

Stéphane Mazouffre biography

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Stéphane Mazouffre is a Research Director at the French National Research Center (CNRS). After graduating from the Limoges Engineering School and the University of Limoges, France, in material science and plasma physics in 1996, he received a PhD in the field of low-temperature plasma physics and laser-aided diagnostics in 2001 from the University of Eindhoven (TUE), The Netherlands.

His research activities in electric propulsion for satellites and spacecraft began in 2003 after he joined the ICARE laboratory in Orleans, France. He is currently the director of the French scientific task force on Hall thrusters, a grouping that involves the CNRS, the French Space Agency (CNES), SAFRAN and several universities. He is also the head of the Electric Propulsion Team at the ICARE laboratory.

His research interests cover Hall thrusters and variants (magnetically-shielded thrusters, wall-less thrusters, two-stage thrusters and cylindrical Hall thrusters) over a broad power range, new electric propulsion concepts (e.g. negative ion thrusters) and micropropulsion. His research also extends to the physics and technology of hollow cathodes and the physics of magnetized discharges such as helicons. He has developed numerous diagnostic techniques for EP devices, including electrostatic probes, $E \times B$ probes and thermal imaging tools. He is especially recognized for the development of laser diagnostics such as laser-induced fluorescence, Thomson and Rayleigh scattering and laser photodetachment. He has authored over 80 scientific publications, more than 110 conference papers, 30 articles for magazines and websites and he holds several patents.

Dr. Mazouffre was a recipient of the Bronze Medal of the CNRS in 2008 and of the Noah Hershkowitz Award of the Institute of Physics in 2012. He is a senior member of the American Institute of Aeronautics and Astronautics and a member of the EPTC and a member of the BoD of the Electric Rocket Propulsion Society.