

ORGANIZING COMMITTEE

Dr. Alessia Sambri CNR-SPIN (Italy)
Prof. Emiliano Di Gennaro University of Naples Federico II (Italy)
Dr. Fabio Miletto Granozio CNR-SPIN (Italy)

VENUE

Sala A, Centro Congressi Federico II, Via Partenope 36

SOCIAL DINNER

October 20 2025, h. 19:30
Restaurant "La Bersagliera", Borgo Marinari 10/11



ORGANIZING SECRETARIAT

Scientific Communication srl
info@jeangilder.it



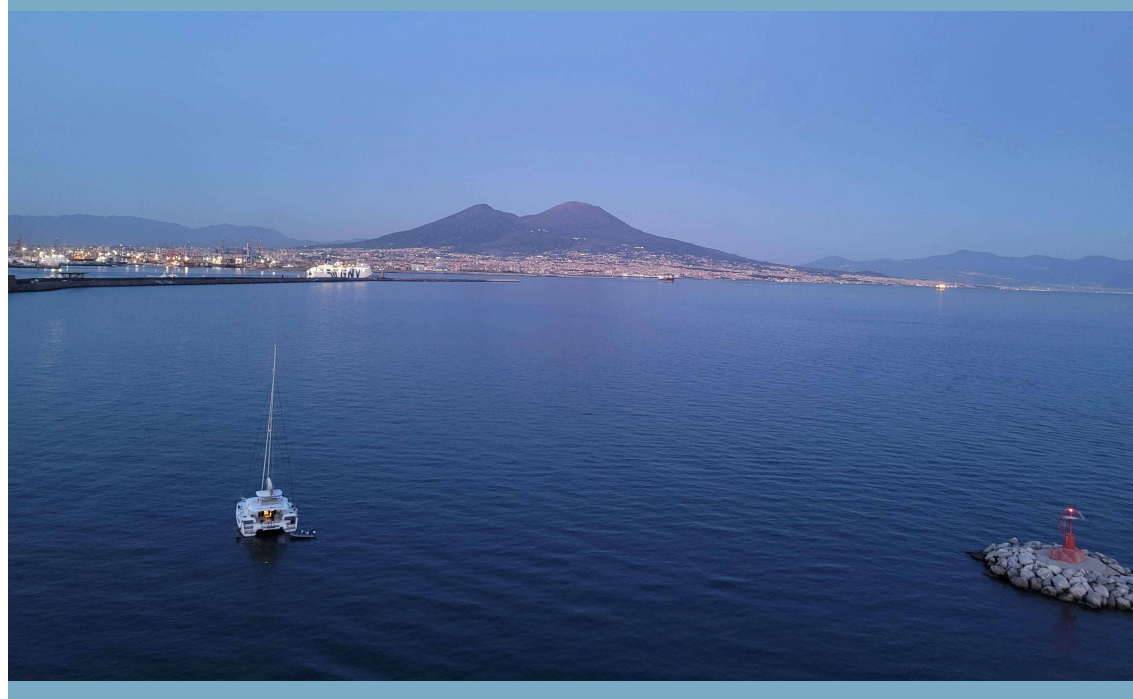
Joint Workshop funded by
FOXES - Freestanding OXides Epitaxial Strained micro-heterostructures
PRIN PNRR 2022 P2022TCT72
PI: A. Sambri

OMEGA - Oxide Membranes hosting an Electron Gas
PRIN 2022 2022TCJP8K
PI: F. Miletto Granozio

Freestanding Oxide Membranes: science and applications

October 20-21 2025, Naples (Italy)

Sala A, Centro Congressi Federico II, Via Partenope 36



Joint Workshop

Financial support under PNRR, M4.C2.I1.1 MUR, funded by
the European Union - NextGenerationEU - Projects OMEGA and FOXES



20 October 2025

09.30 **Opening**

09.40 **Engineered Oxide Quasicrystals with Tunable Aperiodicity**

B. Jalan, University of Minnesota, USA

10.10 **Polarization Vortices in a Ferromagnetic Metal via Twistronics**

L. Yingzhuo, Catalan Institute of Nanoscience and Nanotechnology - ICN2, Spain

10.30 **Unfolding the challenges to prepare single crystalline complex oxide freestanding membranes**

G. De Luca, ICMA-B-CSIC, Spain

10.50 **Freestanding EuTiO₃ Membrane – Towards Strain Induced Multiferroicity**

I. Lary, Tel Aviv University, Israel

11.10 **Coffee Break**

11.40 **Free-standing Ferroelectric and Magnetoelectric single crystal Membranes with super-elasticity**

M. Liu, Xi'an Jiaotong University, China

12.10 **Complex Oxides Micromechanics**

N. Manca, CNR-SPIN, Italy

12.30 **Curvature-induced polar structures in oxide nanomembranes**

D. Pesquera, Catalan Institute of Nanoscience and Nanotechnology, Spain

12.50 **Lunch Break**

14.30 **Ferroelectric topologies in BaTiO₃ nanomembranes for light field manipulation**

Y. Nie, Nanjing University, China

15.00 **Sr₃Al₂O₆ Sacrificial Layer for Solid Electrochemical Cells and Solid State Batteries**

S. Sanna, University of Rome Tor Vergata, Italy

15.20 **Fine lattice tuning for strain-sensitive NaNbO₃ membranes**

O. Krymskaya, CNR-SPIN, University of Rome Tor Vergata, Italy

15.40 **Coffee Break**

16.10 **Band-gap and spin texture engineering in bismuth chalcogenhalides van der Waals double layers**

R. Cardia, CNR-SPIN, Italy

16.30 **Ultrafast electron diffraction for the dynamical investigation of thin layered samples at REGAE**

A. Meents, Center for Free Electron Laser Science (CFEL), DESY, Germany

21 October 2025

09.00 **Complex Oxide Membranes as Platforms for the Growth of Freestanding Heterostructures**

M. Radovic, PSI Center for Photon Science, Paul Scherrer Institute, Switzerland

09.30 **Spalled freestanding oxides micro-membranes: advantages, challenges and perspectives**

A. Sambri, CNR-SPIN, Italy

09.50 **Micromanipulation and characterization of freestanding oxide hetero-membranes grown by RHEED-PLD method**

A. Guarino, CNR-SPIN, Italy

10.10 **Geometric and Strain Effects on the Electronic Properties of (111) LAO/STO Interfaces**

M. Trama, University of Salerno, Italy

10.30 **Charge and spin transport properties of STO-based nanostructures in normal and superconductive phases**

C.A. Perroni, University of Naples "Federico II" and CNR-SPIN, Italy

10.50 **Coffee Break**

11.20 **Quantum Transport and Devices based on LAO/STO freestanding micro-membranes**

T. Jespersen, Technical University of Denmark

11.50 **Freestanding single-crystal superconducting electron-doped cuprate membrane**

S. Sandik, Tel Aviv University, Israel

12.10 **Theory of charge-to-spin conversion under quantum confinement**

A. Maiellaro, CNR-SPIN, Italy

12.30 **Dirac-like fermions anomalous magneto-transport in a spin-polarized oxide two-dimensional electron system**

Y. Chen, CNR-SPIN, Italy

12.50 **Superconducting FeSe thin films: Growth optimization for ring geometry exploration**

J. Petrovic, PSI Center for Photon Science, Paul Scherrer Institute, Switzerland

13.10 **Closing**

13.20 **Lunch Break**