



## **LUIS ADRIANO ALVES DE SOUSA OLIVEIRA - CURRICULUM ABSTRACT**

Born in Coimbra (Portugal) on June 21, 1952. Nationality: Portuguese.

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### **Academic qualifications:**

“Agregação” (qualification for Full Professor) in Mechanical Engineering. Coimbra University – Portugal, 1998. Doctoral Degree (Aerodynamics) by the Faculty of Science and Technology of the University of Coimbra, 1986. "Docteur Ingénieur" (Aerodynamics) by the Faculty of Science of the University of Poitiers-France, 1981. "Diplôme d'Études Approfondies" (DEA) by the Faculty of Science of the University of Poitiers-France, 1978. Graduated in Mechanical Engineering (Applied Thermodynamics) by the Faculty of Science and Technology of the University of Coimbra, 1975.

### **Areas of expertise:**

General scientific field: Ethics in Scientific Research; CFD (Computational Fluid Dynamics); Two-Phase Flows.

Specific, applied fields: Particle Dispersion in Fluid Flows; Forest Fires; Aerodynamic Sealing; Heating and Ventilation of Compartments; Rotating Flows – numerical predictions for non-axisymmetric, turbulent and buoyant type flow conditions; Respiratory Function: numerical modelling of relevant flow conditions.

### **Teaching and research at the Mechanical Engineering Dept. of the Faculty of Science and Technology of the University of Coimbra (DEM-FCTUC), Portugal:**

Retired since January 2014. Presently Invited (pro bono) Full Professor. Full Professor: 2000-2014. Associate Professor: 1990-2000. Auxiliary Professor: 1986-1990. Assistant: 1975-1986. Monitor: 1974-1975.

Chairman of Research Design and Methods (EfS Initiative; Doctoral Program of DEM-FCTUC), Fluid Mechanics, Aerodynamics, Thermodynamics, Heat Generators and Exchangers and Numerical Simulation of Fluid Flow, since 1975.

He was a speaker in about two hundred events and the author or coauthor of about one hundred scientific articles.

### **Functions at the University of Coimbra:**

Head of the General Assembly of the Faculty of Science and Technology: (2002– 2004). Head of the Scientific Committee of the Mech. Engineering Department: (1998-2002). Head of the Committee for Management of Master Theses (CATM), Mechanical Engineering Department (2007-2013).

### **Direction of post-graduate studies:**

Scientific responsible for five Master of Science theses (Portuguese “Mestrado”, prior to Bolonha) and three Ph.D. theses (Portuguese “Doutoramento”), all successfully reported. Also responsible for several other under-graduate and post-graduate studies (seminars and projects).

### **Leader and/or participant in several international and national research projects.**

**Publications:**Books (in Portuguese):

- L. A. Oliveira & A. G. Lopes (2020), "Mecânica dos Fluidos" (6<sup>th</sup> ed.). Lisbon, *LIDEL*.
- L. A. Oliveira (2018), "Escrita Científica – da Folha em Branco ao Texto Final. Lisbon, *LIDEL*.
- L. A. Oliveira & A. G. Lopes (2016), "Mecânica dos Fluidos – Fundamentos de Física e Matemática". Lisbon, *LIDEL*.
- L. A. Oliveira (2013), "Ética em Investigação Científica". Lisbon, *LIDEL*.
- L. A. Oliveira (2012), "Dissertação e Tese em Ciência e Tecnologia" (2<sup>nd</sup> ed.). Lisbon, *LIDEL*.

Book Chapters:

Oliveira, L. A. (2018), "Publication Ethics". In R. Costa & P. Pittia (Eds.), *Food ethics in food studies education: Integrating food science and engineering knowledge into the food chain* (pp. 167-195). New York: *Springer International Publishing AG*.

L. A. Oliveira & J. L. Afonso (2016), "A Ética como Objeto de Ensino". In "Fraude e Plágio na Universidade". *Coimbra University Press*. In Portuguese.

Six Selected Publications in ISI Refereed Journals:

- L. A. Oliveira, A. G. Lopes, B. R. Baliga, M. Almeida & D. X. Viegas (2014), "Numerical prediction of size, mass, temperature and trajectory of cylindrical, wind driven firebrands". *Int. J. Wildland Fire*, vol. 23, n° 5, pp. 698-708.
- A. G. Lopes, L. A. Oliveira, A.D. Ferreira & J. P. Pinto (2013), "Numerical Simulation of Sand Dune Erosion". *Environmental Fluid Mechanics*, *Environmental Fluid Mechanics*, vol. 13, n° 2, pp. 145-168.
- L. A. Oliveira, V. A. F. Costa & B. R. Baliga (2008), "Numerical model for the prediction of dilute three-dimensional, turbulent fluid-particle flows, using a Lagrangian approach for particle tracking and a CVFEM for the carrier phase". *Int. J. Numer. Meth. Fluids*, vol. 58, pp. 473-491.
- V. A. F. Costa, L. A. Oliveira & B. R. Baliga (2008), "Implementation of the Stress Jump Condition in a Control-Volume Finite Element Method for the Simulation of Laminar Coupled Flows in Adjacent Open and Porous Domains". *Numerical Heat Transfer, part B*, 2008, vol. 53, pp. 383-411.
- L. A. Oliveira, V. A. F. Costa & B. R. Baliga (2008), "Numerical model for the prediction of dilute three-dimensional, turbulent fluid-particle flows, using a Lagrangian approach for particle tracking and a CVFEM for the carrier phase". *Int. J. Numer. Meth. Fluids*, vol. 58, pp. 473-491.
- L. A. Oliveira, V. F. Costa e B. R. Baliga (2002), "A Lagrangian-Eulerian model of particle dispersion in a turbulent plane mixing layer". *Int. J. Numer. Meth. Fluids*, vol. 40, pp. 639-653.

Two More Recent Publications in Journals of International Circulation:

- L. A. Oliveira (2020), "About teaching scientific writing in Engineering Education – Overcoming the writer's block". *International Society of Engineering Pedagogy, IGIP. IGIP Newsletter, Issue 1*, pp. 3-4.
- L. A. Oliveira (2019), "About teaching scientific writing in Engineering Education – Priority to the reader". *International Society of Engineering Pedagogy, IGIP. IGIP Newsletter, Issue 3*, pp. 7-8.

**Language Competences:**

Fluent in Portuguese, English, French and Spanish.