IMMACULADA IGLESIAS

PRESENT POSITION

Associate professor of Fluid Mechanics
Dept. of Thermal and Fluids Engineering
Universidad Carlos III de Madrid
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EDUCATION

Doctor of Philosiphy, 1994, University of California at Berkeley. Advisor: Joseph A.C. Humphrey.

Master of Science in Engineering, 1992, University of California at Berkeley.

Grado de licenciatura en Ciencias Químicas, 1989, Universidad de Barcelona.

Licenciatura en Ciencias Químicas, 1988, Universidad de Barcelona.

PUBLICATIONS

1. J. A. C. Humphrey, C. A. Schuler y I. Iglesias, Analysis of Viscous Dissipation in Disk Storage Systems and Similar Flow Configurations, *Phys. Fluids A* **4** (7), 1415-1427 (1992)

2. J. A. C. Humphrey, R. Devarakonda, I. Iglesias y F. G. Barth, Dynamics of Arthropod Filiform Hairs I. Mathematical Modeling of the Hair and Air Motions, *Phil. Trans. R. Soc. Lond. B*, **340**, 423-444 (1993)

3. F. J. Higuera, A. Liñán y I. Iglesias, Effects of boundary layer displacement and separation on opposed-flame spread, *Combust. Theory Modelling*, **1**, 65-78, (1997)

4. I. Iglesias y J. A. C. Humphrey, Two- and three-dimensional laminar flows between disks co-rotating in a fixed cylindrical enclosure, *Int. J. Numer. Meth. Fluids*, **26**, 581-603 (1998)

5. A. L. Sánchez, I. Iglesias y A. Liñán, An Asymptotic Analysis of Chain-Branching Ignition in the Laminar Wake of a Splitter Plate Separating Streams of Hydrogen and Oxygen, *Combustion Theory and Modeling*, **2**, 259–271 (1998)

6. I. Iglesias, M. Vera, A.L. Sánchez y A. Liñán, Simulations of Starting Gas Jets at Low Mach Numbers, *Phys. Fluids* **17**, 038105 (2005)

TECHNICAL REPORTS

1. A.L. Sánchez Pérez, M. Sánchez-Sanz, A. Abdelaziz, I. Iglesias, V. Kurdyumov y A. Liñán, Report on Chemical-Kinetic Reduced Mechanisms for Hydrogen-Air Ignition with Steam, 2002

2. I. Iglesias, A. L. Sánchez, M. Vera y A. Liñán, Numerical study of mixing and reaction in a developing jet, 2003

RESEARCH PROJECTS

1. Análisis de procesos de ignición de hidrógeno, y de rotura de gotas y burbujas inmersas en un flujo turbulento
   Funding Agency: Spanish DGES, contract PB98-0142-C04-02
   Duration: 2000-2002
   Principal Investigator: Antonio L. Sánchez

2. Experimental and Numerical Study of Reactive Flows in Complex Geometries with Relevance to Industrial Safety for Explosion Protection
   Funding Agency: European Commission, contract EVG1-2001-00026
   Duration: 2001-2004
   Principal Investigator: Antonio L. Sánchez

3. Flujos Multifásicos Reactivos y No Reactivos. Lechos Fluidificados, Sprays y Microchorros
   Funding Agency: Spanish MCYT, contract DPI-2002-04550-C07-06
   Duration: 2003-2005
   Principal Investigator: Antonio L. Sánchez

4. Estudio de fenómenos fluido-reactivos de relevancia en el desarrollo de tecnologías limpias de combustión
   Funding Agency: Madrid Regional Government and the University Carlos III de Madrid (CAM-UC3M), contract UC3M-IME-05-004
   Duration: 2006
   Principal Investigator: Immaculada Iglesias

5. Estudio Aerodinámico de Procesos de Ignición
   Funding Agency: Spanish MEC, contract ENE2005-08580-C02-01
   Duration: 2006-2008
   Principal Investigator: Antonio L. Sánchez

6. Combustión Limpia: Análisis, Modelado y Simulación
   Funding Agency: Madrid Regional Government CAM, contract S-0505/ENE/0229
   Duration: 2006-2009
   Principal Investigator: Antonio L. Sánchez

7. Puesta en marcha del laboratorio para el estudio de flujos reactivos de relevancia en el desarrollo de tecnologías limpas de combustión
   Funding Agency: Madrid Regional Government and the University Carlos III de Madrid (CAM-UC3M), contract CCG06-UC3M/ENE-0814
   Duration: 2007
   Principal Investigator: Immaculada Iglesias

8. MyPlanet: Massively Parallel Computations of Combustion and Emission Simulations
   Funding Agency: European Commission, contract PITN-GA-2008-210781
   Duration: 2008-2012
   Principal Investigator: Immaculada Iglesias

9. Diseño fluidodinámico optimizado aplicado a nuevas tecnologías de generación e intercambio de energía
   Funding Agency: Spanish MICINN, contract ENE2008-06683-C03-02
   Duration: 2009-2011
   Principal Investigator: Marcos Vera