

d'HUMIERES Emmanuel

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Research interests:

High energy density physics and high intensity laser-plasma interaction: hot and dense plasmas, particle acceleration, laboratory astrophysics, electron transport in dense plasmas, Particle-In-Cell codes, high energy radiation sources.

Research experience:

Since 2014: **junior member of the Institut Universitaire de France**.

Since September 2017: **Full Professor of Physics at the Université de Bordeaux (France)** carrying research at the **Centre Lasers Intenses et Applications**: «Compact energetic particle and radiation sources generated using very high intensity lasers and applications to fusion, medicine and astrophysics».

January 2016 - August 2016: **Invited Scholar at the University of Nevada, Reno (USA)**.

November 2009 - November 2015: **Adjunct Professor** with the Department of Physics at the **University of Nevada, Reno**.

September 2008 - August 2017: **Associate Professor of Physics at the Université de Bordeaux (France)** carrying research at the **Centre Lasers Intenses et Applications**.

October 2007 – August 2008: **Postdoctoral Fellow** at the **Centre de Physique Théorique at Ecole Polytechnique** (Palaiseau, France): «Energy loss of laser-accelerated high-energy ions in warm dense plasmas».

March 2006 – September 2007: **Postdoctoral Fellow** at the Nevada Terawatt Facility, Department of Physics, **University of Nevada, Reno, USA**: «Particle-in-Cell simulations of ion acceleration and energetic electrons transport in the context of high intensity laser-plasma interaction».

November 2005 – February 2006: **Visiting researcher** at the **Centre de Physique Théorique at Ecole Polytechnique** (Palaiseau, France): «Modeling of a plasma micro-lens».

November 2002 – November 2005: **Graduate student** at the **Commissariat à l'Energie Atomique** (Bruyères-le-Châtel, France).

Academic qualifications:

2012: **Habilitation à Diriger des Recherches in Astrophysics, plasmas, and nuclear physics, University Bordeaux 1, France**. Subject: 'Laser ion acceleration and applications'. Defended on May 15, 2012.

2002 – 2006: **Ph. D. in Astrophysics, University Paris VI**, France. Obtained with highest honors "Mention très honorable". Subject: 'Proton acceleration by laser-plasma interaction and applications'. Supervised by Erik Lefebvre and Victor Malka and defended on January 25 2006.

2001 – 2002: **DEA of Astrophysics and related instrumentation** with honors "Mention Assez Bien" (equivalent to a Master of Science in Astrophysics). **University Paris VI**, France.

1999 – 2003: **Magistère Interuniversitaire de Physique** with honors "Mention Assez Bien" at **École Normale Supérieure**, Paris (includes a Bachelor of Science, now referred to as the Ecole Normale Supérieure Diploma in Physics).

Prices and scientific distinctions:

Selected as a **junior member of the Institut Universitaire de France** for the period 2014-2019.

Price for Scientific Excellence, attributed by the University Bordeaux 1 and the French Ministry of National Education and Research from October 1st, 2010 to September 30th 2014.

Price for Pedagogical Innovation, attributed by the University Bordeaux 1 from September 1st, 2013 to August 31st 2014.

Support in the context of the Young Researcher Award from the Fundamental Physics Institute of Université Bordeaux 1 in 2009.

Professional responsibilities:

- **Co-responsible of the IFCIA research group at CELIA** since January 2017 (15 permanent researchers and ~20 non permanent researchers).
- **International mobility coordinator and responsible of international projects** for the Physics Department (Unité de Formation de Physique) of the University of Bordeaux since September 2010.
- **Secretary of the board of the plasma division of the Société Française de Physique**, since November 2014.

Coordination and participation in research projects: ~1,200,000€ obtained for CELIA as coordinator since 2010: French National Research Agency, AFOSR, Région Aquitaine).

Students supervised: 2 post-docs, 11 PhD students co-supervised at 50%, and shorter participations for 9 Ph.D. students and 4 post-docs, 12 graduate students (second year of Master), 18 undergraduate students, 3 high school students).

Publications (h-index: 25 ; 3430 citations on January 24, 2018 on Google Scholar, <http://scholar.google.com/citations?user=PPjXAVYAAAAJ>): 2 Book chapters, 92 peer-reviewed articles including 12 Phys. Rev. Lett., 1 Science, 1 Nat. Phys. and 2 Sci. Rep., 19 peer-reviewed proceedings, 37 proceedings, 1 plenary presentation, 33 invited presentations, 38 oral presentations, 27 posters, 28 seminars, 2 press releases as well as brief communications in large audience journals.