

Curriculum Vitae - Luna Pratali Maffei

Urls: [LinkedIn](#) • [GitHub](#) • [Google Scholar](#)

Researcher unique identifier(s): ORCID 0000-0002-0681-0720, Scopus ID: 57211170284

GENERAL INFORMATION

Email: luna.pratali@polimi.it

Affiliation: Politecnico di Milano

Position: Junior assistant professor

WORK EXPERIENCE

Junior assistant professor / Researcher (RTD-A)

Politecnico di Milano – Milan, IT

Project within NEST - Network 4 Energy Sustainable Transition (D.D. 1243 02/08/2022, PE00000021), funded under the National Recovery and Resilience Plan (NRRP), Mission 4 Component 2 Investment 1.3, funded from the European Union - NextGenerationEU

Mar 2023 – Present

Post-doctoral Researcher

Politecnico di Milano – Milan, IT

Dec 2022 – Feb 2023

Researcher in the Computational Chemistry Consortium

Politecnico di Milano – Milan, IT

[C3](#) consortium goal is a unified kinetic mechanism for combustion systems with predictive capabilities bringing together academic (NUIG, POLIMI, RTWH, LLNL, ANL) and industrial partners.

Jan 2023 – Present

Nov 2018 – Dec 2021

Lecturer, teaching assistant

Politecnico di Milano – Milan, IT

- “Chemical Kinetics and dynamics: theory and application” (lectures, practicals; 2nd year of M.Sc. in Chemical Engineering, ~10 Students) AY 2023-2024
- “Project laboratory for Chemical Engineering” (practicals; 3rd year of B.S.c. in Chemical Engineering, ~50 Students) AY 2022-2023, 2023-2024
- “Introduction to Statistics for Industry” (practicals; 1st year of B.Sc. in Chemical Engineering, ~200 Students), AY 2018-2019, 2019-2020, 2020-2021
- “Chemical Reaction Engineering” (Tutoring; 1st year of M.Sc. in Chemical Engineering, ~50 Students) AY 2018-2019, 2020-2021, 2021-2022
- Supervision of MSc students (7 in AA. 20219-2021)

Nov 2018 – Present

EDITORIAL ACTIVITIES

Editorial board member

Progress in Reaction Kinetics and Mechanism

Nov 2024 – Present

Reviewer

Combustion & Flame, Combustion science and technology, Fuel, Proceedings of the combustion institute, Propulsion and power research

2020 – Present

EXCHANGE PERIODS

Visiting Graduate Researcher

Argonne National Laboratory – Lemont (IL), USA

Remote

Mar – Sept 2022

Oct 2020 – Feb 2022

Automatic development of kinetic mechanisms ([GitHub](#), [official website](#), [contributors](#)). Main focus: automated implementation of prompt effects in kinetic mechanisms; application of automated tools to PAH chemistry.

Visiting Student (Research Internship)

King Abdullah University of Science and Technology – Thuwal (Jeddah), KSA

Mar – Jul 2016

INTERNATIONAL COLLABORATIONS

- CNRS-Université de Lorraine, Francia for Horizon 2020 "IMPROOF" (H2020-SPIRE-04?2016) project. Output: 2 publications [10.1016/j.cej.2022.136723](https://doi.org/10.1016/j.cej.2022.136723), [10.1016/j.combustflame.2019.09.024](https://doi.org/10.1016/j.combustflame.2019.09.024) 2019-2020
- PCFC RWTH Aachen University for H2020 Residue2Heat (G.A. No 654650) project. Output: Extended abstract for the 9th and 11th European Combustion Meetings 2020-2023
- Argonne National Laboratory (chemical science division), Lemont (US) on the investigation of theoretical aspects of combustion kinetics (prompt effects, impact of stereochemistry, oxidation reactions of aromatics). Output: 3 publications [10.1016/j.combustflame.2022.112422](https://doi.org/10.1016/j.combustflame.2022.112422), [10.1002/wcms.1710](https://doi.org/10.1002/wcms.1710) 2020-
- King Abdullah University of Science and Technology, Thuwal, KSA. Topic: combustion of N-containing fuels. Output: 1 publication [10.1016/j.proci.2022.07.019](https://doi.org/10.1016/j.proci.2022.07.019) 2022
- ICARE-CNRS laboratory (Orleans, France) on the formation of aromatic hydrocarbons in flames. Output: 1 publication [10.1016/j.proci.2022.08.017](https://doi.org/10.1016/j.proci.2022.08.017) 2022

EDUCATION

Ph.D (cum Laude), Industrial Chemistry and Chemical Engineering

Politecnico di Milano – Milan, Italy

Nov 2018 – Dec 2022

Project: Theoretical and kinetic modeling of the combustion of aromatic hydrocarbons.

M.Sc. (cum Laude), Chemical Engineering, Double Degree

Politecnico di Milano, Politecnico di Torino – Milan/Turin, IT

Oct 2016 – Oct 2018

Excellence program diploma, Alta Scuola Politecnica

Politecnico di Milano, Politecnico di Torino – Milan/Turin, IT

Mar 2017 – Sept 2018

Multidisciplinary international honors program ([ASP official website](#)). Courses: Dynamics of Innovation, Design Methods and Processes, Designing for Decision Making, Industry 4.0, Communication Skills.

B.Sc. (cum Laude), Chemical Engineering and Material Science

Università degli Studi di Padova – Padua, Italy

Oct 2013 – Sept 2016

AWARDS

- Bernard Lewis Fellowship for the CI's 40th International Symposium – Emphasizing Energy Transition (awarded by the Combustion Institute) May 2024
- Antonio d'Alessio award for the best PhD thesis in combustion and related fields (awarded by the Italian Section of the Combustion Institute) May 2024
- Best paper award for the "Gas phase kinetics" section of the 39th International symposium of Combustion Jan 2023
- Cover paper for March 2020 issue of Reaction Chemistry & Engineering [10.1039/c9re00418a](https://doi.org/10.1039/c9re00418a) Mar 2020
- Mention among Hot Articles of Physical Chemistry Chemical Physics journal (publication: [10.1039/d0cp03099f](https://doi.org/10.1039/d0cp03099f)) Jul 2020
- Graduation Award "Gabriele Corbelli" for M.Sc. Thesis, Rotary Club Mar 2019
- Scholarship by Politecnico di Milano for high grades achieved in B.Sc. Apr 2017
- Scholarship by "Rotary Club Distretto 2060" as best high school diplomate in Venice Jan 2014
- Certificate of merit by regional school office for high school grades Oct 2013

INVITED CONFERENCE PRESENTATIONS

Invited talk to the 7th international flame chemistry workshop

July 2024

CONFERENCE PRESENTATIONS (oral, poster)

<u>International conference on chemical reaction engineering – Turku, FI</u>	June 2024
<u>Summer modeling workshop – Castiglione della Pescaia, IT</u>	September 2023
<u>12th International conference of chemical kinetics – Hefei, China</u>	June 2023
<u>45th Meeting of the Italian Section of the Combustion Institute – Florence, IT</u>	May 2023
<u>11th European Combustion Meeting – Rouen, FR</u>	April 2023
<u>6th International (and 2nd Virtual) Flame Chemistry Workshop – Virtual</u>	August 2022
<u>39th International Symposium on Combustion – Vancouver, CA</u>	July 2022
<u>European Combustion Meeting – Virtual (Naples)</u>	Apr 2021
<u>5th International (and 1st Virtual) Flame Chemistry Workshop – Virtual</u>	December 2020
<u>42nd Meeting of the Italian Section of the Combustion Institute – Ravenna, IT</u>	Sept 2019
<u>Italian Celebration for the 50 years of CECAM – Bologna, IT</u>	July 2019
<u>International Conference of Chemical Kinetics – Orleans, FR</u>	Jun 2019
<u>Future of Fuels – Jeddah, KSA</u>	March 2019
<u>1st International Conference on Smart Energy Carriers – Naples, IT</u>	Jan 2019

LANGUAGES

- Italian (mothertongue)
- English (proficient: 2018 IELTS Certificate Level C1 – Listening 9, Reading 9, Writing 7, Speaking 7.5)
- Spanish (basic user: 2012 Certificate Level A2.1)