

Oscar Homero Díaz-Ibarra

Dept. / Major: *University of Utah, Chemical Engineering*

Field of Study: *Coal Combustions/ CFD*

Year in School: *3.0*

Degree Being Pursued: *Chemical Engineering Ph.D.*

Date Expected: *2016*

Academic Advisor: *Jennifer Spinti, Research professor*

Email: ohdiaz@chemeng.utah.edu

Degree(s) held: *Mechanical Engineering, Materials and Processes Engineering*

Field(s) of Interest: *Coal Combustion, CFD, Simulation and Modeling of Reactive Flows*

Planned Years in the PSAAP II Program: *2.5*

Year in the PSAAP II Program: *1.5*

Description of Your Work/Project Within PSAAP II:

I am working on computer simulations of the L1500 pulverized-coal test furnace, which is a pilot-scale reactor that has been used in studies of coal combustion, and is located in the Industrial Combustion and Gasification Research Facility at the University of Utah. In this simulation effort, I will use the research code Arches, which is a finite-volume large eddy simulation code built within the Uintah framework.

I am working in a VUQ analysis of a char oxidation model.

NNSA Laboratory Visit Information: *TBD*

Selected Publications:

O. H. Díaz, P. Abad, A. Molina, "Design of a day tank glass furnace using a transient model and computation fluid dynamics", Applied Thermal Engineering, volume 52, issue 2, pages 555-565, 2011.

J. F. Pérez, O. H. Díaz, R. C. Obando, and A. Molina, "Diseño conceptual de un gasificador de biomasa de lecho fijo en equicorriente a escala piloto," Tecnológicas, vol. 22, pp. 121- 140, 2009.

Honors / Awards (*optional*):

- Young Scientist Assistantship. Colombian Science Foundation (Colciencias) /National University of Colombia, Medellin, Colombia. May. 2011
- Scholarship to the best Mechanical Engineering Student in 2008, National University of Colombia, Medellin, Colombia. July 2009
- Honorific Degree to the best Mechanical Engineering Student of the Graduation Ceremony of Sept. 2008, National University of Colombia, Medellin, Colombia. September 2008

Date Updated: *November 20, 2015*