

Valentina Biagioni

Curriculum vitae et studiorum

Education

- 11/2019-in course **PhD Student in Chemical Processes for Industry and Environment.**
Sapienza Università di Roma
Research Topics: "Transport of diluted suspensions in laminar flows with an application to size-based separation of biological samples in microfluidic and Lab-On-a-Chip devices".
- 02/2020 **Licensed Industrial Engineer**
- 12/2016-05/2019 **Master Degree Process Chemical Engineering**
Sapienza Università di Roma
Major: Civil and Industrial Engineering
Final Grade: 110/110
Thesis: Three-dimensional effects sized-based on separation mesoscopic particles in Deterministic Lateral Displacement microfluidic devices.
Relevant Courses: Mathematical Methods for engineering, Chemical Reactors, Advanced Thermodynamics, Wastewater Treatment Processes, Applied Process Design, Theory of Research and development in Chemical Processes.
- 10/2013-12/2016 **Bachelor Degree Process Chemical Engineering**
Sapienza Università di Roma
Major: Civil and Industrial Engineering
Thesis: "Ispezione basata sul rischio di giunti saldati."
- 09/2008-06/2013 **Liceo Scientifico G. Chelli- Grosseto(GR), Italy**
Diploma

Training Experiences

- 04/2018-05/2018 APS Spa Internship: Development of Design basis, Process Flow Diagram, Datasheet and P&ID of a Naphtha Stabilization Unit.
- 06/2012 INFN-LNF Summer Internship: Quantum mechanics, theoretical and experimental activity.

Languages: Italian(Native speaker), English(B2).

IT skills: Matlab, Gnuplot, Fortran 90, LaTeX.

Computer Software: COMSOL Multiphysics, PRO/II, Microsoft Office Suite.

Co-Advisor Masther thesis

Valutazione di un numero di Sherwood modificato per la modellizzazione di reattori a membrana: applicazione al caso del reforming del metano. Rocchetti Chiara (AA 2019-2020)

Co-Advisor Bachelor thesis

Ottimizzazione della geometria di un micro-canale per la separazione in base alla dimensione di particelle e colloidii micrometrici. Carboni Valerio (AA 2019-2020)

Publications

- 09/2020 *Biagioni, V.; Balestrieri, G.; Adrover, A.; Cerbelli, S.* Combining Electrostatic, Hindrance and Diffusive Effects for Predicting Particle Transport and Separation Efficiency in Deterministic Lateral Displacement Microfluidic Devices. *Biosensors* 2020, 10, 126.
- 08/2019 *Valentina Biagioni, Alessandra Adrover, Stefano Cerbelli.* On the Three-Dimensional Structure of the Flow through Deterministic Lateral Displacement Devices and Its Effects on Particle Separation. *Processes*, MDPI.
- 05/2019 *Maria Anna Murrura, Valentina Biagioni, Stefano Cerbelli.* Numbering-up Strategies for Microfluidics-Assisted Water Treatment Processes: Deterministic Lateral Displacement for the Removal of Bacteria and Parasites as a Case Study. *Chemical Engineering Transactions* 73:199, May 2019.

Roma, 26 February 2020