

Stéphane MAZOUFFRE

CNRS Director of Research

Institute for Combustion, Aerothermodynamics, Reactivity and Environment, CNRS

Head of the ICARE Electric Propulsion team

Director of ORACLE, ICARE – Exotrail joint-laboratory

French, born 3rd of February 1973

Qualification

- 2009** Thesis director certification (*Habilitation*), University of Orléans, France
- 2003** CNRS staff research scientist at ICARE in the field of spacecraft electric propulsion
- 2001-2003** Postdoctoral fellow at ICARE – Research fields: Rarefied supersonic plasma jets
- 2001** Ph.D. degree in plasma physics (summa cum laude) from the Eindhoven University of Technology, The Netherlands.
- 1996** M.Sc. degree from a French higher engineering school (ENSIL), University of Limoges, in materials science and surface treatments

Expertise and Relevant experience

Expertise: low-temperature plasma physics, electric propulsion, laser-aided diagnostics

Projects: CNES, ANR, ESA, EU, USAF, SAFRAN, Airbus, MBDA, Enpulsion, Exotrail, GAMA

Collaborations with foreign Universities: Madrid, Princeton, Prague, Daejeon, Singapore

Executive committee of the French Physical Society and of the FPS Plasma Division (2006-2012)

Coordinator of the low-temperature plasma network of the CNRS (2012-14)

PR manager of the ICARE laboratory (2002 – 2008).

Board of directors of the Electric Rocket Propulsion Society

Chairman of the CNES Electric Propulsion expert group

Member of EuroSpace program; AIAA senior member

Scientific committee of the IEPC, MPCS and EUCASS symposia

Editorial Board: *Plasma Sources Science and Technology* (2012-18), *Aerospace*, *Frontiers*

Associate editor: *Journal of Electric Propulsion*

Supervision of 15 PhD students and 9 post-doctoral fellows

Supervision of 27 graduate students and 38 undergraduate students

Space propulsion Teaching: Orléans University (Space Sciences Master), IPSA (Paris), EPF (Paris)

Scientific production

105 papers in peer reviewed international journals (+ 12 book chapters)

131 conference proceedings

45 articles in a general-public magazines and newspapers

70 International symposia (17 invited talks)

Recognitions

2021: Edmond Brun prize, French Academy of Sciences

2020: Chairs of Excellence, University Carlos III, Madrid, Spain

2019&2009: IEPC Best paper award from the Electric Rocket Propulsion Society

2012: Noah Hershkowitz Award of the Institute of Physics (IOP)

2008: Bronze medal of the CNRS

Relevant publications

Direct experimental comparison of Kr and Xe discharge properties in the magnetic nozzle of a helicon plasma source
A. Vinci, S. Mazouffre, *Phys. Plasmas* **28**, 033504 (2021).

Prospects and physical mechanisms for photonic space propulsion
I. Levchenko, K. Bazaka, S. Mazouffre, S. Xu, *Nature Photonics* **12**, 649–657 (2018).

Electric propulsion for satellites and spacecraft: established technologies and novel approaches
S. Mazouffre, *Plasma Sources Sci. Technol.* [Topical Review] **25**, 033002 (2016).