

Max Jorge Antonio Romero Rivas

Researcher

EDUCATION AND TRAINING

2015

Training course "Expert in Management of Innovative Processes and Projects"

Full-time course (1 year) aimed at training professionals capable of managing innovative processes and projects, with skills in economic aspects and strategic planning in the field of renewable energy and the green economy.

Interuniversity Research Consortium Me.S.E.

2012 - 2014

PhD in Fluid Dynamics and Environmental Engineering Processes

Thesis title: Vegetable Oils from Biomass and their Transformation into Biofuels Composed of Liquid Hydrocarbons.

University of Genoa

2006 - 2010

Industrial Engineer

Thesis title: Sustainability Study to Produce Renewable Diesel from Jatropha Curcas in the Lambayeque Region.

Santo Toribio de Mogrovejo Catholic University

PROFESSIONAL HISTORY

2023 - to date

Fixed-term researcher (RTDA)

Research within the PNRR Network 4 Energy Sustainable Transition (NEST) project. WP4.2 – T4.2.1., which involves the design of new solutions to produce renewable hydrogen through reforming, catalytic, and thermochemical processes from biomass and residues.

University of Genoa

2022 - 2023

Research Fellow

Research within the UniGe Technology Transfer Laboratory (UniGeTTLab) project, which involves the identification and protection of the University's research results, as well as facilitating collaborations between research groups and the entrepreneurial community of the Liguria region.

University of Genoa

2017 - 2020

Research and Development Specialist

Specialist in the technical-economic evaluation and development of innovative industrial projects in the field of renewable energy and green economy, particularly in the use of biomass and waste for energy generation, as well as in the performance of LCA analyses.

Graded S.p.A. – ESCO (Naples)

EXPERIENCE

MAIN SEMINARS

2025 17th International Conference on Chemical and Process Engineering (ICheaP17), held in Florence.

Italian Association of Chemical Engineering (AIDIC)

2024 Hydrogen Summer School in Mastering Safety and Regulation in the Hydrogen Value Chain, held in Rome.

ENEA Casaccia Research Center

2014 Fifth International Symposium on Energy from Biomass and Waste, held in Venice.

International Waste Working Group (IWWG) and the Order of Engineers of the Province of Venice.

2014 IconBM: International Biomass Conference, held in Florence.

Italian Association of Chemical Engineering (AIDIC)

2013 International Conference: The Terawatt Challenge. What Research for the Energy of the Future?, held in Rome.

Accademia Nazionale dei Lincei and ENI Enrico Mattei Foundation.

2012 Fourth International Symposium on Energy from Biomass and Waste, held in Venice.

International Waste Working Group (IWWG) and the Order of Engineers of the Province of Venice.

2009 International Symposium Mondialogo, held in Stuttgart (Germany).

UNESCO and Daimler AG.

PRIZES AND ACCOLADES

2017-2020 Fellow of the PhD Program ITalents in Graded S.p.A.

The program promotes innovation in companies by supporting the recruitment of PhDs through co-financing three-year employment contracts.

CRUI Foundation, MIUR e CONFINDUSTRIA

2015 Scholarship Holder

Scholarship to attend the postgraduate training course "Expert in Management of Innovative Processes and Projects" in the field of renewable energy and the green economy.

Interuniversity Research Consortium Me.S.E.

2014 Scholarship Holder

Scholarship to complete PhD studies

Ministero degli Affari Esteri e della Cooperazione Internazionale (Farnesina)

2009 Member of the research group that won the "Silver Mondialogo Engineering Award 2009"

Development of the Multicultural Project "Vegetable Oils for Energy Self-Sufficiency and Improved Living Conditions in Rural Communities" as an engineering innovation responding to the challenges of the 21st century.

UNESCO and Daimler AG (Germany)

PUBLICATIONS

2025 Romero M. and Arato E. Assessment of the Techno-Economic Viability to Produce Biohydrogen from Biowaste. Chemical Engineering Transactions 117, 541–546.

2025 Romero M. Moliner C., Arato E. Discussion on plastic waste management hierarchy. Rivista Di Studi Sulla Sostenibilità 1, 121–140.

2023 Romero M., Duca D., Maceratesi V., Di Stefano S., De Francesco C., Toscano G. Preliminary Study on the Thermal Behavior and Chemical-Physical Characteristics of Woody Biomass as Solid Biofuels. Processes 1, 154.

2022 Romero M., Duca D., Toscano G.. Advancements in the Conversion of Lipid-Rich Biowastes and Lignocellulosic Residues into High-Quality Road and Jet Biofuels Using Nanomaterials as Catalysts. Processes, 10, 187.

2022 Romero M., Capuano D., Miranda C. Economic and environmental performance of biowaste to energy technologies for small-scale electricity generation. Journal of Modern Power Systems and Clean Energy 10, 12-18.

2018 Romero M., Pizzi A., Toscano G., Casazza A., Busca G., Bosio B., Arato A. Deoxygenation of non-edible vegetable oil to produce hydrocarbons over Mg-Al mixed oxides. Chemical Engineering Transactions 64, 121-126.

2016 Romero M., Pizzi A., Toscano G., Busca G., Bosio B., Arato A. Deoxygenation of waste cooking oil and non-edible oil for the production of liquid hydrocarbon biofuels. Waste Management, 47, 62-68.

2015 Romero M., Pizzi A., Toscano G., Busca G., Casazza A., Bosio B., Arato A. Preliminary experimental study on biofuel production by deoxygenation of Jatropha oil. Fuel Processing Technology 137, 31-37.

2014 Romero M., Pizzi A., Toscano G., Bosio B., Arato E. Study of an innovative process for the production of biofuels using non-edible vegetable oils. Chemical Engineering Transactions 37, 883-888.