



**The Combustion Institute**

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**Luís Fernando Figueira da Silva**

*2020 Candidate Profile: The Combustion Institute Board of Directors*

**Reasons for Nomination**

It is an honor and a privilege to be the first South America based researcher to be considered for nomination to the Board of Directors of the Combustion Institute. I have been an active combustion practitioner for nearly thirty years, first in France as a CNRS researcher, then in Brazil as a Professor at Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio). I have also been instrumental in establishing the Brazilian Section of the Combustion Institute

As a Board Member, I will continue to build bridges between the South American Sections of the Combustion Institute and other CI Sections around the world. In particular, I will seek to provide assistance to young researchers in South America to travel to Combustion Institute events. Our current participation does not reflect diversity of the nearly 50 institutions and 300 professionals involved throughout the southern continent. As a case-in-point, the Brazilian Combustion School has already seen seven editions and will benefit from enhanced international student participation.

I will endeavour to enhance the standard of combustion research by fostering collaborative links and encouraging our PhD students to study overseas through Sandwich Doctorate Programs and double degrees. I will also seek to encourage closer links within the region by establishing a South American Conference on Combustion.

Finally, I believe my participation at the Board of Directors of the Combustion Institute will help diffuse the significant Brazilian experience where renewable fuels are successfully employed for transportation and energy generation.



*See the next page for the candidate's curriculum vitae.*

Luís Fernando FIGUEIRA DA SILVA  
Age: 54, born at Rio de Janeiro, Brazil  
[luisfer@puc-rio.br](mailto:luisfer@puc-rio.br)

Associate Professor, PUC-Rio (since 2010)  
Visiting Professor, PUC-Rio (2001-2009)  
Chargé de recherche, CNRS (since 1994)

### **Academic degrees**

Habilitation à diriger les recherches, Université de Poitiers, France, 2001  
PhD at the Université de Poitiers, France, specialty: energetics, 1993  
Master in Aerospace Engineering, Instituto Tecnológico de Aeronáutica, Brazil, 1989  
Aeronautical Engineer, Instituto Tecnológico de Aeronáutica, Brazil, 1987

### **Recent research highlights**

- Measurements and modeling of PAH soot precursors in coflow ethylene/air laminar diffusion flames
- Experimental characterization of the turbulence anisotropy at a bluff-body near wake
- Review of transported probability density function mixing models for turbulent combustion simulations

### **Quantitative summary (1993-2020)**

ORCID: 0000-0002-4932-7341; Researcher ID: A-7445-2008; Scopus Author ID: 6507606204

Peer-reviewed publications: 35  
Conference papers: 79  
Book chapters: 2  
Invited conferences/lectures: 21  
Technical reports: 59  
Patent application: 1  
Research and development financed projects: 25

Doctorate thesis supervisions: 7  
Masters of science supervisions: 21  
Undergraduate scientific initiation supervisions: 28

### **Administration**

Coordinator of the PUC-Rio “Energy and Environment” PrInt internationalization project, 2018-present  
Mechanical engineering course coordinator at PUC-Rio, 2014-2019.  
Associate editor, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2011-2017  
Coordinator, Brazilian Section of the Combustion Institute (RNC), 2004-2014  
Coordinator, Energy and Combustion Programme UNASUL (Union of the South American Nations), 2014-2016  
Academic coordinator, international cooperation with INSA Group (France), 2011-2016

### **Visiting Professor periods**

Laboratoire d’Energétique Moléculaire et Macroscopique, Combustion (EM2C, France), 2016-2019.  
Pontificia Universidad Católica del Perú (Lima, Perú), 2020.  
Universidad Tecnica Federico Santa Maria (Valparaiso, Chile), 2015-2019.  
Universidad de Antioquia (Medellín, Colombia), 2014.