



# Antonio Sgaramella

## EDUCATION AND TRAINING

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[ 1 Jan 2022 – 31 Dec 2024 ]

### PhD Candidate in Energy and Environment

*Sapienza, University of Rome*

**City:** Rome | **Country:** Italy | **Field(s) of study:** Hydrogen Refuelling Stations | **Level in EQF:** EQF level 8

- occupational techniques (making of standard breads, fancy breads, cakes and pastries)
- science applied to food and equipment (microbiology, biochemistry, hygiene)
- occupational technology (basic principles, hygiene and safety)
- knowledge of business and its economic, legal and social context

[ 27 Feb 2019 – 17 May 2021 ]

### Master Degree in Energy Engineering

*Sapienza, University of Rome*

**City:** Rome | **Country:** Italy | **Field(s) of study:** Energy Engineering | **Final grade:** 110/110 | **Level in EQF:** EQF level 7 | **Thesis:** Renewable installation targets review in the light of the Hydrogen Roadmap Italy: energy-economic simulation

[ 1 Feb 2020 – 1 Jul 2020 ]

### Erasmus Program (Energy Engineering)

*Budapest University of Technology and Economy*

**City:** Budapest | **Country:** Hungary | **Level in EQF:** EQF level 7

[ 20 Sep 2015 – 14 Dec 2018 ]

### Bachelor Degree In Energy Engineering

*Sapienza, University of Rome*

**City:** Rome | **Country:** Italy | **Field(s) of study:** Energy Engineering | **Level in EQF:** EQF level 6 | **Thesis:** Evaluation of an Industrial Unconfined Vapor Cloud Explosion (UVCE) Environmental Impact

## WORK EXPERIENCE

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[ 1 Sep 2021 – 31 Dec 2021 ]

### Energy technology engineer

*Kerr SpA*

**City:** Rome | **Country:** Italy

- Energy Diagnosis
- TerMus Software
- Sizing of sustainable technologies
- Feasibility study

[ 1 May 2022 – Current ]

### Freelencer

**Country:** Italy

- Risk assessment correlated to hydrogen refuelling stations
- Techno-economic analysis of hydrogen refuelling stations

- Analysis of existing Italian and European hydrogen refuelling regulations

[ 1 Jan 2012 – 31 Dec 2021 ] **Private teacher**

**Country:** Italy

[ 15 Jun 2013 – 1 Sep 2014 ] **Lifeguard**

**Country:** Italy

- maintenance of residancial pool
- relations with people and suppliers
- Seasonal job

[ 1 Jan 2016 – Nov 2018 ] **Occasional Pomoter**

**City:** Rome | **Country:** Italy

- Sale of products
- relations with people

## LANGUAGE SKILLS

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**Mother tongue(s):** Italian

**Other language(s):**

**English**

**LISTENING C1 READING C1 WRITING C2**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## DIGITAL SKILLS

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### **My Digital Skills**

Microsoft Word | Microsoft Office | Microsoft Excel | Outlook | Python Language - Basic knowledge | Matlab/Simulik | Social Media | EnergyPLAN | HyRAM | AutoCad 2D -3D

## PUBLICATIONS

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[ 2024 ] **HCNG refuelling station to accelerate the transition towards a real hydrogen economy: A techno-economic analysis**

**Reference:** International Journal of Hydrogen Energy

<https://doi.org/10.1016/j.ijhydene.2024.05.145>

[ 2023 ] **How the cylinder initial conditions affect the HCNG refuelling process - A thermodynamic analysis to determine the most effective filling parameters**

**Reference:** International Journal of Hydrogen Energy

<https://doi.org/10.1016/j.ijhydene.2023.07.323>

[ 2023 ] **Recent progresses in H2NG blends use downstream Power-to-Gas policies application: An overview over the last decade**

**Reference:** International Journal of Hydrogen Energy

<https://doi.org/10.1016/j.ijhydene.2023.06.141>

[ 2023 ] **[Optimal RES integration for matching the Italian hydrogen strategy requirements](#)**

**Reference:** Renewable Energy

[ 2024 ] **Hydrogen blending in natural gas grid: energy, environmental and economic implications in the residential sector**

**Reference:** Buildings

Article in Press

[ 2023 ] **Hydrogen volumetric fraction effects on HCNG refuelling station CAPEX**

**Reference:** Journal of Physics

10.1088/1742-6596/2648/1/012064

[ 2023 ] **Potential Role of green hydrogen as an energy carrier in smart energy system communities**

**Reference:** Journal of Physics

10.1088/1742-6596/2648/1/012096

[ 2023 ] **Decarbonization of methanol production - Techno-economic analysis of Power-to-Fuel process in a Hydrogen Valley**

**Reference:** Journal of Physics

10.1088/1742-6596/2648/1/012066

## CONFERENCES AND SEMINARS

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[ 21 Mar 2022 – 22 Mar 2022 ] **World Online Conference on Sustainable Technologies** Online

Oral presentation of the work "Increasing the Italian RES installation targets for accomplishing the electrolyzers capacity goals set by the Italian Hydrogen Strategy".

[ 14 Sep 2023 – 15 Sep 2023 ] **ATI Conference 2023** Carpi, Italy

Presented work: "Hydrogen volumetric fraction effects on HCNG refuelling station CAPEX".

[ 25 Sep 2023 – 29 Sep 2023 ] **Conference on Sustainable Development of Energy, Water and Environment Systems**

Dubrovnik, Croatia

Presented work: "HCNG refuelling station to accelerate the transition towards a real hydrogen economy: a techno-economic analysis".

[ 30 Jun 2024 – 5 Jul 2024 ] **37th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems**

Rhodes, Greece

Presented work: "Can hydrogen refuelling be cost-effective and competitive with electric charging for heavy-duty vehicles?".

[ 8 Sep 2024 – 12 Sep 2024 ] **19th Conference on Sustainable Development of Energy, Water and Environment Systems**

Rome, Italy

Presented work: "Improving the effectiveness of an on-site hydrogen refuelling station for heavy-duty vehicles: a multi-objective optimisation".