

Permanent address	✉	CEA Cadarache, CEA/IRFM Bât. 153, Bureau 142 13108 Saint-Paul-lez-Durance, France
Telephone (work)	☎	(+33) 44-225-4774
E-mail	@	guilhem.dif-pradalier@cea.fr
Website	www	https://sites.google.com/site/guilhemdifpradalier/
Date & Place of Birth	📅	June 30, 1981 in RODEZ (12), age: 36
Nationality	🇫🇷	French



Education & Professional Experience

2011–today	Physicist at CEA/DRF/IRFM, France
2016 (4 months)	Guest Professor, the University of Tokyo, Tokyo, Japan
2014 & 2015	Visiting scientist, Kavli Institute for Theoretical Physics (KITP), Santa Barbara, USA
2008–2011	Postdoctoral Scholar, University of California, San Diego, USA (PI: Prof. P.H. Diamond)
2005–2008	PhD in Radiation, Plasmas & Astrophysics, Aix-Marseille University
2002–2005	<ul style="list-style-type: none"> Engineer from SUPAERO, one of the top “Grandes Ecoles” in France
2005	<ul style="list-style-type: none"> Master of Science, cumulative degree, Paul Sabatier University, Toulouse, France
2005	<ul style="list-style-type: none"> Master’s thesis & internship at CEA/IRFM, France
1999–2002	Preparatory classes in Lycée St. Louis, Paris, France (PCSI & PC*)

Track record & Expertise

- ▶ I maintain an active interest in many problems related to **turbulence, transport & self-organisation** in magnetised plasmas, geophysical fluids and in non-equilibrium systems, in general.
- ▶ recipient of the **PhD Research Award**, European Physical Society, Plasma Physics Division, 2010
- ▶ 82 **publications** in peer-reviewed journals; H-factor=19 (Web of Science) / 22 (Google Scholar)
- ▶ since 2008: ~35 oral presentations at conferences, including ~13 invited/plenary

Selected publications

- **The $E \times B$ Staircase of Magnetised Plasmas**
G. Dif-Pradalier, G. Hornung, et al. *Nucl. Fusion* **57**:066026, 2017.
- **Evidence for Global Edge–Core Interplay in Fusion Plasmas**
G. Dif-Pradalier, E. Caschera, et al. *Plasma and Fusion Research* **12**:1203012, 2017.
- **Finding the Elusive $E \times B$ Staircase in Magnetized Plasmas**
G. Dif-Pradalier, G. Hornung, et al. *Phys. Rev. Letters* **114**:085004, 2015.
- **On the Validity of the Local Diffusive Paradigm in Turbulent Plasma Transport**
G. Dif-Pradalier, P.H. Diamond, et al. *Phys. Rev. E* **82**:025401(R), 2010.
- **Interplay between Gyrokinetic Turbulence, Flows, and Collisions: Perspectives on Transport and Poloidal Rotation**
G. Dif-Pradalier, V. Grandgirard, et al. *Phys. Rev. Letters* **103**:065002, 2009

- ▶ 2017: European-appointed ITPA “Transport & Confinement” Topical Group member
- ▶ Participant or P.I. in the following projects/Grants:

ANR (National Research Agency) grants—EGYPT (2007-2010); GYPSI (2011-2015)

HPC programmes—Lighthouse Projects (2006, 2007, 2008, 2010, 2012, 2016 [PI], 2017); US DOE INCITE projects (2010, 2011, 2012); PRACE projects (2017 [PI], 2018–2021 [PI]);

EUROfusion Enabling Research grants—2014: WP14-ER-01/CEA-01, WP14-ER-01/CEA-10, WP14-ER-01/IPP-01, WP14-ER-01/IPP-02); 2015–2018: WP15-ER-01/IPP-01, WP15-ER-01/IPP-02; 2017–2018: WP17-ENR-CEA-01, WP17-ENR-CEA-02, WP17-ER/ENE-10, WP17-ER/ENE-10

H2020 grant—2015/09-2018/09: Energy oriented Center of Excellence EoCoE

organiser of the 2019 **Festival de Théorie**, 4-week international workshop in Aix-en-Provence, France