



Giulia Luisa Eleonora Bozzano

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EDUCATION

1991: master chemical engineering degree at Politecnico di Milano

1994: PhD in chemical engineering

AWARDS

1989, 1990: 2 INPDAl awards for student performances

1991, ENICHEM Award

1991, AVIR Award for the Thesis Activity

1993, Award for the best project at the "Chemical and Process Engineering" congress;

PROFESSIONAL EXPERIENCES

1991-98 Phd student and independent contractor

1998 nominated "cultrice della materia" for Chemical Engineering Principle course

1998-00 "Assegnista di Ricerca" at Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering

2000 Researcher, SSD ING-IND24, at Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering

2005-today: Associate Professor, SSD ING-IND24, at Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering

June 2018 – today: secretary of CAPE Working Party

TEACHING ACTIVITY

1991-2003: Assistant Professor, Chemical Engineering Principles, Politecnico di Milano

1995-1996: Seminars, Chemical Plants, Politecnico di Milano

2003-2004: Assistant Professor, Introduction to the Chemical Engineering, Politecnico di Milano

2003-2004: Coordinator and professor of "Physics and Technical Physics Elements" for the Lombard Inter-university School for Secondary schools teaching specialization

2001-2002: Adjunct Professor, Chemical Engineering Principles, BSc at Politecnico di Milano

2002-2003: Adjunct Professor, Chemical Engineering Principles 2, Politecnico di Milano

2003-2004: Professor, Chemical Engineering Principles 2, Politecnico di Milano

2004: Professor, PhD School of Chemical Engineering, Chemical Reactor Modeling, Ischia 16-18 Settembre 2004

2005 – Today: Professor, Chemical Engineering Principles, Politecnico di Milano

RESEARCH ACTIVITY

- **113** publications, congress communications, book contributions
- **2 patents** (1 italian patent – 1 us patent)

The research activity associated to the contracts with industry and to the PRIN projects allowed the candidate to face with a wide variety of problems related to transport phenomena, reactor and kinetic modeling. The obtained results have been always original and, when allowed by confidentiality restrictions, they have been disclosed in publications.

The recent last 4 projects with public and private organizations:

- COWBOY, Fondazione CARIPLO, 0.5 M€ (Coordinator)
- BioMAN, Fondazione CARIPLO, 0.5 M€ (WP leader)
- BIOREFILL, Regione Lombardia e Fondazione CARIPLO, 1.8 M€ (Tasks leader)
- CITY WISE NET, Regione Lombardia, 4 M€ (Tasks leader)

Additionally, Giulia Bozzano has a long and consolidated industrial attitude and leadership in industrial projects with private funding (since 1991); the more recent are hereafter reported:

- (2017) PSE – Pressure Swing Europe – 47500 €
- (2011) ENI SpA, TAR sands, study and development of a new process for the heavy oil extraction, 0.4M€
- (2012) Icap Sira Chemicals & Polymers SpA, Emulsion and solvent polymerization modeling, 0.12M€
- (2011) ENI SpA, Visbreaking and thermal cracking modeling, 0.1M€

The research activity has been devoted to the following arguments:

- Study of complex radical reaction mechanism in gas and liquid phase
- Detailed Modeling of Visbreaking and Delayed Coking processes
- Stability of petroleum residues and their derivatives toward asphaltthenes precipitation
- Characterization of complex hydrocarbon mixtures in terms of components and properties
- Modeling of non conventional equipment and reactors (vacuum spray dryer for soap drying, reactors for glass production, random and structured packing columns, liquid film evaporators, sea water desalting plants)
- Two-phase motion modeling in coils and equipment
- Dissolution and nucleation of pure oxygen inside a coil
- Velocity and stress distribution inside a water-starch mixture exiting from a nozzle
- Modeling of liquid-liquid extraction columns
- Modeling of urea reactor
- Drop Coalescence modeling

PRIN (national funding) projects:

1997 – 2000: pyrolysis and combustion processes modeling (Tasks leader)

1999 – 2001: Kinetic and fluid-dynamic modeling of innovative combustion processes (Tasks leader)

2001- 2003: Detailed kinetic modeling of combustion processes (Tasks leader)

2003-2005: Detailed kinetics of poly-aromatic hydrocarbons, carbon nanoparticles and cenospheres. Experimental evaluation of the behaviour of "mild" combustion (Tasks leader).

2004-2006: Kinetic mechanisms of the thermal degradation of plastics and halogenated additives (Tasks leader)

2010-2012: Detailed kinetics of poly-aromatic hydrocarbons and nanoparticles formation in combustion processes. Particulate characterization with advanced molecular spectroscopy techniques and molecular dynamics (Tasks leader)

2013-2016: Innovative processes for algal biomasses conversion aimed at jet fuel and green diesel production (Tasks leader)

Activities on behalf of the Department and the University

1994-1995: representative of PHD students in the Chemistry, Materials, Chemical Engineering Department Advice of Politecnico di Milano

2001-2002: Member of the external relations committee of the Chemistry, Materials, Chemical Engineering Department of Politecnico di Milano

2002 Member of the administration advice of the Chemistry, Materials, Chemical Engineering Department of Politecnico di Milano

2002 – today: member of the advice for Chemical Engineering studies

2008 – today: member of the advice of the doctoral professors of Chemical Engineering Doctorate at Politecnico di Milano

Reviewer activity

Reviewer of several scientific journals. Some of them are:

- Chemical Engineering Science
- Computers & Chemical Engineering
- Industrial and Engineering Chemistry Research
- Journal of Applied Physics
- Journal of Molecular liquids
- Chemical Engineering Communication
- Chemical Engineering Journal
- Canadian Journal of Chemical Engineering

MEMBER OF THE SCIENTIFIC AND ORGANIZING COMMITTEE OF THE FOLLOWING INTERNATIONAL CONGRESSES:

- iconbm2014 (www.aidic.it/iconbm)
- icheap10 (www.aidic.it/icheap10)
- icheap11 (www.aidic.it/icheap11)
- icheap12 (www.aidic.it/icheap12)
- iconbm2016 (www.aidic.it/iconbm2016)
- ESCAPE30 (www.aidic.it/escape30)

AFFILIATIONS

- Member of the Sustainable Process Engineering Research (SuPER) Team (<http://super.chem.polimi.it>)
- Member of the GAIA (Group for food and food engineering)
- Member of AIDIC (Italian Association of Chemical Engineering)