Nicolas Bertoldo

Environmental engineer

Working experience

01/11/2022 - Current — **PhD Fellow in Sustainability in Public Procurement**, *Politecnico di Milano, Materials for Energy and Environment lab*, Milan, Italy.
Development of a Life cycle thinking-based methodology to be used in Sustainable Public Procurements.
Supervisor Prof. Giovanni Dotelli.
Life Cycle Assessment, Environmental Sustainability, Circular Economy

04/08/2025 - 08/08/2025 — **Teaching assistant**, *Oulu University*, Oulu, Finland.
ADMA3 Summer School on Sustainability Assessment (5 ECTS).

01/09/2024 - 28/02/2025 — **Visiting PhD**, *Aalborg University*, Aalborg, Denmark.
Circular Public Procurement.

01/10/2023 - Current — **Teaching assistant**, *Politecnico di Milano*, Milan, Italy.
Course: Sustainable Materials for Architecture, Prof. Giovanni Dotelli.

01/03/2023 - Current — **Teaching assistant**, *Politecnico di Milano*, Milan, Italy.
Course: Life Cycle Assessment of Materials and Processes, Prof. Giovanni Dotelli.

02/05/2022 - 01/08/2022 — **Environmental consultant**, *EY S.p.A., Climate Change & Sustainability Services,*, Milan, Italy.
Greenhouse Gases inventories, Sustainability reporting (GRI), CDP questionnaire (Climate change and water security).

13/09/2021 - 28/04/2022 — **Thesis Work**, *STIIMA, National Research Council of Italy (CNR)*, Milan, Italy.
Life Cycle Assessment, Ecodesign, Footwear, Environmental sustainability.

Education

24/02/2020 - 28/04/2022 — **Master's degree in Environmental Engineering**, *Polytechnic of Milan*, Milan, Italy.
- Thesis title: "Ecoshoe: an Ecodesign tool to enhance environmental sustainability in the Footwear Industry".
Supervisor: Prof. Giovanni Dotelli.

06/03/2017 – 23/07/2019 — **Bachelor's degree in Environmental Engineering**, *Polytechnic of Milan*, Milan, Italy.

30/09/2013 - 24/02/2017 — **Bachelor's degree in Telecommunication Engineering**, *Polytechnic of Milan*, Milan, Italy.

Language skills

Italian — Mother tongue
English — Level B2: Understanding | Speaking | Writing

Skills

Digital skills — Brightway LCA framework | Python | Django | Microsoft Office | OpenLCA | SimaPro | R, R Studio | Matlab | GAMS | GIMP | Qgis | LaTeX

Publications

- Bertoldo, N., Sabbadini, S.R.M., Ruggieri, G., Dotelli, G. (2025). Cradle-To-Grave LCA of a Bio-Based Retrofitting of an Old Italian Dwelling. In: Hanaor, D.A.H. (eds) Sustainable Materials for the Built Environment. Springer Series in Materials Science, vol 352. Springer, Cham.

- Bertoldo, N., Cefis, N., Ballini, A., Gallucci, F., Paris, E., & Dotelli, G. (2025). Mechanical and environmental analysis of concretes with partial replacement of clinker by coconut shell ashes. In Life-Cycle Performance of Structures and Infrastructure Systems in Diverse Environments (pp. 1519-1526). CRC Press.
- Bertoldo, N., Qureshi, T., Simpkins, D., Arrigoni, A., & Dotelli, G. (2024). Concrete with Organic Waste Materials as Aggregate Replacement. Applied Sciences, 14(1), 108.

Conferences

09/09/2025 – 12/09/2025	Nicolas Bertoldo, Mette Alberg Mosgaard, Anja Marie Bundgaard and Giovanni Dotelli, *"A Multi-Criteria Decision-Making tool to be used in Green and Circular Public Procurement"*, 12th International Conference on Life Cycle Management, Palermo, Italy, *Oral presentation*
15/07/2025 – 19/07/2025	Nicolas Bertoldo, Nicola Cefis, Andrea Ballini, Francescantonio Gallucci, Enrico Paris and Giovanni Dotelli, *"Mechanical and environmental analysis of concretes with partial replacement of clinker by coconut shell ashes"*, Ninth International Symposium on Life-Cycle Civil Engineering 2025, Melbourne, Australia, *Oral presentation*
25/06/2025 – 27/06/2025	Nicolas Bertoldo, Nicola Cefis, Marco Blazina, Andrea D'Anna and Giovanni Dotelli, *"Exploring the Use of Sewage Sludge Ash in Concrete: Assessing Mechanical Properties and Environmental Impacts"*, Sustainable Built Environment Conference, Zurich, Switzerland, *Oral presentation*
19/03/2025 – 21/03/2025	Nicolas Bertoldo, Andrea Bortolotti and Giovanni Dotelli, *"Life Cycle Assessment of Green Waste Management: Optimizing Composting Facility Distribution in the Milan Metropolitan Area"*, XIX Convegno dell'Associazione Rete Italiana LCA, Cortina d'Ampezzo, Italy, *Oral presentation*
03/07/2024 – 05/07/2024	Nicolas Bertoldo, Alessandro Salvi and Giovanni Dotelli, *"Integrating Aspen Plus Simulations with Brightway 2.5 for Sustainable Process Design"*, 4th Life Cycle Innovation Conference (LCIC), Berlin, Germany, *Oral presentation*
05/09/2023 – 08/09/2023	Nicolas Bertoldo, Sergio Sabbadini, Gianluca Ruggieri, Chiara Moletti and Giovanni Dotelli, *"Retrofitting of Italian vernacular built stock with bio-based building materials: a viable solution to mitigate climate change effects?"*, The 11th International Conference on Life Cycle Management (LCM), Lille, France, *Poster presentation*
28/06/2023 – 30/06/2023	Nicolas Bertoldo, Elisabetta Abbate, Davide Micillo, Francesco Airoldi, Carlo Brondi and Giovanni Dotelli, *"The potential environmental benefit of the ecodesign approach: a case study in the footwear industry"*, XVI conference of the Associazione Rete Italiana LCA, Milan, Italy, *Oral presentation*
28/05/2023 – 01/06/2023	Nicolas Bertoldo, Tanvir Qureshi, Dylan Simpkins, Alessandro Arrigoni and Giovanni Dotelli, *"Sustainable Concrete from Recycled Organic Waste Materials as Aggregate Replacement"*, XVIII Italian national conference of the Associazione Italiana di Ingegneria dei Materiali (AIMAT) 2023, Catania, Italy, *Poster presentation*

Courses

9/04/2024 – 15/05/2024	*Advanced LCA – Consequential and IO-Based Life Cycle Assessment* (5 ECTS), Aalborg University, Aalborg, Denmark. Lecturers: Prof. Jannick Schmidt, Prof. Massimo Pizzol, Assoc. Prof. Søren Løkke, Assist. Prof. Agneta Ghose. Learning outcomes: ○ Consequential Life Cycle Assessment ○ Stochastic LCA ○ Input-Output LCA

24/04/2023 – 28/04/2023	*Spatiotemporal Life Cycle Assessment with Brightway* (2 ECTS), International Life Cycle Academy, Barcelona, Spain. Lecturer: Chris Mutel. Learning outcomes:

- Compare inventory modelling approaches in Brightway
- Select tools from Brightway to create and modify inventory datasets
- Choose and apply temporal distributions to inventory datasets
- Analyse temporally differentiated life cycle inventory results
- Describe approaches to distribute climate change impacts over time
- Calculate temporal life cycle impact assessment of temporal inventory databases
- Summarise approaches for creating region-specific inventory datasets
- Outline calculation approaches regionalised life cycle impact assessment
- Interpret regionalised life cycle impact assessment results

Authorization

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