

Ethan Rosenthal

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Education	Columbia University	
	Ph.D. in Physics	In Progress
	M.Phil. in Physics	2012
	M.A. in Physics	2011
	James Madison University	
B.S. in Physics, Math minor, <i>magna cum laude</i>	2009	
Research	Columbia University	2010-Present
	Graduate Research Assistant	
	Advisor: Prof. Abhay Pasupathy	
	- Scanning tunneling microscopy (STM) and spectroscopy (STS) of correlated electron systems like unconventional superconductors, density wave materials, and mott insulators.	
	- Experience ranges from designing and building low temperature, ultra high vacuum (UHV) STMs to electronic bandstructure and scattering calculations.	
	James Madison University	2007-2008
	Undergraduate Research Assistant	
Advisor: Prof. Chris Hughes and Prof. Brian Augustine		
- Thin-film adhesion on polymer substrates for lab-on-a-chip devices.		
Columbia University	2008	
NSF Research Experience for Undergraduates Student		
Advisor: Prof. Philip Kim		
- Electronic transport in graphene-dielectric heterostructures.		
National Institute of Standards and Technology	2007	
NSF Summer Undergraduate Research Fellowship Student		
Advisor: Dr. Kevin Silverman		
- Electronic transport in self-assembled, semiconductor quantum dots.		
Honors	Allen M. Sachs Teaching Award	2012
	Columbia Physics Department Preceptor	2010-2011
	Walter and Martha Curt Physics Scholarship	2006-2009
	Henry W. Leap Physics Scholarship	2008
	Dr. Raymond A. and Elizabeth A. Serway Physics Scholarship	2007
	Honors Achievement Scholarship	2006
Presidential Physics Scholarship	2005	
Publications	E. P. Rosenthal , E. F. Andrade, C. J. Arguello, R. M. Fernandes, L. Y. Xing, X. C. Wang, C. Q. Jin, A. J. Millis, and A. N. Pasupathy	
	<i>Visualization of electron nematicity and unidirectional antiferroic fluctuations at high temperatures in NaFeAs</i>	
	Nature Physics 10 , 225232 (2014)	

Publications
(continued)

S. P. Chockalingam*, C. J. Arguello*, **E. P. Rosenthal**, L. Zhao, C. Gutierrez, J. H. Kang, W. C. Chung, R. M. Fernandes, S. Jia, A. J. Millis, R. J. Cava, A. N. Pasupathy
Visualizing the charge density wave transition in 2H-NbSe₂ in real space
Phys. Rev. B. **89**, 235115 (2014)

J. Okamoto, C. J. Arguello, **E. P. Rosenthal**, A. N. Pasupathy, A. J. Millis
Experimental evidence for a Bragg glass density wave phase in a transition-metal dichalcogenide
Phys. Rev. Lett. **114**, 026802 (2015)

C. J. Arguello, **E. P. Rosenthal**, E. F. Andrade, W. Jin, P. C. Yeh, N. Zaki, S. Jia, R. J. Cava, R. M. Fernandes, A. J. Millis, T. Valla, R. M. Osgood Jr., A. N. Pasupathy
Quasiparticle interference, quasiparticle interactions, and the origin of the charge density-wave in 2H-NbSe₂
Phys. Rev. Lett. **114**, 037001 (2015)

C. J. Arguello, J. Munevar, T. Goko, E. Andrade, B. A. Frandsen, L. Liu, F. L. Ning, A. N. Pasupathy, **E. Rosenthal**, H. Micklitz, J. Agüero, E. Baggio-Saitovitch, R. dOrtenzio, T. Medina, T. J. S. Munsie, T. J. Williams, G. M. Luke, Pengcheng Dai, H. Q. Luo, X. Y. Liu, S. Carr, F. Ronning, E. D. Bauer, R. M. Fernandes, E. Uykure, S. Miyasaka, S. Tajima, M. Nakajima, S. Uchida, Y. J. Uemura
Multiprobe characterization of coexisting antiferromagnetic and superconducting orders in Ba₂(Fe,Ni)₂As₂ near the phase boundary
(in review)

L. Zhao, H. Deng, I. Korhova, J. Secor, M. Begliarbekov, Z. Chen, E. Andrade, **E. Rosenthal**, A. Pasupathy, V. Oganessian, L. Krushin-Elbaum
Emergent high-temperature superconductivity on the surfaces of topological insulator Sb₂Te₃
(in review)

O. Adak, **E. P. Rosenthal**, J. Meisner, E. Andrade, A. Pasupathy, C. Nuckolls, M. S. Hybertsen, L. Venkataraman
Flicker Noise as a Probe of Electronic Interaction at Metal-Single Molecule Interfaces
(in review)

E. P. Rosenthal, E. F. Andrade, C. J. Arguello, R. M. Fernandes, L. Y. Xing, X. C. Wang, C. Q. Jin, A. J. Millis, and A. N. Pasupathy
Doping dependence of nematicity in NaFe_{1-x}Co_xAs imaged with scanning tunneling spectroscopy
(in preparation)

Talks

“Visualization of electronic nematicity in the iron pnictides” APS March Meeting, San Antonio, 2015 (*invited*)

“Doping dependence of nematicity in NaFe_{1-x}Co_xAs imaged with scanning tunneling spectroscopy” APS March Meeting, Denver, CO, 2014

“Magnetic origin of electronic nematicity in NaFeAs” APS March Meeting, Baltimore, MD, 2013

“Direct visualization of high temperature electronic nematicity in NaFeAs” A3 Tokyo Meeting, Tokyo, Japan, 2013

“Imaging charge density wave nucleation in NbSe₂” APS March Meeting, Boston, MA, 2012

Posters

“Doping dependence of nematicity in NaFe_{1-x}Co_xAs imaged with scanning tunneling spectroscopy” FCMP Beijing Workshop, Beijing, CN, 2014

“Direct visualization of high temperature electronic nematicity in NaFeAs” Gordon Research Conference on Superconductivity, Les Diablerets, CH, 2013

“Magnetic origin of electronic nematicity in NaFeAs” Gotham-Metro Condensed Matter Meeting, New York, NY, 2012