

Stéphane MAZOUFFRE

CNRS Director of Research

Institute for Combustion, Aerothermodynamics, Reactivity and Environment, CNRS

Deputy Director of the ICARE lab

Head of the ICARE Electric Propulsion team

Director of ORACLE, ICARE – Exotrail joint-laboratory 2019 – 2022

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

Programs: CNES, ANR, ESA, EU, SAFRAN, Airbus, Enpulsion, Exotrail, GAMA...

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

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 (2012-2014)

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

Scientific committee of the IEPC and MPCS 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

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

144 conference proceedings

46 articles in a general-public magazines and newspapers

77 International symposia (23 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

Enhanced electron heating in the magnetic nozzle of a radio-frequency plasma via electron cyclotron resonance
A. Vinci, S. Mazouffre, Eur. Phys. Lett. **141** 44002 (2023).

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).