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


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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