

1. Name and Academic Ranking

Nicolas Rios Ratkovich
Assistant Professor

2. Education

Doctor in Applied Biological Sciences. Ghent University. Belgium. (2010).
M. Sc Sustainable Energy Systems. Mälardalen University. Sweden. (2006).
M. Sc Process Engineering specialty in Project Management for Environmental and Energy. Ecole des Mines de Nantes. France. (2004).
Chemical Engineering. Universidad de los Andes. (2002).
Mechanical Engineering. Universidad de los Andes. (2002).

3. Academic Experience

Assistant Professor 2013- Present. Full Time

4. Certifications or professional registrations

Colombia, Professional Card # 16363

5. Current membership in professional organizations

AIChE, American institute of Chemical Engineers, Member 2013 - Present
The Society of Petroleum Engineers
Chemical Engineering Professional Council – Member

6. Service Activities

National or International Panels and committees:

Chemical Engineering, Universidad de los Andes, Research Group Committee -GDPP (Grupo de Diseño de Productos y Procesos). Member 20013 – Present
Chemical Engineering, Universidad de los Andes, Strategic Planning Committee, 2013 – Present

7. Main Publications - Last Five Years

Lopez J, Pineda H, Bello D. H., Rios N. (2016) Study of liquid–gas two-phase flow in horizontal pipes using high speed filming and computational fluid dynamics. *Experimental Thermal and Fluid Science* (ISSN 0894-1777) 76 (1), pp. 126-134.

Pinilla J, Asuaje M, Rios N. (2015) Study of a fogging system using a computational fluid dynamics simulation. *Applied Thermal Engineering* (ISSN 1359-4311) 96 (N/A), pp. 228-239.

Pineda H, Biazussi J, Oliviera B, Carvalho R, Bannwart A, Rios N. (2015) Phase distribution analysis in an Electrical Submersible Pump (ESP) inlet handling water–air two-phase flow using Computational Fluid Dynamics (CFD). *Journal of Petroleum Science and Engineering* (ISSN 0920-4105) 139 (N/A), pp. 49-61.

Rios N, Horn W, Helmus F, Rosenberger S, Naessens W, Nopes I, Bentzen T. (2013) Activated sludge rheology: A critical review on data collection and modelling. *Water Research* (ISSN 0043-1354) 47 (N/A), pp. 463-482.

Rios N, Majumder S, Bentzen T. (2013) Empirical correlations and CFD simulations of vertical two-phase gas–liquid (Newtonian and non-Newtonian) slug flow compared against

experimental data of void fraction. *Chemical Engineering Research and Design* (ISSN 0263-8762) 91 (N/A), pp. 988-998.

Rios N, Bentzen T. (2013) Comparison of four types of membrane bioreactor systems in terms of shear stress over the membrane surface using computational fluid dynamics. *Water Science and Technology* (ISSN 0273-1223) 68 (N/A), pp. 2534-2544.

8. Professional Development Activities

Thermal Systems Operation and Design Cours of Cranfield University, United Kingdom, 2016