

Simeone Chianese, PhD, MRSC - Curriculum Vitae et Studiorum

Address for correspondence:

Department of Engineering, University of Campania “Luigi Vanvitelli” (ex Second University of Naples - SUN), Real Casa dell'Annunziata, Via Roma 29, 81031 - Aversa (CE), Italy
Tel.: +39 081 5010327
Fax.: +39 081 5037370
E-mail: simeone.chianese@unicampania.it
Web: <http://www.ingegneria.unicampania.it/dipartimento/docenti?MATRICOLA=702984>

Present Position

- 15/06/2018 - to present: Assistant Professor of Chemical Plants at the Department of Engineering of the University of Campania “Luigi Vanvitelli”

Academic Qualifications

- 10/06/2021: Associate professor qualification

Academic Teaching Activity

- a.a. 2020/2021 – to present
 - Gaseous emission treatment technologies
 - Sustainable management of wastes
 - Waste management
- a.a. 2018/2019 - 2019/2020
 - Risk analysis – Contaminated site remediation

International Teaching Activity

- 29/11/2019 – Successful candidate of the Erasmus+ Mobility for Teaching in the framework of the Erasmus+ Programme 2019/2020 – Host Institution: Polytechnic University of Valencia

Teaching in a PhD Course

- 05/11/2020: Teaching at the PhD “Environnement, Design and Innovation”, University of Campania, with a lecture titled: “Production of biopolymers: sensitivity analysis”

Academic Instruction

- 19/12/2014: PhD in Occupational Medicine, Science and Technology for the Environment (CYCLE XXVII), Postgraduate Program in Science for Life and Environment of the University of Campania “Luigi Vanvitelli”, Aversa, Italy. Thesis Title: “Experimental study of hydrogen production from CO catalytic conversion of tar rich syngas”. Supervisor: prof. Dino Musmarra; Co-Supervisor: dr. Reinhard Rauch (Vienna University of Technology); dr. Antonio Molino (ENEA).
- 14/12/2011: Master Degree in Environmental Engineering (110/110 cum laude), University of Campania “Luigi Vanvitelli”, Aversa, Italy. Thesis title: “Preliminary Design of a Thermal Waste Treatment Plant for the Province of Caserta”. Supervisor: prof. Dino Musmarra.

Academic Honour

- 2017 - 2018: Cultore dell Materia (Subject Expert, Teaching and Research Assistant) in the courses of “Chemical Plants” (SSD: ING-IND/25): “Technologies for Environmental Protection”, “Waste Treatment” and “Polluted Site Remediation” by the Department of Engineering of the University of Campania “Luigi Vanvitelli”.

PhD Board

- 01/11/2022 – to now: member of the extended PhD board in “Science and Engineering for the Environment and Sustainability”, University of Campania “L. Vanvitelli”.

- 01/11/2018 – 31/10/2022: member of the extended PhD board in “Environment, Design and Innovation”, University of Campania “L. Vanvitelli”.

Responsibility of Research Activities

- 01/10/2020 – 31/03/2021: Scientific responsible of the research activity on hydrogen production through water splitting at low temperature at the Laboratory of Electronic Sensors, School of Electrical & Computer Engineering, National Technical University of Athens (Head of the laboratory: Prof. Evangelos Hristoforou).
- 22/04/2020 – 30/06/2020: Scientific responsible of the research activity on “Modelling of an activated sludge process of wastewater treatment” for the company “L.C.A. Ambiente S.r.l.a.”.

Responsibility for post-graduated research scholarships

- 2019 to present: scientific responsible for the research activity of 5 post-graduated research scholarships.

Researcher in Funded Research Projects

- 09/12/2019-to present: Member of the UNICAMPANIA Research Unit in the framework of the National Project titled “Biomasse x Batterie x Bioraffinerie x Biomateriali for Value (Bio44V)” funded from “Fondo per la Crescita Sostenibile – Sportello “Agrifood” PON I&C 2014-2020, di cui al D.M. 5 marzo 2018 Capo III.
- 01/04/2017 – 31/07/2020: Member of the UNICAMPANIA Research Unit in the framework of the European Project H2020-BBI-JTI-2016. Title “Valuable Products from Algae Using New Magnetic Cultivation and Extraction Techniques (VALUEMAG)”, Project ID: 745695. Principal Investigator: National Technical University of Athens. Total amount of the project: 4.789.000,00 Euro. Project amount for UNICAMPANIA Unit: 502.500,00 Euro. Duration: 36 months. Reference: prof. Dino Musmarra.
- 01/01/2016-31/03/2017: Member of the UNICAMPANIA Research Unit in the framework of the National Project Titled "Progetto di barriere permeabili adsorbenti per la protezione di acquiferi sotterranei" – Legge regionale n. 5/2002 - Promozione della ricerca scientifica in Campania, Annualità: 2007. Duration: 12 months (with an extension of 3 months). Reference: prof. Dino Musmarra.
- 01/06/2015-27/02/2018 - Member of the UNICAMPANIA Research Unit in the framework of the European Project H2020-FETOPEN-2014-2015-RIA. Title: “Hybrid Electric Energy Integrated Cluster Concerning Renewable Fuels (HELENIC-REF)”, Project ID: 665318. Principal Investigator: National Technical University of Athens. Total amount of the project: 2.578.386,00 Euro. Project amount for UNICAMPANIA Unit: 553,500 Euro. Duration: 36 months. Reference: prof. Dino Musmarra.
- 01/07/2015-24/04/2017 - Member of the UNICAMPANIA Research Unit in the framework of the European Project H2020-FETOPEN-2014-2015-RIA. Title: “An Innovative Method for Improving the Structural Integrity using SMA Revolutionary Technology (InnoSMART)”, Project ID: 664892. Principal Investigator: Cranfield University. Total amount of the project: 1.995.113,00 Euro. Project amount for UNICAMPANIA Unit: 466,000 Euro. Duration: 36 months. Reference: prof. Dino Musmarra.
- 02/10/2011-01/04/2015 – Member of the UNICAMPANIA Research Unit in the framework of the National Project PON Research and Competitiveness 2007-2013. Title: "Mobile device for Desorption Hydrocarbons (DI.MO.D.I.)", project code: PON01_00599. Total amount of the project: 4.071.907,17 Euro. Principal Investigator: Edilgen Srl. Project amount for UNICAMPANIA Unit: 1,254,063.00 Euro. Duration: 36 months. Reference: prof. Dino Musmarra.

Collaboration with International Universities and Research Institutes

- Institute of Chemical Engineering – Vienna University of Technology (AT)

- School of Electrical and Computer Engineering - National Technical University of Athens (EL)
- Department of Materials Science & Engineering – University of Ioannina (EL)
- School of Water, Energy and Environment – Cranfield University (UK)
- Department of Water Management, Delft University of Technology (NL)
- Institute of Physics of the Slovak Academy of Science (SK)
- Action Group Europeo CTRL+SWAN dell'EIP (European Innovation Partnership) on Water

Collaboration with Italian Universities and Research Institutes

- ENEA – Centro Ricerche Trisaia (IT)
- ENEA – Centro Ricerche Portici (IT)
- Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione industriale - Università degli Studi di Napoli Federico II (IT)
- Dipartimento di Ingegneria Industriale e dell'Informazione e di Economia - Università degli Studi dell'Aquila (IT)

Collaboration with Spin-offs

- Environmental Technology srl – Spin-off Universitario (IT)
- MED.HYDRO srl – Spin-off Universitario (IT)
- Promete Srl – Spin-off CNR (IT)

Technological Transfer

2014 - to present: co-founder of the Academic Spin-Off “*Environmental Technologies s.r.l.*” of the Università degli Studi della Campania “L. Vanvitelli” (ex Second University of Naples - SUN).

Awards of the Spin-off.

- 2014: Start Cup Campania 2014 Award;
- 2014: Young Entrepreneur Initiative Franci@Innovazione 2014 YEI Award

Scientific-Organizational Committees

- 01/09/2020-31/05/2022: Management-technical assistant of the Evaluation Expert Groups (GEV) for the exercise of the evaluation of research quality (VQR) 2015-2019 of the Italian Scientific Research.
- 06/07/2022: Invited Speaker - 3rd International Electronic Conference on Applied Sciences 2022.
- 01/06/2020: International Technical Program Committee del *2021 International Conference on Soil Science, Pollution Prevention and Environment*
- 16/04/2019: Chairperson of the session “Nanomaterials development and production for environmental applications and sustainable energy” – 3rd International Conference on NANOTECHNOLOGY BASED INNOVATIVE APPLICATIONS FOR THE ENVIRONMENT, Napoli, Italy, 14-17 April, 2019
- 30/05/2017-27/09/2017 - Additional member of International Scientific Committee of the 2nd International Conference on NANOTECHNOLOGY BASED INNOVATIVE APPLICATIONS FOR THE ENVIRONMENT, 24- 27 September 2017, Rome, Italy.
- 29/04/2016-30/10/2017: Member of the Scientific Committee of the Fondimpresa Educational Project titled “Technological innovations for environment protection” (“INnovazioni Tecnologiche per la Salvaguardia dell'Ambiente - IN.TE.SA”).
- 26/04/2015-26/05/2015 - Member of the Scientific-Organizational Committee of the final workshop for the project P.O.N. “DI.MO.D.I.” entitled “Cleaning And Remediation Of Contaminated Sites. Experiences, interventions and technologies in comparison”.

Editorial Board Membership

- 22/10/2020 – to present: Guest Editor of the Special Issue “Pollution Reduction Technology, Flue Gas Treatment Plants and Solid Waste Treatment Plants”, “Sustainability” ISSN: 2071-1050 – Indexing: Scopus.
- 15/01/2020 – to present: Editorial Board Member of the *The Open Chemical Engineering Journal* (BENTHAM OPEN) ISSN: 1874-1231 – Indexed in Scopus.
- 06/09/2019 – to present: Editorial Board Member of the *Environments Journal* (MDPI) ISSN: 2076-3298 – Indexed in Scopus.

Blind peer review for international research programmes:

- 2022 to present: The Israel Science Foundation Bioprocess Programme
- 2021 to present: Qatar National Research Fund Programme

Blind peer review for international scientific journals

- 2016 – to present: AQUA – Water Infrastructure, Ecosystems and Society, Bioprocess and Biosystems Engineering, Sustainable Energy Technologies and Assessments, Sustainable Energy & Fuels, Environmental Technology & Innovation, Algal Research, Water Research, Catalysis Today, Environmental Science: Processes & Impacts, Scientific Reports, ACS Earth and Space Chemistry, International Journal of Energy Research, Environmental Science and Pollution Research, Separation and Purification Technology, Arabian Journal of Chemistry, Waste and Biomass Valorization, Biochemical Engineering Journal, Energy Conversion and Management, Hydrology and Earth System Sciences, Water, Inventions, Biology, International Journal of Environmental Research and Public Health, Sustainability, Coatings, Catalysts, Energies, Applied Sciences, Forests, Nanomaterials, Materials, Water Science and Technology, Chemical Engineering Transactions, Resource-Efficient Technologies, SN Applied Sciences.

Awards:

- 2022: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Chemistry *Biomass gasification technology: The state of the art overview*, Molino, A., Chianese, S., Musmarra, D. 2016, *Journal of Energy Chemistry*, 25(11), 10-25.
- 2022: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Engineering *Biofuels production by biomass gasification: a review*, Molino, A., Larocca, V., Chianese, S. and Musmarra, D. 2018, *Energies*, 11(4), 811.
- 2022: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Chemistry *Recent developments in supercritical fluid extraction of bioactive compounds from microalgae: Role of key parameters, technological achievements and challenges*, Molino A., Mehariya S., Di Sanzo G., Larocca V., Martino M., Leone G.P., Marino T., Chianese S., Balducchi R., Musmarra D. 2020, *Journal of CO2 Utilization*, 36, pp. 196 - 209.
- 2021: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Chemistry *Biomass gasification technology: The state of the art overview*, Molino, A., Chianese, S., Musmarra, D. 2016, *Journal of Energy Chemistry*, 25(11), 10-25.
- 2021: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Engineering *Biofuels production by biomass gasification: a review*, Molino, A., Larocca, V., Chianese, S. and Musmarra, D. 2018, *Energies*, 11(4), 811.
- 2021: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Chemistry *Recent developments in supercritical fluid extraction of bioactive compounds from microalgae: Role of key parameters, technological achievements and challenges*, Molino A., Mehariya S., Di Sanzo G., Larocca V., Martino M., Leone G.P., Marino T., Chianese S., Balducchi R., Musmarra D. 2020, *Journal of CO2 Utilization*, 36, pp. 196 - 209.

- 2018: Web Of Science Hot Paper - Top 0.1% of the papers in the academic field of Engineering *Biofuels production by biomass gasification: a review*, Molino, A., Larocca, V., Chianese, S. and Musmarra, D. 2018, *Energies*, 11(4), 811.
- 2018: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Engineering *Biofuels production by biomass gasification: a review*, Molino, A., Larocca, V., Chianese, S. and Musmarra, D. 2018, *Energies*, 11(4), 811.
- 2018: Elsevier Journal of Energy Chemistry 2016 Best Paper Award *Biomass gasification technology: The state of the art overview*, Molino, A., Chianese, S., Musmarra, D. 2016, *Journal of Energy Chemistry*, 25(11), 10-25.
- 2018: Web Of Science Highly Cited Paper - Top 1% of the papers in the academic field of Chemistry *Biomass gasification technology: The state of the art overview*, Molino, A., Chianese, S., Musmarra, D. 2016, *Journal of Energy Chemistry*, 25(11), 10-25.
- 2018: *Most Cited Energies Articles published in last 12 months*:
Molino, A., Larocca, V., Chianese, S. and Musmarra, D., 2018. Biofuels production by biomass gasification: a review, *Energies*, 11(4), 811. DOI: 10.3390/en11040811. Scopus ID: 2-s2.0-85045123199.
- 2018: *Most Viewed Energies Articles published in last 12 months*:
Molino, A., Larocca, V., Chianese, S. and Musmarra, D., 2018. Biofuels production by biomass gasification: a review, *Energies*, 11(4), 811. DOI: 10.3390/en11040811. Scopus ID: 2-s2.0-85045123199.
- 2018: H2020 Innosmart Project has been selected for the Innovation Radar initiative of European Commission's Horizon 2020 for Maturity (concerns innovations that are actively exploring value creation opportunities), Excellent Science, and Potential for meeting market needs.
Innovation Title: Structural repair using non-linear elasticity of SMA Alloys
Innovation Category: Exploration Developed in H2020 project InnoSMART
Website: <https://www.innoradar.eu/innovation/19566>
- 2017: *Most Cited Journal of Energy Chemistry Articles published since 2012*:
Molino, A., Chianese, S., Musmarra, D. 2016. Biomass gasification technology: The state of the art overview, *Journal of Energy Chemistry*, 25(11), 10-25. DOI: 10.1016/j.jechem.2015.11.005.
- 2017: *Most Downloaded Journal of Energy Chemistry Articles*:
Molino, A., Chianese, S., Musmarra, D. 2016. Biomass gasification technology: The state of the art overview, *Journal of Energy Chemistry*, 25(11), 10-25. DOI: 10.1016/j.jechem.2015.11.005.
- 27/11/2015: vincitore del Diploma d'Onore – Premio Euromediterraneo X Edizione, conferito dall'Accademia Ercolanese.
- 03/12/2012: vincitore del Premio “Concorso Miglior Tesi di Laurea – Edizione 2012” bandito da A.S.I.P.S., Azienda Speciale per l'Innovazione della Produzione e dei Servizi della Camera di Commercio di Caserta.
- 2015: *Euromediterraneo Award - Diploma of Honour X Edition*, awarded from Accademia Ercolanese (Vincitore del Diploma d'Onore – Premio Euromediterraneo X Edizione, conferito dall'Accademia Ercolanese).
- 2012: *Best Master Thesis Award - 2012 Edition*, awarded from Special Company for the Innovation of the Production and of the Services of the Chamber of Commerce of Caserta (Vincitore del Premio “Concorso Miglior Tesi di Laurea – Edizione 2012” bandito da A.S.I.P.S., Azienda Speciale per l'Innovazione della Produzione e dei Servizi della Camera di Commercio di Caserta).

Scientific Affiliation

- 29/07/2022 – to present: Member of the Institute of Chemical Engineers (IChemE) – Membership number: 200100546
- 03/02/2020 – to present: Member of the European Federation of Chemical Engineering
- 30/01/2020 – to present: Member of the European Federation of Biotechnology
- 27/11/2019 – to present: Member of the Royal Society of Chemistry (MRSC) – Membership number: 678609
- 01/01/2018 to present: Member of the Italian Association of Chemical Engineering (Associazione Italiana di Ingegneria Chimica – AIDIC) – Membership number: 7852.
- 13/01/2017 - to present: Member of the National Inter-University Consortium for Marine Sciences (Consorzio Nazionale Interuniversitario per le Scienze del Mare – CoNISMa)

Research interests of Dr. Chianese are mainly focused on environmental chemical engineering for the removal of pollutants from environmental matrices, renewable fuel production thorough advanced technologies and value-added product generation from biomasses via pressurized anaerobic digestion, anaerobic/aerobic fermentation, microalgal growth and photosynthesis. His research interests include

- Micro-pollutant removal from aqueous streams
- Advanced wastewater treatment
- Advanced oxidation processes
- Innovative technologies for groundwater remediation
- Innovative technology for biofuel production
- Hydrogen production through advanced approaches
- Shape memory alloy deposition
- Microalgal biomass growth and extraction of valuable by-products
- CO₂ capture through microalgae growth
- Biomass valorisation through pressurized anaerobic digestion
- Value added product production from biomass via biorefinery
- Biomass gasification
- Supercritical water gasification
- Catalytic hydrogen production
- Syngas cleaning

His work has been published in several international peer-reviewed scientific journals and presented in several international conferences. He is co-author of more than 60 papers in international scientific journals indexed by the main databases (Scopus and/or Web of Science) and of more than 30 papers in international conferences.

Bibliometric parameters¹

Number of papers: 66

Number of citations: 1909

H-Index: 22

The whole list of publications is available at the following webpage:

<https://iris.unicampania.it/cris/rp/rp10812>

¹ Updated on 23th November 2022 – Source: Scopus (Scopus ID: 55770440800).