

CURRICULUM VITAE

PERSONAL DETAILS

Name: Maria
Surname: Bolla
Nationality: Italian
Date of birth: 13th March 1997
Gender: Female
e-mail: maria.bolla01@edu.unige.it

EDUCATION AND TRAINING

<i>November 2023- In progress</i>	Ph.D period abroad at the VSB Technical University of Ostrava (VSB-TUO), Czech Republic. The research is focused on the study of flammability and explosion properties of spent coffee grounds samples.
<i>2021-In progress</i>	Ph.D Candidate (XXXVII cycle) in Security, Risk and Vulnerability, Curriculum: Risk and Resilience Engineering of Natural, Industrialized and Built Environments - Department of Civil, Chemical and Environmental Engineering, University of Genoa, Italy. Major fields of study: Biopolymers, Valorization of Wastes, Inherent Safety, Risk Management.
<i>November 2023</i>	Participation to EFFoST 2023, International Conference on Sustainable Food and Industry 4.0: Towards the 2030 Agenda, November 6 th -8 th , 2023, Valencia, Spain. Oral presentation.
<i>October 2023</i>	Participation to FEx23, International Conference on Fires & Explosions in the Process Industry, October 8 th -11 th , 2023, Bologna, Italy. Oral presentation.
<i>June 2023</i>	Participation to the international workshop: Catalysis for carbon neutrality and energy transition, June 13 th , 2023, Genoa, Italy.
<i>May 2023</i>	Participation to ICheaP 16, International Conference on Chemical and Process Engineering, June 4 th -7 th , 2023, Naples, Italy.
<i>January 2023</i>	Participation to the workshop: AIDIC Talk in Università, March 18 th , 2023, Genoa, Italy.
<i>January 2023</i>	Participation to the workshop: MeOH come vettore energetico, AIDIC, January 18 th , 2023, Genoa, Italy.
<i>March 2023</i>	Participation to the workshop: DYN-RISK: Approccio alla valutazione dinamica del rischio nel contesto industriale ed in aree portuali: innovazione e ricerca, March 18 th , 2023, Genoa, Italy.
<i>September 2022</i>	Ph.D National School of IPTA 2022 on the topic “Ingegneria di prodotto per la transizione alimentare”, Como, 8 th -10 th September, 2022.
<i>July 2022</i>	Ph.D. National School of GRICU 2022 (Group of Chemical Engineering of the University) on the topic “Fondamenti dei Processi di Elettrochimica e loro Applicazione”, Ischia, Italy, 6 th -9 th July, 2022.
<i>July 2022</i>	Participation to the GRICU National Congress, July 3 rd -6 th , 2022, Ischia, Italy. Poster

	presentation.
July 2022	Participation to the Congress “La Chirurgia Vascolare tra innovazione e tradizione”, Genoa, Italy, 1 st July, 2022.
2019-2021	Master’s degree in Chemical and Processes Engineering. Thesis: Enrichment of PLA matrices with spent coffee grounds extracts for active food packaging application. Internship within the Food Engineering Lab of DICCA of the University of Genoa, in collaboration with Avient (MI), and the DIFI Department of the University of Genoa. Final degree mark: 110/110 cum laude.
2016-2019	Bachelor’s degree in Chemical Engineering. Thesis: Photoreforming of hydrolysates from biomass for the production of biofuels. Internship within the Department of Chemistry of the University of Milan. Final degree mark: 110/110 cum laude.
2011-2016	Scientific high school diploma.

ACADEMIC EXPERIENCE

November 2023- In progress	Subject expert for the course of “Chemical and Biochemical Processes and Plants for Energy”, cod 72562, Master’s degree in Energy Engineering, University of Genoa, held by Roberta Campardelli.
October 2023	Research period at the Chemistry Department of La Sapienza, University of Rome, Italy, with the research group of Prof. Marianna Villano. The research was focused on the characterization studies of polyhydroxyalkanoates.
March 2023- May 2023	Speaker for three seminars about “Wastes valorization towards the production of industrial products and energy” held for the course of “Chemical and Biochemical Processes and Plants for Energy”, cod 72562, Master’s degree in Energy Engineering, University of Genoa, Academic Year 2022-2023, 2 nd semester (May 10 th , May 17 th , May 24 th). First seminar (May 10 th , 2023): “Waste management towards the production of high value added-compounds and energy”. Second seminar (May 17 th , 2023): “Biopolymers: a sustainable alternative to oil based plastics”. Third seminar (May 24 th , 2023): “Process safety applied to biochemical processes”.
March 2023	Participation in the organization activities of the Workshop DYN-RISK: Approccio alla valutazione dinamica del rischio nel contesto industriale ed in aree portuali: innovazione e ricerca, March 18th, 2023, Genoa, Italy.
January 2023	Participation in the organization activities of AIDIC Talk in Università, March 18th, 2023, Genoa, Italy.
November 2022	Scientific Reviewer of Chemical Engineering & Technology.

PROJECTS

2022	Collaboration for research contract with TICASS for a H2020 Project on “Bio-based plastic packaging”. The activity was carried out at the Department of Civil, Chemical and Environmental Engineering of the University of Genoa. Technical-scientific manager: Prof. Patrizia Perego.
------	---

SKILLS & COMPETENCES

- Fluent in English with B2 level in conversation, listening, reading, and writing;
- Excellent organizational skills and ability to organize and respect the deadlines;
- Excellent team working skills;
- Ability in the use of laboratory equipment and chemicals;
- Excellent knowledge of the main command of Microsoft Office tools;
- Good digital knowledge of Matlab, Simulink, Aspen Plus, UniSim;
- Basic digital knowledge of Python, Comsol, Ansys Fluent, SimaPro, programming in C, CAD 2D Microstation.

SUPERVISION FOR THE STUDENTS LABORATORY ACTIVITIES

- Laboratory support for the thesis of Iacopo Zangani, Bachelor's Degree in Biotechnology, Department of Experimental Medicine, University of Genoa. The work focused on the production of polyhydroxyalkanoates starting from carbon feedstocks extracted from spent coffee grounds, with a focus on the scale up of the process. Thesis to be discussed in 2024.
- Laboratory support for the thesis of Pietro Bergaglio, Bachelor's Degree in Biotechnology, Department of Experimental Medicine, University of Genoa. The work focused on the production and characterization of polyhydroxyalkanoates starting from carbon feedstocks extracted from spent coffee grounds. Thesis to be discussed in 2024.
- Laboratory support for the thesis of Soulef Boukkaz, "Valorization of spent coffee grounds towards the production of polyhydroxyalkanoates by *Cupriavidus necator* DSM 545", 2023, Master's Degree in Applied and Experimental Biology, Department of Earth, Environment and Life Science, University of Genova. Supervisors: Prof. Patrizia Perego, Prof. Marina Pozzolini. Co-supervisor: Prof. Chiara Cervetto.
- Laboratory support and co-supervision for the thesis of Agnese Gamberini, Chiara Repetto, "Biodegradable engineered vascular prostheses: a validation comparative study in bioreactor", 2022, Master's Degree in Chemical and Processes Engineering, Department of Civil, Chemical and Environmental, University of Genoa. Supervisors: Prof. Patrizia Perego, Prof. Jan Oscar Pralits, Dr. Pier Francesco Ferrari. Co-supervisor: Dr. Maria Bolla.

POSTERS AND ORAL PRESENTATIONS IN NATIONAL AND INTERNATIONAL CONGRESSES

- Bolla, M.*, Pettinato, M., & Perego, P. (2023), Valorization of Spent Coffee Grounds towards the Production of Polyhydroxyalkanoates. EFFoST 2023, International Conference on Sustainable Food and Industry 4.0: Towards the 2030 Agenda, November 6th-8th, 2023, Valencia, Spain. Oral presentation.
Website: <https://www.effost.org/effost+international+conference/effost+conference+2023/default.aspx>
- Drago, E.*, Bolla, M., Pettinato, M., Campardelli, R., Firpo, G., Perego, P. (2023), The potential of vacuum technology for active food packaging development. AIV XXVI Conference about Energy Transition and Environmental Sustainability: Materials, Processes and Devices for Research and Industrial Applications, November 7th-10th, 2023, Rome, Italy. Oral presentation.
Website: <https://www.aiv.it/it/aiv-xxvi-conference>
- Bolla, M.*, Pettinato, M., & Fabiano, B. (2023), Inherent Safety Development Applied to Green Processes and Energy Transition. FEx23, International Conference on Fires & Explosions in the Process Industry, October 8th-11th, 2023, Bologna, Italy. Oral presentation.
Website: <https://www.aidic.it/fex23/>

- Vairo, T., Magrì, S., Pettinato, M.*, Bolla, M., & Fabiano, B. (2023), A Dynamic Approach to Natech Risk Assessment applied to a LPG Storage Facility in a Landslides Sensitive Italian. ICheaP 16, International Conference on Chemical and Process Engineering, June 4th-7th, 2023, Naples, Italy. Oral presentation.
Website: <https://www.aidic.it/icheap16/>
- Bolla, M.* (2023), Inherent safety approach towards PHAs sustainable production from wastes as carbon sources. Poster Session for the PhD Program in Security, Risk and Vulnerability, February 15th, 2023, Genoa, Italy. Poster presentation.
- Bolla, M.*, Pettinato, M., Campardelli, R., Firpo, G., & Perego, P. (2022), PLA-based active food packaging production with antioxidant properties. Session: Chemical Engineering for Food & Biomedicals applications. GRICU National Congress, July 3rd-6th, 2022, Ischia, Italy. Poster presentation.
Website: <https://www.aidic.it/gricu2022/page.php?pipe=testoprogramme>

* *Speaker*

PUBLICATIONS

- Pettinato, M., Bolla, M., Campardelli, R., Firpo, G., & Perego, P. (2023), Potential Use of PLA-Based Films Loaded with Antioxidant Agents from Spent Coffee Grounds for Preservation of Refrigerated Foods, *Foods*, 12, 4167, doi: 10.3390/foods12224167.
- Bolla, M., Pettinato, M., & Fabiano, B. (2023), Inherent Safety Development Applied to Green Processes and Energy Transition, *Chemical Engineering Transactions*, 104, 151-156, doi: 10.3303/CET23104026.
- Bolla, M., Drago, E., Pettinato, M., Perego, P., Firpo, G., Campardelli, R. (2023), Nuove tecnologie per il packaging alimentare sostenibile, *Food Hub Magazine*.
- Vairo, T., Magrì, S., Pettinato, M., Bolla, M., & Fabiano, B. (2023), A Dynamic Approach to Natech Risk Assessment applied to a LPG Storage Facility in a Landslides Sensitive Italian, *Chemical Engineering Transactions*, 89, 289-294, doi: 10.3303/CET2399049.

FURTHER INFORMATION

- European driving license, class B.
- I gave presentations and guides to the laboratories of DICCA, Genoa, for the orientation program offered to high school students.
- I studied classical guitar, musical theory and solfeggio at the "Accademia Musicale Teresiana" in Arenzano (GE) from 2004 to 2008 and at the middle school musical specialty from 2008 to 2011.

In compliance with the law D.LGS. no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.

Genoa, 01/02/2024

Norcia Bolla