



SAPIENZA
UNIVERSITÀ DI ROMA



Ministero dell'Ambiente
e della Sicurezza Energetica



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NextGenerationEU

HYDROGEN SUMMER SCHOOL 2026

26-29 May, Rome
ENEA - Casaccia Research Center

Hydrogen & e-Fuels: Innovation and Artificial Intelligence for the Energy of the Future

Sponsored by



School program

Tuesday, 26 May 2026

- 10:00** **Registration**
- 11:00** **Istituzional Welcome**
Roberto Cianella, *MASE*
Giulia Monteleone, *ENEA*
Gaetano Iaquaniello, *AIDIC*
- 11:30** **Plenary Session 1 – Hydrogen & e-Fuels Fundamentals**
Hydrogen production, storage, and transport technologies
Paolo De Filippis, Paola Russo, *University La Sapienza*
e-Fuels as energy carriers: synthesis routes and challenges
Giulio Vilardi, *University La Sapienza*
Question time
- 12:30** **Lunch**
- 14:00** **Plenary Session 2 – AI Fundamentals**
Frontiers in AI: From Classical Machine Learning to Large Language Models and Agentic Systems
Gabriele Piantadosi, *ENEA*
Advanced Machine Learning Applications for Renewable Energy and Hydrogen Plant O&M.AI
Evolution Overview: from deep Learning to Agentic AI
Saverio De Vito, *ENEA*
Question time
- 15:00** **Coffee break**
- 15:30** **Project Workshop 1**
- 17:30** **End of day one**

Wednesday, 27 May 2026

09:10 **1st Session – Gaseous e-Fuels**

SGL's digital transformation and early experiences in synthetic gas infrastructure
Gianluca Vollaro, Linda Moretti, *SGL*

Hydrogen in Mobility

Massimiliano Rossi, *Corporate & External Affairs, Toyota Motor Italia*

Question time

10:30 **Coffee break**

11:00 **2nd Session – Liquid e-Fuels**

Producing Biofuels for Hard-to-Abate Industries: Envisioning future applications.
Insights from the HYDRA Project

Filippo Cirilli, Maria Ilaria Pistelli, *RINA Consulting*

Enhancing Productivity and Project Quality through Digital Innovation and AI

Elena Nespeca, Pierfrancesco Peppoloni, *Technip Energies*

Question time

12:20 **Lunch**

13:50 **3rd Session – e-Fuels**

Strategic Role of E-Fuels in the implementation of RED III

Simone Mausoli, Giuseppe Signoretta, *Bureau Veritas*

Defossilizing aviation: why e-SAF must take off now

Carlo Giorgio Visconti, *Politecnico di Milano*

Question time

15:10 **Project Workshop 2**

18:10 **End of day two**

19:00 **Social Dinner**

Thursday, 28 May 2026

- 09:10 1st Session – AI for Hydrogen**
 From Pipeline Construction site to Machine Learning Lab Key challenges in developing AI systems for the Energy industry
 Roberta Colloca, *Techfem*
 AVL Italia: Advanced Monitoring System for Industrial & H2 projects
 Nicolangelo Testa, *AVL*
 Question time
- 10:30 Coffee break**
- 11:00 2nd Session – AI for Hydrogen**
 Case Study AI in diagnostic predictive fuel cell.
 Pierpaolo Polverino, *University of Salerno*
 Case study: the application of Digital twin to demo hydrogen plants, the case of H2Smart Lab
 Alberto Soraci, Gabriele Formis, Smritirekha Talukdar, *AREA Science Park*
 Machine learning for process industry 5.0 – Successful industrial applications
 Pierantonio Facco, *University of Padova*
 Question time
- 12:50 Lunch**
- 13:50 3rd Session – Gaseous e-Fuels**
 From CO₂ capture to its chemical recycle.
 Francesco Maestri, *SIAD Tecno Project Industriale*
 Question time
- 14:50 Project workshop presentation and debate**
- 18:30 End of day three**

Friday, 29 May 2026

- 09:10** **1st Session – e-Fuels project and impact**
- Hydrogen in International Cooperation
Matteo Micheli (tbc), *UNIDO*
- The Impact of E-Fuels on the Transport Sector.
Carlo Tritto, *Transport & Environment – T&E*
- Hydrogen Safety Prevention: State of the Art and Future Perspectives
Antonio Anecchini, *Corpo Nazionale dei Vigili del Fuoco*
- Question time
- 11:00** **Attendance certificate & Coffee break & Summer School Close-out**
- 11:30** **Laboratory Tour**
- 13:00** **End of Summer School**

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