LUCIO ZACCARIELLO - CURRICULUM VITAE

Lucio Zaccariello was born in Naples (Italy), on May 30th, 1976. Since 2010, He is Assistant Professor of Chemical Plants at the Department of Environmental, Biological and Pharmaceutical Sciences and Technologies of the Second University of Naples.

He obtained his Degree in Environmental Science in the Academic Year 2003-2004, and his Ph.D. in Chemical Engineering (Chemical Plants) in the Academic Year 2009-2010, both at the Second University of Naples. In particular, the title of his Degree Thesis is: "Fluid-Particle Interaction Phenomena in Fluidized Bed Reactors", while the title of his Ph.D. Thesis is: "Cleaning Methods of the Syngas Obtained from Fluidized Bed Gasification of Solid Wastes".

Since 2014, He is Scientific Advisor of the Chemical and Biochemical Plants Laboratory at the Second University of Naples.

His research activity was mainly focused on the study of technical aspects related to the use of fluidized bed reactors in thermochemical conversion processes. He investigated the features related to the performance obtainable from bubbling fluidized bed gasifiers, pyrolyzers and combustors operated with different kind of materials (plastics, municipal and industrial wastes, biomass, etc.). In particular, he studied the aspects concerning the reactor and the producer gas cleaning section design, and the aspect related the energy production from gasification of biomass and waste.

He is author of more than 20 scientific papers. He obtained the "Best Paper Award" for the paper entitled "Co-Gasification of Coals, Waste and Biomass in a Fluidized Bed Reactor", presented at the 2th International Multi-Conference on Engineering and Technological Innovation (Orlando, USA, July 10-13, 2009), and for the paper entitled "The crucial role of the process modelling during the design of a bubbling fluidised bed gasifier of plastics" presented at the "The World Congress on Engineering and Computer Science 2014 (San Francisco, USA, October 22-24, 2014)".

He was member of the Organizing Committee of the 21st International Conference on Fluidized Bed Combustion (Naples, Italy, June 3-6, 2012).

He is Reviewer for several international Journals among the most important in the field of Chemical Engineering.

His scientific activities have been carried out in cooperation with several Institution and Companies, such as: Institute for Water Quality, Resources and Waste Management - Vienna University of Technology, Germany; Institute of Process Engineering and Power plant Technology IVD - University of Stuttgart, Germany; Department of Chemical Engineering - University of Naples "Federico II", Italy; Department of Chemistry, Materials, and Chemical Engineering - Polytechnic University of Milan, Italy; Institute for Research on Combustion - National Research Council (CNR), Naples, Italy; National Packaging Consortium (CONAI), Italy; Ansaldo Energia, Italy; EcoEngineering Impianti,

Italy; Amadori, Italy; AMRA (Center of Competence in the field of Analysis and Monitoring of Environmental Risk), Italy; Dalma Mangimi, Italy; Italplasma (Westinghouse), Italy; E-Vento Acqua, Italy; CSM, Italy.

He is member of the research group operating in Environmental Risk Assessment and signed contracts for monitoring and assessing the risk in regional industrial areas.

He signed as an expert consultant the official design of industrial plants as:

- Anaerobic digestor of Santa Maria Capua Vetere (40.000t/y);
- Material and Energy (through gasification process) Recovery Facility from Municipal Solid Waste of Caserta (30.000t/y);
- Biomass bubbling fluidized bed gasifier of Castiglione dei Pepoli (6.400t/y).

He was also included in the designing staff of the pre-pilot scale Bubbling Fluidized Bed Reactors of Second University of Naples and in the designing staff of the pilot scale Gasifier of the Center of Regional Competence AMRA - Analysis and Monitoring of Environmental Risk. He was from 2006 to 2012 the Chief Executive of the afore-mentioned plants. Since 2012 He is the Technical Director of the industrial scale biomass gasifier of Castiglione BioEnergie Srl. The Combined Heat and Power plant has a thermal output of 1.8MW and an electric output of 1MW.

His teaching activity started in the Academic Year 2008-2009, and consists in about 10 Courses destined to undergraduate students. Since 2013, He is a member of Scientific Committee of the doctorate course in “Environment, Design and Innovation” of Second University of Naples. He teaches in the Ph.D. Course of the doctorate above-mentioned. He was supervisor of several Degree Theses in Biotechnology and Environmental Sciences and Technology.