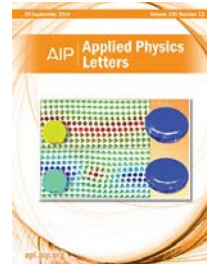




Pulecio



APL Cover

Javier Pulecio's Research Featured on the Cover of Applied Physics Letters

TAMPA, Fla. (September 30, 2014) A recently published paper, [Symmetry breaking of magnetic vortices before annihilation](#), by Javier Pulecio, et. al., PhD '10, appeared on the cover of the [September 29, 2014 issue](#) of [Applied Physics Letters](#), Volume 105, Issue 13.

The research investigates how magnetic quasi-particles known as vortices breakdown under high energy configurations. Using start-of-the-art Lorentz transmission electron microscopy imaging techniques with resolution down to 5 nanometers, they were able to directly observe the transition and unique asymmetrical states produced under applied magnetic force fields.

Pulecio is a research associate at the U.S. Department of Energy's Brookhaven National Laboratory within the Department of Condensed Matter Physics and Materials Science in the Electron Microscopy and Nanostructure Group.

Javier received his Ph.D. in electrical engineering under the supervision of Sanjukta Bhanja, associate professor in the Department of Electrical Engineering. In 2011, he was awarded a USF Outstanding Dissertation Award. His other awards include the NSF Florida-Georgia LSAMP Bridge to the Doctorate fellowship, Alfred P. Sloan Foundation Minority Graduate scholarship, and McKnight Doctoral fellowship.

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The University of South Florida is a high-impact, global research university dedicated to student success. USF is a Top 50 research university among both public and private institutions nationwide in total research expenditures, according to the National Science Foundation. Serving nearly 48,000 students, the USF System has an annual budget of \$1.5 billion and an annual economic impact of \$4.4 billion. USF is a member of the American Athletic Conference.

The College of Engineering at the University of South Florida is ranked at #72 among public institutions by U.S. News & World Report's 2015 engineering graduate school rankings. The college serves 4,600 students offering ABET-accredited undergraduate degrees in seven programs, as well as eleven masters and nine doctoral degrees. The College is actively engaged in local and global research activities with foci on sustainability, biomedical engineering, computing technology and transportation and for the fiscal year 2013-14 had \$30.5 million in research expenditures. There are 124 tenured / tenure track faculty and 80 instructors and research faculty.

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