

PERSONAL INFORMATION

Alessandra Bonoli



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Date of birth 06/07/1961

Nationality Italian

Academic Experience

- 2021- Full Professor in Raw Materials Engineering
She has taught a number of bachelor, master, international master and PHD classes at the University of Bologna and other Italian universities.
Principal among them are "Raw Materials Engineering", "Valorisation of Primary and Secondary resources", "Sustainability in Construction", and "Resources and Recycling" (taught in English)
- from 2002 – 2021 Associate Professor at the Civil, Chemical, Environmental and Materials Engineering Department, School of Engineering and Architecture, University of Bologna
Assistant Professor at the University of Bologna
- from 1990 – to 2002 Research Associate at the University of Bologna
- from 1986 – to 1990 Master's Degree in Mining and Raw Material Engineering with honours from the University of Bologna in 1986 – phd in Raw Materials Engineering

Membership Since 2019 she has been a delegate of the University of Bologna to the United Nations in the Sustainable Development Solutions Network (UN, New York)

Representative member of the University of Bologna at the European Commission within the Operational Groups of the European Innovation Partnership on Raw Materials (EIP Raw Materials) (from 2018 to today).

Member of the experts board supporting the participating process of Bologna Municipality for 2030 Bologna Carbon Neutrality

Resident Fellow (by Rector appointment) for the "Raw Materials" research group of the University of Bologna, Italy
Resident Fellow (by Rector appointment) for the Consortium "CINIGEO", National Consortium for Geo resources and Geo technologies Engineering

Member of the Sustainability UNIBO Team (by Rector appointment) to promote environmental sustainability and the achievement of the Agenda2030 SDGs inside the University of Bologna

Director of the Education Commission at DICAM department

Delegate of the University of Bologna at the Working Group for "School, University and Research for the 2030 Agenda", Ministry of Education, University and Research,

Delegate of the University of Bologna in the Table of Work on Education for the Sustainable Development Goals (UN Agenda 2030 SDGs) and to that of Waste and Resources of the Network of Italian Universities for Sustainable Development (RUS).

Referent of the University of Bologna for the European network WITEC, The European Association for Women in Science, Engineering and Technology (from 2015 to today).

Collaborations with Europe and other European Research and Academic Departments

EU Commission - in the period June 2022-March 2023 she was appointed as expert at the Criticality Working Group of the European Commission for the Criticality assessment of raw materials for the EU-27 - Contract CRM Assessment 2023

United Nations University | Vice-Rectorate in Europe, Sustainable Cycles Programme (SCYCLE) at the United Nations Institute for Training and Research (UNITAR) Office, Bonn, Germany

CITG TU Delft University of Technology, Faculty of Civil Engineering and Geosciences, Delft, Nederland;
DTU, Technical University of Denmark, Department of Management Engineering, University of Copenhagen Denmark;

University of Granada, Spain - Area de Tecnologías del Medio Ambiente, Ingeniería Civil /ETSI Caminos, Canales y Puertos

Technical University of Iasi, "Gheorghe Asachi", Department of Environmental Engineering and Management, Iasi, Romania;

University of Aalborg, Department of Development and Planning Urban Planning and Mobility, Aalborg Denmark;

Collaborations with Italian public and private subjects

Fachhochschule Nordwestschweiz Hochschule für Life Sciences, Institut für Ecopreneurship, Muttenz (CH);
 Technical University of Cataluna, Barcelona, Spain "GIA (Grupo de Ingeniería Ambiental)", "Departamento de Ciencias y Técnicas del Agua y del Medio Ambiente".
 Clean Energy Research Centre, University of British Columbia, Vancouver, BC, Canada
 UNIDO, Vienna.

Emilia Romagna Region,
 Bologna Municipality,
 ARPAE (regional agency for Environment and Energy),
 ENEA (National Energy and Environment Agency),
 HERA s.p.a. (Italian Multiutility for environmental services)
 Several private companies

| Mother tongue(s) | Italian | | | | |
|------------------|--|---------|--------------------|-------------------|---------|
| | UNDERSTANDING | | SPEAKING | | WRITING |
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | C1 | B2 | C1 | C1 |
| | Level C1 Common European Framework of Reference for Languages (CEFR) | | | | |
| French | B1 | B1 | B1 | B1 | B1 |
| | Self evaluation | | | | |
| German | A2 | A2 | A1 | A1 | A2 |
| | Self evaluation | | | | |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Organisational /managerial skills

Founder and coordinator of a research group (about 15 persons) named "Engineering of Transition and Circular Economy" that is developing researches oriented to building a sustainable world, from the point of view of environmental, social and economic, by saving and valorising natural resources: raw materials, water and energy.
 Founder in 2012 the Department Research Center for international COoperation and Development on Engineering, Environment and Emergency (CODE³) to promote and coordinate Environmental Engineering projects for developing Countries.

Main Research themes

Raw Materials Engineering and Circular Economy
 Raw materials and Urban Mining
 Sustainable development, climate change, ecological transition and energy transition. Mitigation and adaptation.
 Sustainable environmental solutions in both the building and waste management fields.
 Innovative studies in integrated waste management and in collection and recycling system.
 Recycling of Construction and Demolition waste in the context of Circular Economy.
 Electrical electronic Equipment waste management and recycling.
 Valorisation of primary and secondary resources, as urban and industrial waste as well as technologies dedicated to the production of raw material and materials from recycling process.
 Life cycle Sustainability assessment, LCA, LCC, ecological footprint, multicriteria analysis
 Researches in urban sustainability and resilience.
 Urban green Technologies as adaptation tool at urban level
 Implementation and application of integrated management systems (in terms of safety, environment quality) to mineral and inert materials processing. Studies on construction and demolition waste recycling and on other waste derived from urban and industrial activities.

- Main International projects**
- Coordination of**
 MedFreeSUP, Climate Kic (2020-2022)
 EU Horizon 2020
 Climate KIC – CLIMATE European Institute for Innovation and Technology
 Acronimo: MEDfreeSUP
 Title: Single-use plastic free systemic local applications along the Mediterranean east coast, path for a common set of protocols through experiments in Italy, Croatia and Greece
- CEI (2018)
 EU Horizon 2020
 Climate KIC – CLIMATE European Institute for Innovation and Technology
 Title: Circular Economy Indicators for plastic value chain in manufacturing
- INSIGHT_BONOLI (2016)
 EU Horizon 2020
 Climate KIC – CLIMATE European Institute for Innovation and Technology
 Acronimo: INSIGHT_BONOLI
 Title: A "new deal" of the University in Informatic Waste Reuse and Recycling
- Partner and responsible of WPs**
 eCircular
 EU Horizon 2020 (2018-2020)
 Climate KIC – CLIMATE European Institute for Innovation and Technology
 Project Flagship 2018
 Title: Circular Economy Indicators for plastic value chain in manufacturing
- EU Horizon 2020 – Societal Challenges - Climate Action, Resources Efficiency and Raw Materials (2017-2020)
 Acronym: ROCK
 Title: Regeneration and Optimisation of Cultral Heritage in creative and Knowledge Cities
- EU Horizon 2020 – CE-BG-06-2019 (2019-2022)
 Acronym: BioPlastic Europe
 Title: Developing and Implementing Sustainability-Based Solutions for Bio-Based Plastic Production and Use to Preserve Land and Sea Environmental Quality in Europe
- INTERREG III/c, Interreg IIIC East. (2005-2008)
 Project name: IUWMM
 Title: Integrated Urban Waste Management Model

Main last year publications (2022-2023)

- Pennellini, Sara; Awere, Eric; Kakavand, Narges; Bonoli, Alessandra, Assessment of secondary wastewater treatment technologies for agricultural reuse in Rafah, Gaza Strip: Application of evidential reasoning method, «CLEANER ENGINEERING AND TECHNOLOGY», 2023, 13, Article number: 100611, pp. 1 - 12
- De Pascale, Beatrice; Tataranni, Piergiorgio; Lantieri, Claudio; Bonoli, Alessandra; Sangiorgi, Cesare, Innovative light-coloured porous asphalt for low-impact pavements: A laboratory investigation, «CONSTRUCTION AND BUILDING MATERIALS», 2023, 368, pp. 130482 - 130489 [articolo]
- Sara Bottausci; Roger Midence; Francisco Serrano-Bernardo; Alessandra Bonoli, Organic Waste Management and Circular Bioeconomy: A Literature Review Comparison between Latin America and the European Union, «SUSTAINABILITY», 2022, 1661, Article number: 1661, pp. 1 - 14
- Obeng, Peter Appiah; Awere, Eric; Quaye, Sharon Amanda; Obeng, Panin Asirifua; Banafo, Kwesi Sane; Pennellini, Sara; Bonoli, Alessandra, A Review of User Vulnerabilities Associated with Shared Sanitation Practices in Sub-Saharan Africa, «INTERNATIONAL JOURNAL OF ENVIRONMENT AND CLIMATE CHANGE», 2022, 12, Article number: IJECC.95188, pp. 977 - 998 [articolo]Open Access
- Degli Esposti A., Magrini C., Bonoli A. Door-to-door waste collection: a framework for the socio - economic evaluation and ergonomics optimisation, Waste Management, WM-22-1673R1, 2022.
- Eric Awere, Alessandra Bonoli, Peter Appiah Obeng, Sara Pennellini, Sara Bottausci, William Kwaasi Amanor and Emmanuel Kekeli Akuaku, Small-Scale Palm Oil Production in Ghana: Practices, Environmental Problems and Potential Mitigating Measures, in: Palm Oil - Current Status and Updates [Working Title], Mihintale, Dr. Viduranga Y. Waisundara, 2022Bottausci S., Midence R., Serrano-Bernardo F., Bonoli A., Organic Waste Management and Circular Bioeconomy: A Literature Review Comparison between Latin America and the European Union. Sustainability 2022, Volume 14, Issue 3, 1661
- Alhjouj, A.; Bonoli, A.; Zamorano, M. A Critical Perspective and Inclusive Analysis of Sustainable Road Infrastructure Literature. Appl. Sci. 2022, 12, 12996. <https://doi.org/10.3390/app122412996>
- Zanni, S, Roccaro, M, Bocedi, F, Peli, A, Bonoli, A (2022). LCA to Estimate the Environmental Impact of Dairy Farms: A Case Study. SUSTAINABILITY, vol. 14, p. 1-15, ISSN: 2071-1050, doi: 10.3390/su141106028
- Liserra, Tonino, Bonoli, Alessandra, Di Federico, Vittorio (2022). Direct Simulation of Micro-Component Water Consumption for the Evaluation of Potential Water Reuse in Households. Environmental Sciences Proceedings, vol. 21, p. 43-50, ISSN: 2673-4931, doi: 10.3390/environsciproc2022021043
- Magrini C., Dal Pozzo A., Bonoli A. Assessing the externalities of a waste management system via life cycle costing: The case study of the Emilia-Romagna Region (Italy). Waste Management, Volume 138, 1 February 2022, Pages 285-297.3.

Bologna, 18/06/2023