

## CURRICULUM VITAE

### PERSONAL DATA:

**Name:** José Javier Honrubia Checa.

**Citizenship:** Spanish.

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**Present Position:** Full Professor, Department of Applied Physics, Polytechnic University of Madrid.

**Address:** ETSI Aeronáutica y del Espacio, Plaza del Cardenal Cisneros 3, 28040-Madrid, Spain.

**AREAS OF EXPERTISE:** Inertial Fusion Energy, Hydrodynamics, Radiation transport, Electron and ion driven fast ignition of fusion targets.

**RESEARCH EXPERIENCE:** Worked as IP or head of research group in 19 research projects granted by the Spanish Ministry of Education and Research and the European Commission since 1998.

### EXPERIENCE OF INTERNATIONAL COLLABORATION OVER THE LAST 10 YEARS:

August 2008 and August 2010      Invited Scientist at Plasma Physics Group, P-Division, Los Alamos National Laboratory, NM, USA.

May-July 2012,

Sep-Oct 2013 and      Guest Professor, Institute of Laser Engineering, Osaka University, Japan.

Nov-Dec 2014

### REVIEWING EXPERIENCE:

**Journals:** Nature Physics, Physics of Plasmas, Nuclear Fusion, Plasma Physics and Controlled Fusion, Laser and Particle Beams and Physics Letters.

**Institutions:** European Commission, French Ministry of Science and Technology, Italian Ministry of Education and Research, Laserlab - Europe, USA Department of Energy.

**Editorial Committees:** Matter and Radiation at Extremes, High Energy Density Physics, Laser and Particle Beams, Nuclear Europe Worldscan.

### PROFESSIONAL MEMBERSHIPS:

1. Member of the Board of the *Plasma Physics Division* of the *European Physical Society*

(2008-2016).

2. Member of the Board of the *Beam Plasma and Inertial Fusion Physics Section* of the Plasma Physics Division of the *European Physical Society* (2001-2008).
3. Member of Board of the *Spanish Nuclear Society* (1994-1998).

### **MOST RELEVANT PUBLICATIONS OVER THE LAST 5 YEARS:**

123 publications collected in the Web of Knowledge.

H-index = 22.

1. S. Micheau, A. Debayle, E. d'Humieres, **J.J. Honrubia**, B. Qiao, M. Zepf, M. Borghesi and M. Geissler, *Generation and optimization of electron currents along the walls of a conical target for fast ignition*, *Physics of Plasmas* **17**, 122703 (2010).
2. A. Debayle, **J.J. Honrubia**, E. d'Humieres and V.T. Tikhonchuk, *Characterization of laser-produced fast electron sources for fast ignition*, *Plasma Physics and Controlled Fusion* **52**, 124024 (2010).
3. A. Debayle, **J.J. Honrubia**, E. d'Humieres and V.T. Tikhonchuk, *Divergence of laser-driven relativistic electron beams*, *Physical Review E* **82**, 036405 (2010).
4. C. Regan, T. Schlegel, V.T. Tikhonchuk, **J.J. Honrubia**, J.L. Feugeas and P. Nicolai, *Cone-guided fast ignition with ponderomotively accelerated carbon ions*, *Plasma Physics and Controlled Fusion* **53**, 045014 (2011).
5. F. Perez, A. Debayle, **J. Honrubia** et al., *Magnetically Guided Fast Electrons in Cylindrically Compressed Matter*, *Physical Review Letters* **107**, 065004 (2011).
6. D. Batani, **J.J. Honrubia** et al., *The HiPER project for inertial confinement fusion and some experimental results on advanced ignition schemes*, *Plasma Physics and Controlled Fusion* **53**, 124041 (2011).
7. B. Vauzour, J.J. Santos, A. Debayle, S. Hulin, H.-P. Schlenvoigt, X. Vaisseau, D. Batani, S.D. Baton, **J.J. Honrubia** et al., *Relativistic High-Current Electron-Beam Stopping-Power Characterization in Solids and Plasmas: Collisional Versus Resistive Effects*, *Physical Review Letters* **109**, 255002 (2012).
8. A. Debayle, L. Gremillet, **J.J. Honrubia** and E. d'Humieres, *Reduction of the fast electron angular dispersion by means of varying-resistivity structured targets*, *Physics of Plasmas* **20**, 013109 (2013).
9. B. Vauzour, B., A. Debayle, X. Vaisseau, S. Hulin, H.-P. Schlenvoigt, D. Batani, S.D. Baton, **J.J. Honrubia** et al., *Unraveling resistive versus collisional contributions to relativistic electron beam stopping power in cold-solid and in warm-dense plasmas*, *Physics of Plasmas* **21**, 033101 (2014).
10. A.P.L. Robinson, D.J. Strozzi, J.R. Davies, L. Gremillet, **J.J. Honrubia**, T. Johzaki, R.J. Kingham, M. Sherlock, A.A. Solodov, *Theory of fast electron transport for fast ignition*, *Nuclear Fusion* **54**, 054003 (2014).
11. J.C. Fernandez, B.J. Albright, F.N. Beg, M.E. Foord, B.M. Hegelich, **J.J. Honrubia**, M. Roth, R.B. Stephens, L. Yin, *Fast ignition with laser-driven proton and ion beams*, *Nuclear Fusion* **54**, 054006

(2014).

12. **J.J. Honrubia**, J.C. Fernandez, B.M. Hegelich, M. Murakami and C.D. Enríquez, *Fast ignition driven by quasi-monoenergetic ions: optimal ion type and reduction of ignition energies with an ion beam array*, Laser and Particle Beams **32**, 419 (2014).
13. **J.J. Honrubia** and M. Murakami, *Ion beam requirements for fast ignition of inertial fusion targets*, Physics of Plasmas **22**, 012703 (2015).
14. X. Vaisseau, A. Debayle, **J. J. Honrubia** et al., *Enhanced Relativistic-Electron-Beam Energy Loss in Warm Dense Aluminum*, Phys. Rev. Lett. **114**, 095004 (2015).
15. A. Schönlein, G. Boutoux, S. Pikuz, L. Antonelli, D. Batani, A. Debayle, A. Franz, L. Giuffrida, **J.J. Honrubia** et al., *Generation and characterization of warm dense matter isochorically heated by laser-induced relativistic electrons in a wire target*, Europhysics Letters **114**, 45002 (2016).
16. **J.J. Honrubia**, A. Morace and M. Murakami, *On intense proton beam generation and transport in hollow cones*, Matter and Radiation at Extremes **2**, pp. 18-36 (2017).