

Scuola di Dottorato GRICU/NEST + CAPE Forum 2025

Ischia (NA), 17-20 September 2025

Program:

SEP, WED 17th, 15:00-15:20 CEST

Welcome, greetings & intro

prof. Piero Salatino, GRICU - prof. Flavio Manenti, CAPE WP EFCE

Welcome address:

prof. Francesco Cupertino – Chairman, Fondazione NEST

dr. Gabriella Scapicchio – General Director, Fondazione NEST

CAPE Forum 2025:

SEP, WED 17th, 15:20-18:30 CEST

Topic: Industrial data science

Session chairs: prof. Mattia Vallerio, prof. Flavio Manenti, Politecnico di Milano

15:20-15:40 – Introduction to CAPE topics, prof. Flavio Manenti

15:40-16:40 – Industrial Data Science, prof. Mattia Vallerio

16:40-17:00 – Coffee break

17:00-18:30 – Workshop: Automatic Generation of Best Surrogate Model, prof. Mattia Vallerio, dr. F. Sanchez-Martinez

SEP, THU 18th, 09:00-12:30 CEST

Topic: Design of experiments

Session chairs: prof. Pierantonio Facco, prof. Fabrizio Bezzo, Università di Padova

09:00-09:40 – Model-based Design of Experiments, prof. Fabrizio Bezzo

09:40-10:40 – Introduction to Design of Experiments, prof. Pierantonio Facco

10:40-11:00 – Coffee break

11:00-12:30 – Workshop: Applications on Design of Experiments, prof. Pierantonio Facco

SEP, THU 18th, 14:00-17:30 CEST

Topic: Process optimization

Session chairs: prof. Marco Vaccari, prof. Gabriele Pannocchia, Università di Pisa,

14:00-14:40 – Fundamentals on Process Optimization, prof. Gabriele Pannocchia

14:40-15:40 – Methods and Tools on Process Optimization, prof. Gabriele Pannocchia

15:40-16:00 – Coffee break

16:00-17:30 – Workshop: Applications on Process Optimization, prof. Marco Vaccari

GRICU/NEST Doctoral School:

Chemical Engineering in future energy systems' integration

SEP, FRI 19th, 09:00-12:30 CEST

Topic: Chemical Engineering in future energy systems' integration – I

Session chair: prof. Leonardo Tognotti, Università di Pisa

09:00-10:00 – Biomass, Biofuels, and Biorefineries: the Technological Platform, prof. Leonardo Tognotti, UNIPi

10:00-11:00 – Unlocking the Potential of Biofuels: Challenges and Technological Innovation, dr. Isabella De Bari, ENEA

11:00-11:30 – Coffee break

11:30-12:30 – E-Fuels and Fuel Cells, prof. Barbara Bosio, UNIGE

SEP, FRI 19th, 14:00-17:30 CEST

Topic: Chemical Engineering in future energy systems' integration - II

Session chair: prof. Samir Bensaid, Politecnico di Torino

14:00-15:00 – Hydrogen Production Technologies: From Fossil Fuels to Renewable Sources, dr. Alberto Giaconia, ENEA

15:00-15:30 – Coffee break

15:30-16:30 – Hydrogen-based Vectors: Gaseous, prof. Fabrizio Scala, UNINA

16:30-17:30 – Hydrogen-based Vectors: Liquid, prof. Fabio Salomone, POLITO

SEP, SAT 20th, 09:00-12:30 CEST

Topic: Chemical Engineering in future energy systems' integration – III

Session chair: prof. Alessandro Galia, Università di Palermo

09:00-10:00 – Decarbonization of Chemical Processes: Electrification, prof. Enrico Tronconi, POLIMI

10:00-10:30 – Coffee break

10:30-11:30 – Decarbonization of Industrial Processes: Low-carbon Heat, prof. Alessandro Galia, UNIPA

11:30-12:30 – Smart Sector Energy Integration: a Chemical Engineer's View, prof. Piero Salatino, UNINA