

Curriculum Vitae of David Bolzonella

Personal data

Name and surname

David Bolzonella

Birth

Venice, Italy, 18th April 1972

Family

Married, 2 sons

1. Education

Degree cum laude in Environmental Sciences, University Ca Foscari of Venice (1997)

Post lauream Master in Environmental Chemical Engineering, University of Padova (2000)

PhD in Agro-Industrial Biotechnology, XV cycle, University of Verona, (2003)

2. Academic activity

2.1 Role

Assistant Professor in Chemical Engineering Plants (ING-IND/25) at the University of Verona since 01/01/2005

Associate Professor in Chemical Engineering Plants (ING-IND/25) at the University of Verona since 01/09/2014

Full Professor in Chemical Engineering Plants (ING-IND/25) at the University of Verona since 01/11/2018

2.2 Teaching

David Bolzonella is teaching or has taught the following courses at the University of Verona:

Lab of Biochemical Engineering (2 CFU) for the degree in Agro-Industrial Biotechnology (2004-2005)

Biochemical Engineering (4 CFU) + Lab of Biochemical Engineering (2 CFU) for the degree in Agro-Industrial Biotechnology (2005-2006)

Bioreactors (4 CFU) + Lab of Bioreactors (1 CFU) for the Master degree in Industrial and Molecular Biotechnology (2005-2006, 2006-2007, 2007-2008)

Industrial Bioprocess Engineering (4 CFU) for the Master degree in Industrial and Molecular Biotechnology (2005-2006, 2006-2007, 2007-2008)

Winery Engineering (6 CFU) and Winery Waste and Wastewater Treatment (3 CFU) for the degree in Science and Technology of Viticulture and Oenology (since 2009)

Fundamentals of Biochemical Engineering (5 CFU) + Lab (1 CFU) for the bachelor degree in Biotechnology (since 2016)

Biotechnology for Bioeconomy for the bachelor degree in Biotechnology (2021-2022)

Environmental Sustainability – modulo Winery waste and Wastewater Treatment per il Corso di Laurea Magistrale in New frontiers for Viticulture (LM69, dal 2021 ad oggi)

Biorefineries (6 CFU) for the master degree in Industrial Biotechnology (since 2019)

2.2 Post-lauream and PhD teaching activity

Course in “Analysis of waste and wastewater” for the Master in Environmental Chemical Engineering for Wastewater Treatment for the Universities of Verona, Padova, Cà Foscari-Venezia, Trieste, Udine, Bologna and Ancona (2004 – 2010).

Course in “Wastewater Treatment” for the Master in “Methods and Techniques for Environmental Management” organised by the Environmental Protection Agency of the Veneto Region (ARPAV)

David Bolzonella is member of the board of Professors of the PhD in Biotechnology of the University of Verona.

2.2 Over-seas academic activity

David Bolzonella has been “visiting professor” at

University of California Irvine – UCI (USA), Department of Civil and Environmental Engineering in 2008 (Fall term)

University of Southampton (UK), School of Engineering & the Environment, 2012-2014.

And has taught in the following Universities

University of California Irvine (USA),
Universidade de Joinville - Santa Catarina (Brasil),
Università di Barcellona (Spagna),
University of Southampton (UK),
University of Bath - Plumpton College (UK),
Jyväskylä University (FIN).

2.3 Academic duties (commissions)

Representative of the Assistant Professors of the School of Science in the Academic Senate in 2006-2007

Member of the Commission for Teaching for the School of Science in 2006-2007

Member for the School of Science of the Commission for Cultural, Rcreative and Sport activities” from 2006 to 2009

Elected representative of Associate Professors in the Board of the Department of Biotechnology since 2015

Member of the Teaching boards of the courses in Biotechnology and Viticulture and Oenology of the Department of Biotechnology and member of the Scientific Committee of the Master in Technologies for Efficiency in Energy Management, Department of Computer Science

Member of the Commission for Quality and Third Mission of the Department of Biotechnology since 2017

Member of the Commission for Sustainability, Energy Saving and Environmental Education of the University of Verona since 2017

Representative of the Macro-Area of Science and Engineering of the Board for Quality 2017-2018

Representative of the Macro-Area of Science and Engineering of the Board of Directors since November 1st 2018

3. Research activity

3.1 Research interests

The research activity of Prof David Bolzonella focuses on the following areas:

- Bioprocess Engineering for the recovery of biogas (renewable energy) from urban/industrial/agricultural organic waste/residues/by-products via anaerobic processes for the production of methane and hydrogen
- Bioprocess Engineering for the recovery of nutrients and other bio-based products (e.g., volatile fatty acids, VFA, and poly-hydroxy-alkanoates, PHA) from organic waste/residues
- Municipal Organic Waste Management for Energy and Material Recovery
- Advanced treatment of wastewater sludge
- Treatment of livestock effluents and food/agro-industrial by-products for the recovery of bioenergy, nutrients and bio-based products
- Advanced biological treatments of civil/industrial wastewater

3.2 Research projects

Principal Investigator in the following projects

- 2009 FP7 2007-2013 "Valorisation of food waste as a feedstock for second generation biofuels" – VALORGAS [ENERGY.2009.1]
- 2010 LIFE+2010 ENVIRONMENT "Integrated Solid Waste Management in Tinos, ISWM-Tinos" (LIFE10 ENV/GR/000610).
- 2010 FP7 2007-2013 "Innovative system solutions for municipal sludge treatment and management- ROUTES" [ENV.2010.3.1.1-2], Contract No 265156
- 2012 "Anaerobic digestion of Organic Waste" Industria 2015, Ministry of Economic Development
- 2012 Intelligence Energy Europe (IEE) 2012. "GRass as a GReen Gas Resource: Energy from landscapes by promoting the use of grass residues as a renewable energy resource (GR3)", IEE/12/046/SI2.645700
- 2014 Progetto BIOFITO – Veneto Agricoltura – Regione Veneto
- 2016 Horizon 2020 WASTE 7-2015 "Innovative approaches to turn agricultural waste into ecological and economic assets" – NOAW [688388]
- 2016 Joint Project Università di Verona "Application of enzymes in anaerobic digestion of agro-waste". A public-private partnership.
- 2016 Horizon 2020 Water-1-b-2015 "Development and application of Novel, Integrated Tools for monitoring and managing Catchments" (IntCatch) (Project id: 689341)
- 2017 Horizon 2020 CIRC-05-2016 "RESources from URban Bio-waSte" RES URBIS
- 2017 ERANET MED "Biogas in Mediterranean and Near Asian Countries", BIOGASMENA
- 2018 RIR Veneto Green Cluster SAAR
- 2019 Life Environment CIRCforBIO "A circular economy system for multi-source biomass conversion to added value products" [CCM/GR/001180]
- 2020 RIR Veneto Green Cluster Eco-DPI "ECODESIGN E RICICLO DI DPI IN UNA FILIERA INDUSTRIALE CIRCOLARE"
- 2022 Horizon Europe AgriLoop [GA 101081776] "Pushing the frontier of circular agriculture

- by converting residues into novel economic, social and environmental opportunities.”
- 2022 BEIS Hydrogen BECCS Innovation Programme, Scotland, UK
- 2023 Horizon Europe Ellipse GAP-101112581

Participated in the research team of the following National/International research projects

- 2000 PRIN 1999 MIUR “Trattamenti di depurazione di correnti liquide ed aeriformi per la rimozione di inquinanti ad alta nocività (“priority pollutants”), con particolare riferimento ai problemi di recupero ambientale dell’area di Venezia”.
- 2004 PRIN 2003 MIUR “Sistemi avanzati per il trattamento delle acque reflue”.
- 2004 Fondazione Cariverona 2003 “Riduzione della produzione di fanghi di supero e recupero energetico negli impianti di depurazione di acque reflue mediante processi avanzati di digestione anaerobica”.
- 2005 EU 6 FP Renewable energy from Crops and Agrowastes CROPGEN [SES6-CT-2004-502824].
- 2006 PRIN 2005 MIUR “Sistemi avanzati per il trattamento delle acque reflue”.
- 2009 Fondazione Cariverona 2009 "BIOMASSE DI OGGI E DI DOMANI: dai reflui zootecnici e dalle microalghe un contributo all’agricoltura sostenibile e all’energia rinnovabile
- 2012 Joint Project Università di Verona-AGSM Verona Spa- AMIA Verona – Acque Veronesi "Digestione anaerobica di rifiuti organici e fanghi di depurazione".
- 2012 Industria 2015 – Ministero dello Sviluppo Economico “Recupero di energia da rifiuti organici”
- 2012 LIFE+2012 ENVIRONMENTAL POLICY AND GOVERNANCE “Sustainable management of livestock waste for the removal/recovery of nutrients” (LIFE-LIVESTOCK) (LIFE10 ENV/CY/00544).
- 2014 Horizon 2020-EE-2014-3-MarketUptake “Standard method and online tool for assessing and improving the energy efficiency of wastewater treatment plants” (ENERWATER) (Project id: 649819)
- 2016 Horizon 2020 Water-1-b-2015 “Scale-up of low-carbon footprint material recovery techniques in existing wastewater treatment plants” (SMART-Plant) (Project id: 690323)

3.3 Activity of reviewer for Scientific Boards and International level

BARD, the United States - Israel Binational Agricultural Research & Development Fund

National Commission for Scientific and Technological Development (CONICYT) and the Superior Council of the National Fund for Scientific & Technological Development (FONDECYT)

Swiss National Science Foundation (SNSF)

Science Foundation Ireland (SFI)

Commissione Europea, programma Horizon 2020

Ministero Romeno per l’Università e la Ricerca

Ministero per l’Istruzione, l’Università e la Ricerca (MIUR)

3.4 Editor, guest editor for Special issues

Editorial member for the journals
Environmental Technology & Innovation, Elsevier
Waste and Biomass Valorisation, Springer

Special Issue Guest Editor for the journals
Journal of Environmental Management, Elsevier (2019)
Energies, MDPI (2020)
Science of the Total Environment, Elsevier (2020)
Chemosphere, Elsevier (2021)

4. Third mission and Public engagement

David Bolzonella operates as a consultant for Several Companies, Agencies and Territorial Offices through the Department of Biotechnology of the University of Verona.
The global amount of funds from these activities sum up to over 2 million euros in the last ten years.

Moreover, David Bolzonella is:

Member of the Scientific committee of the Italian Biogas Consortium (BIC) since 2015

Member of the technical working group defining the guidelines for biomethanisation trials for the Thermo-technical Italian Committee (CTI).

Member of the Scientific Committee of the Italian Cluster for Green Chemistry (SPRING)

5. Publications

David Bolzonella authored more than 150 papers in indexed journals, cited more than 6000 times, for a *h index* of 55 and is part of the “Top Italian Scientists” category “Engineering” (www.topitalianscientists.org).

He authored and co-authored more than 10 books and chapters of books.

He has given more than 300 speeches at national and international congresses, and in more than 20 occasions he was invited speaker.

Verona, January 2023

Signed

