

### Universidad de Castilla-La Mancha

School of Industrial Engineering  
Avenida Camillo Jose Cela, s/n  
13 071 Ciudad Real, SPAIN  
Tel. (34) 926 052 002  
[antoineclaude.bret@uclm.es](mailto:antoineclaude.bret@uclm.es)  
[www.antoinebret.com](http://www.antoinebret.com)

- Full Professor (“Catedrático”) – Universidad de Castilla-La Mancha (UCLM), Ciudad Real, Spain.
- PhD Physics, Paris Orsay University, France, 1994.
- Engineer, École supérieure d’électricité (“Supelec”), France, 1991.
  
- Research in plasma physics. Nuclear Fusion, Astrophysics.
- 134 peer-review papers (1<sup>st</sup> author of 85). 40 invited talks.
- 6 times Visiting Scholar at the “Harvard-Smithsonian Center for Astrophysics”.
- Visiting Scientist at “MIT’s Plasma Science and Fusion Center” (June 2025).
- Citations: 2 982 (ISI)      3 799(Google Scholar)
- H-index: 27 (ISI)      31 (Google Scholar)
  
- Associate Editor for *Journal of Plasma Physics* (Cambridge Press) since 2012.
- Participant in 12 Grants + 1 European grant (EUROfusion). PI or Co-PI of 4.
  
- Advisor for 1 PhD Thesis and 20+ BS/Master Thesis.
- Currently advisor for 1 PhD student in Abu Dhabi.
- Referee for 9 National Funding Agencies + *European Research Council*.
  
- Teaching on Energy and Climate issues since 2004.
- Currently teaching “Energía Hidráulica” in the UCLM’ “Máster Universitario en Energías Renovables”.
- Textbook *The Energy-Climate Continuum: Lessons from Basic Science and History* (Springer, 2014).
- Co-author, with 2 students, of *How Green are Electric or Hydrogen-Powered Cars? Assessing GHG Emissions of Traffic in Spain* (Springer, 2016).
- Textbook *Introducción a la mecánica de fluidos*, McGraw-Hill, 2025.
  
- 50+ outreach talks on Climate and Energy, Physics..., in schools or associations since 2010 in English, Spanish or French.
- Author of *Del Nilo al Big Bang, Física para los que suspendían Física*, explaining the current frontiers in Physics to a general audience (in Spanish, independently published, 2020).
- Scientific Advisor for the “European Green Deal” project *Connecting Christians with Climate Change and Conservation as Creation Care* by “A Rocha France” (11/2021-10/2023).

## Dr. Antoine Bret – Full CV

---

### Universidad de Castilla-La Mancha

School of Industrial Engineering  
Avenida Camillo Jose Cela, s/n  
13 071 Ciudad Real, SPAIN  
Tel. (34) 926 052 002  
*antoineclaude.bret@uclm.es*  
*www.antoinebret.com*

### Full Professor (“Catedrático”)

#### Education

---

- 2009**      **Full Professor Habilitation, France (HDR)** - *University Paris VI Jussieu, France*  
*Subject: Beam-plasma instabilities in the relativistic regime*
- 1994**      **PhD in Plasma Physics Theory** - *University Paris XI Orsay, France*  
*Advisor: Claude Deutsch - Suma Cum Laude.*
- 1991**      **Master Gas and Plasma Physics** - *University Paris XI Orsay, France*
- 1988-1991**      **Engineer** - *Ecole Supérieure d’Electricité (“SUPELEC”), France*
- 1985-1988**      **Preparation to competitive scientific examinations** - *Lycée Stanislas, Paris, France*
- Languages** - Fluent in French, English and Spanish

#### Positions & Teaching

---

- Since 2004**      **Visiting Prof., then Associate Prof., then Full Prof.** – *Univ. de Castilla-La Mancha, Spain*  
*Área de Mecánica de Fluidos*  
*Courses taught: Renewable Energies and Climate Change<sup>1</sup>, Hydropower*  
*Fluid Mechanics, Theory of Pumps and Turbines*
- 2025**      **Visiting Scientist**, *MIT’s Plasma Science and Fusion Center.*
- Since 2012**      Total of 14 months as a **Visiting Scholar** or **Research Fellow**  
*Harvard-Smithsonian Center for Astrophysics or Black Hole Initiative at Harvard University*
- 2016 & 2020**      **Adjunct Professor, IE University** – *Madrid, Spain*  
*Advanced Seminar on “Tips you must know about Climate Change and Energy”*
- 2003-2004**      **Oral Examiner in Mathematics** - *Lycée Stanislas – France*  
*Courses taught: First- and Second-year College level Mathematics*
- 1994-1995**      **Assistant Professor (“ATER”, not Tenured)** - *University Paris Orsay – France*  
*Courses taught: Quantum Mechanics and Related Math – First year level*  
*Plasmas Physics – Master level*
- 1991-1995**      **Teaching Assistant** - *University Paris Orsay – France*  
*Supervision of student’s Lab work and Problems sessions*
- 1991-1995**      **Oral Examiner in Mathematics** - *Lycée Stanislas - Paris, France*

---

<sup>1</sup> See Content [here](#). A textbook has been published from this course, *The Energy Climate Continuum, Lessons from Basic Science and History* (Springer, 2014).

# Dr. Antoine Bret – Full CV

---

## Research Grants & Projects

---

### Grant CFP-FSD-AWP24-ENR-03-CEA-03 from EUROfusion

Participants S. Le Pape (PI) + 43

Topic *High gain direct drive ignition with Foams as a Pathway to Energy*

### Grant PID2021-125550OB-I00 from Spanish Ministerio de Economía y Competitividad

Participants A. BRET (PI), G. Rodriguez, F. Cobos, S. Piriz.

Topic *Inestabilidades hidrodinámicas en fusión inercial y ciencias planetarias*

### Grant SBPLY/17/180501/000264 from Castilla-La Mancha Science and Education Council

Participants A. BRET (PI), R. Piriz (co-PI), G. Wouchuk, G. Rodriguez.

Topic *Hidrodinámica de la materia con alta densidad de energía*

### Grant ENE2016-75703-R from Spanish Science and Education Ministry

Participants R. Piriz (PI), A. BRET (co-PI), G. Wouchuk, G. Rodriguez.

Topic *Materia con alta densidad de energía en fusión por confinamiento inercial*

### Grant PEII-2014-008-P from Castilla-La Mancha Science and Education Council

Participants G. Wouchuk (PI), R. Piriz, A. Bret, M. Barriga-Carrasco, F. Cobos-Campos, G. Rodriguez

Topic *Hidrodinámica de la fusión termonuclear por confinamiento inercial*

### Grant ENE2013-45661-C2-1 from Spanish Science and Education Ministry

Participants R. Piriz (PI), G. Wouchuk (co-PI), A. Bret, G. Rodriguez, M. Barriga-Carrasco

Topic *Materia con alta densidad de energía en fusión inercial.*

### “Salvador de Madariaga” Fellowship from Spanish Science and Education Ministry (2012) - PI

Visiting Scholar at Harvard-Smithsonian Center for Astrophysics

### International Space Science Institute, Bern, Switzerland

A. Bykov	<i>Ioffe Institute, Russia</i>	M. Lemoine	<i>IAP, France</i>
M.E. Dieckman	<i>Linköping, Sweden</i>	A. Marcowith (PI)	<i>LPTA, France</i>
L’O.C. Drury, G. Murphy	<i>DIAS, Ireland</i>	G. Pelletier	<i>LAOG, France</i>
J.G. Kirk, B. Reville	<i>MPIK, Germany</i>	A. Spitkovsky, L. Sironi	<i>Princeton, Harvard</i>
B. Lembège	<i>CETP, France</i>	J. Vink	<i>Utrecht university</i>

Topic *Fermi shock acceleration process: from non-relativistic to ultra-relativistic shocks*

### Grant ENE2009-09276 from Spanish Science and Education Ministry

Participants R. Piriz (PI), G. Wouchuk, A. Bret, C. Huete, G. Rodriguez, M. Barriga-Carrasco.

Topic *Materia con alta densidad de energía en fusión por confinamiento inercial.*

### Grant FIS2006 from Spanish Science and Education Ministry

Participants R. Piriz (PI), M. Barriga-Carrasco, D. Cortazar, A. Bret.

Topic *Física de Plasmas con Alta Densidad de Energía*

### Grant PAI08 from Castilla-La Mancha Science and Education Council

Participants G. Wouchuk (PI), A. Bret.

Topic *Fenómenos básicos en plasmas densos y a alta temperatura.*

### Grant PAI05 from Castilla-La Mancha Science and Education Council

Participants G. Wouchuk (PI), A. Bret.

Topic *Inestabilidades en plasmas y fluidos.*

### Grant FTN2003 from Spanish Science and Education Ministry

Participants R. Piriz (PI), M. Temporal, M. Barriga-Carrasco, D. Cortazar, A. Bret.

Topic *Inestabilidades hidrodinámicas en fusión por confinamiento inercial.*

---

## Dr. Antoine Bret – Full CV

---

### Service & Administration

---

- Boards**      *Journal of Plasma Physics (Cambridge Press)* – Associate Editor since 2012  
*EPS Plasma Physics Conference 2017* – Sub-Chair of the Program Committee
- Referee**      *Science, Phys. of Plasmas, PRE, PRL, Phys. Lett. A, J. of Phys. A, Computer Phys. Comm.*  
*Plasmas Phys. and Controlled Fusion, Laser and Particle Beams, EPL, NJP*  
*Astrophys. Journal, J. of Mathematical Phys., IEEE Transactions on Plasma Science.*  
*Various National Grant Agencies, European Research Council.*
- Listed in**      *Who's Who in Science and Engineering, Who's Who in the World,*  
*International Directory of Experts and Expertise, The Cambridge Blue Book 2<sup>nd</sup> Edition.*
- Member**      *European Physical Society, Real Sociedad Española de Física, American Physical Society*
- Member of the Board of Directors (School of Industrial Engineering, Ciudad Real, Spain, 2008-2011)  
Member of the Economic Board (School of Industrial Engineering, Ciudad Real, Spain, 2008-2011)

### Books & Outreach

---

- |  |  |
|--|--|
| <b>The Energy-Climate Continuum</b><br>Lessons from Basic Science and History<br><i>Springer, 2014</i> | <b>Environment, Energy and Climate Change II</b><br>Ch. 1: Energy and Climate: A Global Perspective<br><i>Springer, 2015</i> |
| <b>The World is not 6000 years old. So what?</b><br><i>Wipf &amp; Stock, 2014</i>                      | <b>How Green are Electric or Hydrogen-Powered Cars?</b><br><i>Springer, 2016</i>   |
| <b>Del Nilo al Big Bang</b><br>Independently published, 2020   | <b>Introducción a la mecánica de fluidos</b><br>McGraw-Hill, 2025  |

Scientific Advisor for the “European Green Deal” project *Connecting Christians with Climate Change and Conservation as Creation Care* by “A Rocha France” (11/2021-10/2023).

Various conferences on Climate Science and other issues – See list of Publications and Talks

### Miscellaneous

---

- 2003**      **Minister for a Protestant Church** – *Madrid, Spain*
- 2002**      **NGO Project Director** - *HOPE Worldwide France, Paris, France*  
Supervision of 3 social workers, Responsible for a Senior Center in Paris  
Leading of volunteer teams up to hundreds of people  
Fund Raising Organization, Support of a Rumanian Orphanage
- 1996-2002**      **System Administrator** - *Eglise du Christ de Paris, Paris, France*  
Lotus Notes PC/Mac Network (30 clients) with NT4 Server  
Lotus Notes Databases Development, Webmaster  
Conference organization (up to 2500+ participants)
- 1995-2002**      **Publisher** - *Publications Chrétiennes Internationales, Paris, France*  
Direction of 1 employee. Leading of volunteer teams  
Book translation from English to French  
Managing of the publishing chain from manuscript editing to book selling
- 1993-1998**      **Volunteer** – *Les petits frères de Pauvres, Paris, France*
- 6-7/1991**      **Technical Survey on Ceramic Materials in the US-** *French Commissariat à l’Energie Atomique*