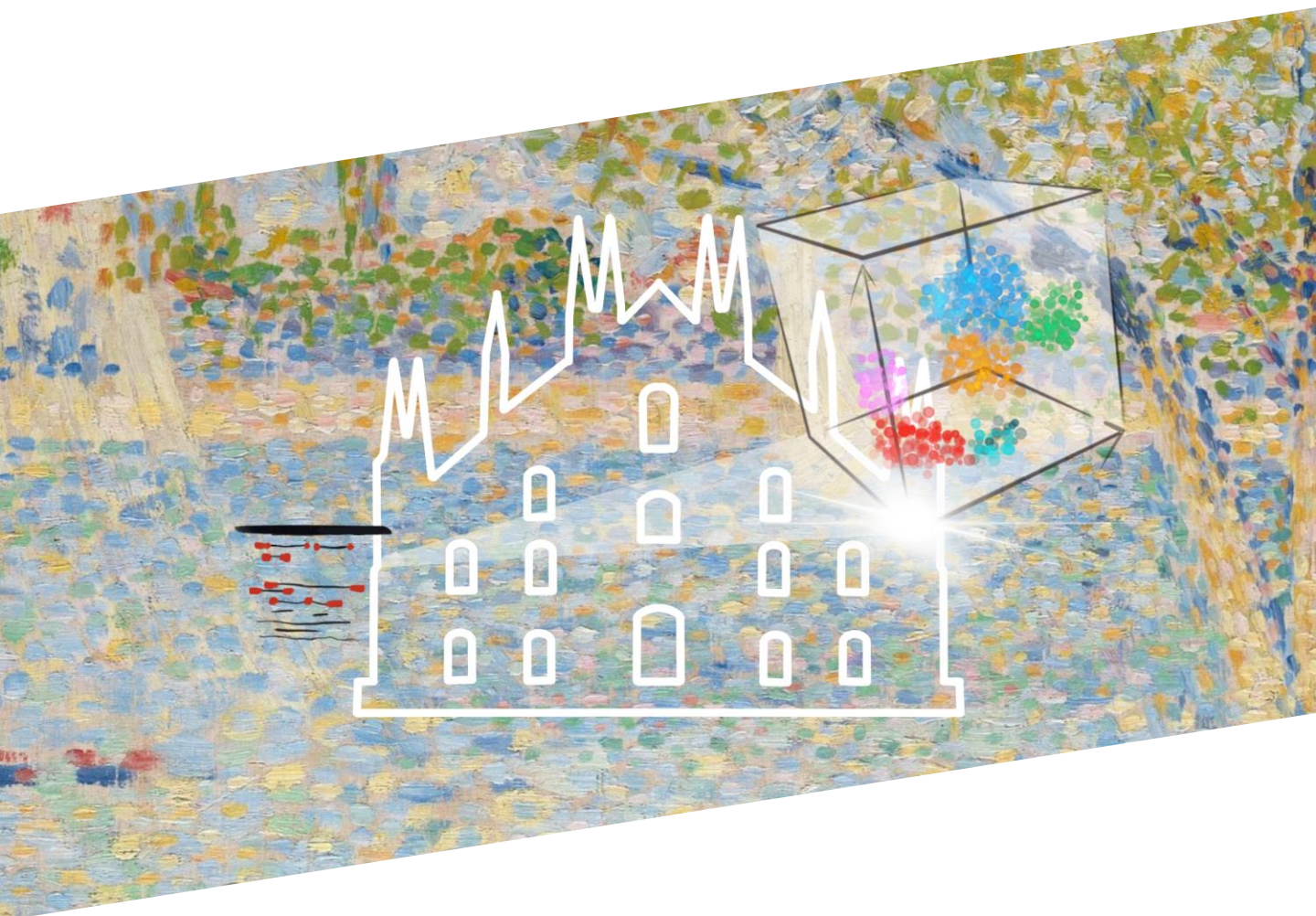


Advanced course

SINGLE CELL ANALYSIS BOOT CAMP



Università degli Studi di Milano

Via Santa Sofia, 9

20122 Milano

Segreteria: citometria.biometra@unimi.it



UNIVERSITÀ
DEGLI STUDI
DI MILANO

MONDAY 14 JULY 2025

Introduction to single cell technology

Aula Delta - via Santa Sofia, 9

- | | |
|----------------|---|
| h. 8.30-9.00 | Registration |
| h. 9.00-10.00 | <i>Domenico Mavilio</i>
Welcome and presentation of the Advanced course |
| h. 10.00-11.00 | <i>Clelia Peano</i>
Single cell sequencing technologies and applications |
| h. 11.00-12.00 | Coffee break with the speakers |
| h. 12.00-13.00 | <i>Valentina Proserpio</i>
Single cell RNA-seq in fundamental and translational research |

Aula Delta - via Santa Sofia, 9

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|----------------|--|
| h. 14.00-18.00 | <i>Simone Puccio, Silvia Della Bella</i>
Hands-on: Data preprocessing and integration |
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TUESDAY 15 JULY 2025

From bulk to single cell

Aula Delta - via Santa Sofia, 9

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|----------------|---|
| h. 9.00-10.00 | <i>Giulio Pavesi</i>
Computational and statistical approaches to the analysis of scRNA-seq data (I) |
| h. 10.00-11.00 | <i>Giulio Pavesi</i>
Computational and statistical approaches to the analysis of scRNA-seq data (II) |
| h. 11.00-12.00 | Coffee break with the speakers |
| h. 12.00-13.00 | <i>Ludovica Celli</i>
A multiomic approach to disentangle the interplay between Acute Myeloid Leukemia and tumor-reactive engineered T-cells |

Aula Delta - via Santa Sofia, 9

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|----------------|--|
| h. 14.00-18.00 | <i>Simone Puccio, Silvia Della Bella</i>
Hands-on: Data annotation and trajectory |
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WEDNESDAY 16 JULY 2025

scRNA-seq and T cell biology

Aula Delta - via Santa Sofia, 9

h. 9.00-10.00

Domenico Mavilio

From RNA-seq to multiparametric flow cytometry: computational approaches merging two different technologies at single cell level

h. 10.00-11.00

Emilia Mazza

Molecular mechanisms of resistance to immune checkpoint blockade mediated by CD4⁺ regulatory T cells

h. 11.00-12.00

Coffee break with the speakers

h. 12.00-13.00

Massimiliano Pagani

Connecting topology to function in the tumor microenvironment

Aula Delta - via Santa Sofia, 9

h. 14.00-18.00

Simone Puccio, Domenico Mavilio

Hands-on: Cell interaction analysis and Pathway analysis

THURSDAY 17 JULY 2025

scRNA-seq application

Aula Delta - via Santa Sofia, 9

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|----------------|---|
| h. 9.00-10.00 | <i>Sonislpa Mohapatra</i>
Technological solutions for transcriptomics and gene expression analysis |
| h. 10.00-11.00 | <i>Michaela Fakiola</i>
Epigenomic insights into intratumoral CD4+ regulatory T cells via single cell RNA sequencing |
| h. 11.00-12.00 | Coffee break with the speakers |
| h. 12.00-13.00 | <i>Matteo Zampini</i>
Unraveling myelodysplastic syndromes: insights from multi-omics single cell sequencing |

Aula Delta - via Santa Sofia, 9

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|----------------|---|
| h. 14.00-18.00 | <i>Simone Puccio</i>
Hands-on: Multi-omics and TCR |
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FRIDAY 18 JULY 2025

**Spatial transcriptomics and transcriptional control
of cell identity**

Aula Delta - via Santa Sofia, 9

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|----------------|--|
| h. 9.00-10.00 | <i>Federica Marchesi</i>
Single cell transcriptomics: pros and cons of different approaches |
| h. 10.00-11.00 | <i>Silvio Bicciato</i>
Computational analysis of single cell spatial omics data: challenges and opportunities |
| h. 11.00-12.00 | Coffee break with the speakers |
| h. 12.00-13.00 | <i>Sergio Marchini</i>
Exploring single cell sequencing technologies |
| h. 13.00-14.00 | Final exam and customer satisfaction questionnaire |

Relatori

Silvio Bicciato

Department of Molecular Medicine, University of Padova, Italy

Ludovica Celli

CNR ITB, Lab of Bioinformatics, Segrate (MI), Italy

Silvia Della Bella

Unit of Clinical and Experimental Immunology, BioMeTra, University of Milan, Italy
Flow Cytometry Facility, BioMeTra, University of Milan, Segrate (MI), Italy

Michaela Fakiola

IFOM, BioMeTra, University of Milan, Italy

Federica Marchesi

Lab of Tissue Oncoimmunology, BioMeTra, University of Milan, Italy

Sergio Marchini

Genomics Core Facility, IRCCS Humanitas Research Hospital, Rozzano (MI), Italy

Domenico Mavilio

Unit of Clinical and Experimental Immunology, BioMeTra, University of Milan, Italy
Flow Cytometry Facility, BioMeTra, University of Milan, Segrate (MI), Italy

Emilia Maria Cristina Mazza

Lab of Translational Immunology, IRCCS Humanitas Research Hospital, Rozzano (MI), Italy

Sonilpa Mohapatra

Novogene Company Limited, Cambridge, UK

Massimiliano Pagani

Molecular Oncology and Immunology Lab, BioMeTra, University of Milan, Italy

Giulio Pavesi

Head of the Master Degree Program in Bioinformatics for Computational Genomics,
Department of Biosciences, University of Milan, Italy

Clelia Peano

CNR IRGB, Genomics Centre, Human Technopole, Milan, Italy

Valentina Proserpio

Department of Life Sciences and Systems Biology, University of Turin, Italy

Simone Puccio

CNR IRGB, Lab of Translational Immunology, IRCCS Humanitas Research Hospital, Rozzano (MI), Italy

Matteo Zampini

Lab of Genomics of Hematological Malignancies, IRCCS Humanitas Research Hospital,
Rozzano (MI), Italy