

ROSSELLA GIRIMONTE



CAREER

- I. From Jan 31, 2000 **Assistant Professor**
- II. Post-doctoral Research Scientist
UNICAL-DICEM (Rende, Italy),
02/1999-11/1999
- III. Post-graduate Research Scientist
UNICAL-DICEM (Rende, Italy),
06/1998-09/1998
- IV. Post-graduate Research Scientist
UNICAL-DICEM (Rende, Italy),
06/1995-12/1995

PERSONAL DETAILS

ASSISTANT PROFESSOR, Ph. D
Of Chemical Plants
(ING/IND25 – Impianti Chimici)
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Engineering - DIMES
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RESEARCH ACTIVITIES

Her research activities are focussed on fluidized bed systems, particularly on:

- I. Dynamics and properties of high-temperature fluidized beds
- II. Fluidization properties of multi-solid fluidized mixtures
- III. Static and Fluidization properties of cohesive solids
- IV. Dynamics and applications of confined-fluidized bed contactors

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RESPONSIBILITIES

From 2019: member of the Chemical Engineering Bachelor's Degree Council (DIMES, UNICAL) and member of the Commission of Teaching and Student Career Monitoring.

TEACHING ACTIVITIES

- I. **From 2019 Chair of Unit Operations**
https://www.unical.it/portale/portaltemplates/view/view_scheda_insegnamento.cfm?54626&LANG=ITA&54626&LANG=ITA
- II. **From 2018 Assistant teacher of Chemical Plants Design**
- III. https://www.unical.it/portale/portaltemplates/view/view_scheda_insegnamento.cfm?72594&LANG=ITA&72594&LANG=ITA
- IV. **From 2019 Assistant teacher of laboratory of Unit Operations for Particulate Solids**
https://www.unical.it/portale/portaltemplates/view/view_scheda_insegnamento.cfm?72594&LANG=ITA&72594&LANG=ITA

Office Hours for Students
Friday morning cubo 44A, ground floor

PUBLICATIONS

- 1) Girimonte, R., Formisani, B., Testa, F. CO₂ adsorption in a confined fluidized bed of zeolite pellets: Influence of operating velocity (2019) *Particuology*, 46, pp. 67-74.
- 2) Girimonte, R., Formisani, B., Vivacqua, V. Application of the theory of binary fluidization to solids of irregular shape: Choosing the granulometry of sand in processes for energy production from wastes of the olive oil industry (2019) *Powder Technology*, 345, pp. 563-570.
- 3) Girimonte, R., Formisani, B., Vivacqua, V. The concentration profile of two-solid beds after slow defluidization: Model and experiment (2019) *Chemical Engineering Journal*, 359, pp. 1006-1012.
- 4) Girimonte, R., Formisani, B., Vivacqua, V. The relationship between fluidization velocity and segregation in two-component gas fluidized beds: Density- or size-segregating mixtures (2018) *Chemical Engineering Journal*, 335, pp. 63-73.
- 5) Girimonte, R., Bernardo, P., Minnicelli, A., Formisani, B. Experimental characterization of the cohesive behaviour of fine powders by the raining bed test (2018) *Powder Technology*, 325, pp. 373-380.
- 6) Naghib, S.D., Pandolfi, V., Pereira, U., Girimonte, R., Curcio, E., Di Maio, F.P., Legallais, C., Di Renzo, A. Expansion properties of alginate beads as cell carrier in the fluidized bed bioartificial liver (2017) *Powder Technology*, 316, pp. 711-717.
- 7) Girimonte, R., Formisani, B., Testa, F. Adsorption of CO₂ on a confined fluidized bed of pelletized 13X zeolite (2017) *Powder Technology*, 311, pp. 9-17.
- 8) Girimonte, R., Formisani, B., Testa, F. Adsorption of CO₂ in a confined fluidized bed of a pelletized 13X zeolite: Fluidization velocity and process performance (2017) 12th International Conference on Fluidized Bed Technology, CFB 2017, pp. 491-497.
- 9) Formisani, B., Girimonte, R., Vivacqua, V. Determination of the tensile strength of a particulate solid by the raining bed method (2017) 12th International Conference on Fluidized Bed Technology, CFB 2017, pp. 639-645.
- 10) Girimonte, R., Vivacqua, V., Formisani, B. Extension of the model of binary fluidization to beds confined in a packing of coarse spheres (2016) *Powder Technology*, 297, pp. 275-282.
- 11) Zafar, U., Hare, C., Calvert, G., Ghadiri, M., Girimonte, R., Formisani, B., Quintanilla, M.A.S., Valverde, J.M. Comparison of cohesive powder flowability measured by Schulze Shear Cell, Raining Bed Method, Sevilla Powder Tester and new Ball Indentation Method (2015) *Powder Technology*, 286, pp. 807-816.
- 12) Di Renzo, A., Di Maio, F.P., Girimonte, R., Vivacqua, V. Segregation direction reversal of gas-fluidized biomass/inert mixtures - Experiments based on Particle Segregation Model predictions (2015) *Chemical Engineering Journal*, 262, pp. 727-736.
- 13) Girimonte, R., Formisani, B. Effects of operating temperature on the bubble phase properties in fluidized beds of FCC particles (2014) *Powder Technology*, 262, pp. 14-21.
- 14) Formisani, B., Girimonte, R., Vivacqua, V. The interaction between mixture components in the mechanism of binary fluidization (2014) *Powder Technology*, 266, pp. 228-235.
- 15) Girimonte, R., Vivacqua, V. Design criteria for homogeneous fluidization of Geldart's class b solids upward through a packed bed (2013) *Powder Technology*, 249, pp. 316-322.
- 16) Formisani, B., Girimonte, R., Vivacqua, V. Fluidization of mixtures of two solids: A unified model of the transition to the fluidized state (2013) *AIChE Journal*, 59 (3), pp. 729-735.
- 17) Formisani, B., Girimonte, R., Vivacqua, V. Extended validation of a model of segregating fluidization of homogeneous two-solid beds (2012) *International Journal of Chemical Reactor Engineering*, 10 (1), art. no. A41.
- 18) Girimonte, R., Vivacqua, V. The expansion process of particle beds fluidized in the voids of a packing of coarse spheres (2011) *Powder Technology*, 213 (1), pp. 63-69.
- 19) Formisani, B., Girimonte, R., Vivacqua, V. Fluidization of mixtures of two solids differing in density or size (2011) *AIChE Journal*, 57 (9), pp. 2325-2333.
- 20) Girimonte, R., Formisani, B. The minimum bubbling velocity of fluidized beds operating at high temperature (2009) *Powder Technology*, 189 (1), pp. 74-81.
- 21) Formisani, B., Girimonte, R., Longo, T. The fluidization process of binary mixtures of solids: Development of the approach based on the fluidization velocity interval (2008) *Powder Technology*, 185 (2), pp. 97-108.
- 22) Di Renzo, A., Di Maio, F.P., Girimonte, R., Formisani, B. DEM simulation of the mixing equilibrium in fluidized beds of two solids differing in density (2008) *Powder Technology*, 184 (2), pp. 214-223.
- 23) Formisani, B., Girimonte, R., Longo, T. The fluidization pattern of density-segregating binary mixtures (2008) *Chemical Engineering Research and Design*, 86 (4), pp. 344-348.

- 24) Girimonte, R., Formisani, B. The onset of bubbling in high temperature fluidized beds (2006) AIChE Annual Meeting, Conference Proceedings, 6 p.
- 25) Formisani, B., Girimonte, R., Longo, T. The fluidization pattern of density segregating binary mixtures (2006) AIChE Annual Meeting, Conference Proceedings, 6 p.
- 26) Formisani, B., Girimonte, R. Experimental analysis of the fluidization process of binary mixtures of solids (2003) KONA Powder and Particle Journal, 21 (March), pp. 66-75.
- 27) Formisani, B., Girimonte, R., Pataro, G. The influence of operating temperature on the dense phase properties of bubbling fluidized beds of solids (2002) Powder Technology, 125 (1), pp. 28-38.
- 28) Formisani, B., Cristofaro, G.D., Girimonte, R. A fundamental approach to the phenomenology of fluidization of size segregating binary mixtures of solids (2001) Chemical Engineering Science, 56 (1), pp. 109-119.
- 29) Formisani, B., Girimonte, R., Mancuso, L. Analysis of the fluidization process of particle beds at high temperature (1998) Chemical Engineering Science, 53 (5), pp. 951-961.

(LINK ON THE ON LINE PLATFORM "IRIS")

<https://iris.unical.it/simple-search?query=girimonte#.XoikQNZbIU>