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[RAFAEL DELGADO BUSCALIONI](#) Associate  
Professor [Statistical Physics of Complex  
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Work Module 5, Office 509, 5th floor.

Biographical Info

Postdoc at Queen Mary, University College London.

PhD at UNED.

Physics Degree, Universidad Complutense Madrid.

Honors and Awards

Marie Curie and Ramon y Cajal research fellowships.

Research Interests

Fluid dynamics.

Molecular hydrodynamics.

Colloids.

Polymer dynamics.

Ultrasound-matter interaction.

Coarse-graining theory.

Hybrid models.

Fluctuating hydrodynamics.

Euler-Lagrange methods.

Immersed Boundary Method.

Collaborate in FLUAM. a versatile GPU code for Fluid And Matter dynamics: available at <https://code.google.com/p/fluam>

Relevant/Recent Publications

F. Balboa Usabiaga and R. Delgado-Buscalioni and B. E. Griffith and A. Donev, Inertial Coupling Method for particles in an incompressible fluctuating fluid, Computer

Methods in Applied Mechanics and Engineering, 269:139-172, (2014). [\[URL\]](#)

Raffaello Potestio, Sebastian Fritsch, Pep Español, Rafael Delgado-Buscalioni, Kurt Kremer, Ralf Everaers, and Davide Donadio Hamiltonian Adaptive Resolution Simulation for Molecular Liquids, Physical Review Letters 110, 108301 (2013). [\[URL\]](#)

Raffaello Potestio, Pep Español, Rafael Delgado-Buscalioni, Ralf Everaers, Kurt Kremer, and Davide Donadio Monte Carlo Adaptive Resolution Simulation of Multicomponent Molecular Liquids Phys. Rev. Lett. 111, 060601 (2013). [\[URL\]](#)

Florencio Balboa Usabiaga, Ignacio Pagonabarraga, Rafael Delgado-Buscalioni, Inertial coupling for point particle fluctuating hydrodynamics, Journal of Computational Physics 235, 701 (2013). [\[URL\]](#)

Carmen Hijón, Pep Español, Eric Vanden-Eijnden and Rafael Delgado-Buscalioni, Mori-Zwanzig formalism as a practical computational tool, Faraday Discuss., (2010). [\[URL\]](#)

R. Delgado-Buscalioni, K. Kremer and M. Praprotnik, Coupling atomistic and continuum hydrodynamics through a mesoscopic model: Application to liquid water, J. Chem. Phys. 131, 244107 (2009). [\[URL\]](#)

R. Delgado-Buscalioni, E. Chacon and P. Tarazona, Hydrodynamics of nanoscopic capillary waves, Phys. Rev. Lett. 101,106102 (2008). [\[URL\]](#)

R. Delgado-Buscalioni, Cyclic dynamics of a tethered polymer under shear flow, Phys. Rev. Lett. 96, 088303 (2006). [\[URL\]](#)

G. De Fabritiis, R. Delgado-Buscalioni and P. Coveney, Modelling the mesoscale with molecular specificity, Phys. Rev. Lett.97, 134501 (2006). [\[URL\]](#)

R. Delgado-Buscalioni and P. V. Coveney Continuum-particle hybrid coupling for mass, momentum and energy transfers in unsteady fluid flow, Phys. Rev. E, 67, 046704 (2003). [\[URL\]](#)

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