Columbia Department of Physics PhD Graduates 2017

Andrea Petri
"Non-Gaussian information in cosmology with weak gravitational lensing."
Dissertation Sponsor and Research Advisors: Professors Lam Hui and Morgan May

David Kaleko
"MicroBooNE: The search for the MiniBooNE low energy excess."
Dissertation Sponsor and Research Advisor: Professor Mike Shaevitz

Andrey Vlasov
"Outflows from compact objects in supernovae and novae."
Dissertation Sponsor and Research Advisor: Professor Brian Metzger

Steven Alkire
"ATLAS levels up: Early Searches for diboson resonances in semi-hadronic decay channels at sqrt(s) = 13 TeV center of mass energy."
Dissertation Sponsor and Research Advisor: Professor Emlyn Hughes

Ting Ting Wang
"Heavy flavor jet quenching in relativistic heavy ion collisions at the LHC."
Dissertation Sponsor and Advisor: Professor Brian Cole
Ori Weiner
"Gamma-ray burst science in the era of IACT arrays."
Dissertation Sponsor: Professor Gustaaf Brooijmans
Research Advisor: Professor Reshmi Mukherjee

Andrew Brainerd
"Topics in cosmology and quantum mechanics: Entanglement harvesting and cosmic bubble collisions"
Dissertation Sponsor and Research Advisor: Professor Brian Greene

Yuran “Alex” Chen
"Particle-in-cell simulation and its applications to magnetosphere problems in astrophysics."
Dissertation Sponsor and Research Advisor: Professor Andrei Beloborodov

Ziyuan Bai
"Neutral kaon mixing from lattice QCD."
Dissertation Sponsor and Research Advisor: Professor Norman Christ

Derek Araujo
"Data analysis for the E and B Experiment and instrumentation development for cosmic microwave background polarimetry."
Dissertation Sponsor and Research Advisor: Professor Amber Miller

Carlos Forsythe
"Fractal magnetic subband structure in dielectric superlattice graphene systems."
Dissertation Sponsor and Research Advisor: Professor Cory Dean
David Murphy

"Precision light flavor physics from lattice QCP."

Dissertation Sponsor and Research Advisor: Professor Robert Mawhinney

Antonio Levy

"Optical spectroscopy of emergent phases in the second Landau Level."

Dissertation Sponsor and Research Advisor: Professor Aron Pinczuk

Ryne Carbone

"A search for new diboson resonances in the boosted semi-leptonic final state at \(\sqrt{s} = 13\) TeV with the ATLAS detector."

Dissertation Sponsor and Research Advisor: Professor John Parsons

Sky Cheung

"Understanding iron-pnictide superconductors using Muon spin rotation and scanning tunneling microscopy with nonconvex optimization."

Dissertation Sponsor and Research Advisor: Professors Abhay Pasupathy and Yasutomo Uemura

Suk Hyun Kim

"Probing transition metal dichalcogenide monolayers and heterostructures by polarization-resolved spectroscopy."

Dissertation Sponsor and Research Advisor: Professors Tony Heinz

David Caratelli

"Study of electromagnetic interactions in the microBooNE liquid argon time projection chamber."

Dissertation Sponsor and Research Advisor: Professors Tony Heinz