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[JUAN LUIS ARAGONES](#) Postdoctoral  
Researcher [Locomotion of Artificial  
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Biographical Info

Postdoc at MIT.

PhD at UCM.

Honors and Awards

Junior Leader of "la Caixa" fellow.

PhD extraordinary Award by UCM.

Research Interests

In my group we are interested in the development of locomotion strategies for microscopic artificial machines within complex environments. Inspired by nature, specifically by the movement of cells in complex media, we use a synergistic combination of experimental and numerical methods to extract general design rules about their motion.

Relevant/Recent Publications

Aggregation Dynamics of Active Rotating Particles in Dense Passive Media, Juan L. Aragonés, Joshua P. Steimel, Alfredo Alexander-Katz, Soft Matter, arxiv:1701.06930, (2019). [\[URL\]](#)

Single-step assembly of asymmetric vesicles, Laura R. Arriaga, Yuting Huang, Shin-Hyun Kim, Juan L. Aragonés, Roy Ziblat, Stephan A. Koehler and David A. Weitz, Lab Chip, Advance Article, DOI: 10.1039/C8LC00882E, (2019). [\[URL\]](#)

Diffusion of self-propelled particles in complex media, Juan L. Aragonés, Shahrzad Yazdi, and Alfredo Alexander-Katz, Phys. Rev. Fluids 3, 083301, (2018). [\[URL\]](#)

Block copolymer templated self-assembly of disk-shaped molecules, J. L. Aragonés

and A. Alexander-Katz, J. Chem. Phys. 147, 054905, (2017). [\[URL\]](#)

Elasticity-induced force reversal between active spinning particles in dense passive media, J. L. Aragones, J. P. Steimel & A. Alexander-Katz, Nature Communications volume 7, Article number: 11325, (2016). [\[URL\]](#)

Emergent ultra-long-range interactions between active particles in hybrid active-inactive systems, Joshua P. Steimel, Juan L. Aragones, Helen Hu, Naser Qureshi, and Alfredo Alexander-Katz, PNAS, 113(17) 4652-4657, (2016). [\[URL\]](#)

Artificial Tribotactic Microscopic Walkers: Walking Based on Friction Gradients, Joshua P. Steimel, Juan L. Aragones, and Alfredo Alexander-Katz, Phys. Rev. Lett. 113, 178101, (2014). [\[URL\]](#)

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