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Department of Materials Science
University of Milano – Bicocca



Bicocca Quantum
Technologies centre



Smart Electron
% Università degli Studi di Milano – Bicocca,
Piazza dell'Ateneo Nuovo, 1 - 20126, Milano
www.smartelectron.eu

The SMART-electron Consortium:

University of Milano-Bicocca
UNIMIB (Italy)

École Polytechnique Fédérale de Lausanne
EPFL (Switzerland)

The Institute of Photonic Science
ICFO (Spain)

Israel Institute of Technology
TECHNION (Israel)

Italian National Research Council
CNR (Italy)

HOLOEYE Photonics AG
HOLOEYE (Germany)

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QED (UK)



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Smart
Electron
2025 International Event

Future Trends for
Exploring Dynamics and
Complexity in Physical Sciences





Future Trends for
Exploring Dynamics and
Complexity in Physical Sciences

Aula Sironi, Building U4,
University of Milano-Bicocca,
Piazza della Scienza 4, 20126 Milano

Morning

9:30
Welcome

9:35
Initial greetings from the Director of the
Materials Science Department,
Prof. P. Mustarelli

9:40
Initial greetings from the representative of
the Bicocca Quantum Technologies (BiQuTe)
centre, Prof. A. Giachero

9:45
G.M. Vanacore, UNIMIB
Smart Electron at a glance

10:00
D. Van Der Marel, University of Geneva
Thoughts about boosting superconductivity

Afternoon

10:45
C. Vozzi, CNR-IFN
Development of table-top ultrafast soft-X
spectroscopy for material science

11:30
Coffee break

11:45
L. Maccone, University of Pavia
Quantum Metrology

12:30
F.J. García de Abajo, ICFO
Quantum Nanophotonics with Free Electrons

13:15
Lunch break

14:30
V. Grillo, CNR-Nano
Electron beam shaping with a quantum spice

15:15
F. Carbone, EPFL
Intervalley scattering processes in graphite
revealed by ultrafast momentum resolved
EELS

16:00
A. Fitzpatrick, Columbia University
A Pulsed Laser Phase Plate for High-
Resolution Cryo-Electron Tomography

16:45
Closing remarks from the Deputy Director of
the Materials Science Department,
Prof. S. Sanguinetti