Alex Pandya

Curriculum Vitae

Princeton University Department of Physics
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Education

PhD in Physics, Princeton University	2017-Present
MA in Physics, Princeton University	2017-2019
BS in Physics, University of Illinois at Urbana-Champaign	2013-2016

Honors and Awards

NSF Graduate Research Fellow	2019-2022
Sigma Xi Research Honor Society – Full Member	2019-2020
DOE Computational Science Graduate Fellowship – *Honorable Mention*	2017
Robert E. Hetrick Outstanding Senior Thesis Award	2017
UIUC Physics Dept. NSF Fellowship Precompetition – *1st Place*	2016
Phi Beta Kappa Honor Society *Member*	2016
Phi Kappa Phi Honor Society *Member*	2016
LGS Innovations National STEM Scholarship	2016
Lorella M. Jones Summer Research Fellowship	2015
Phi Eta Sigma Honor Society *Member*	2014-2016
Dean's List	2013-2016
Chancellor's Scholar	2013-2014
N & D Waffle Scholarship	2013

Publications and Presentations

Journal articles

1. Andrew Marszewski, Ben S. Prather, Abhishek V. Joshi, **Alex Pandya**, Charles F. Gammie, "Updated Transfer Coefficients for Magnetized Plasmas" *ApJ*, 921:17 (2021)

2. **Alex Pandya**, Frans Pretorius, "Numerical exploration of first-order relativistic hydrodynamics" *Phys. Rev. D* **104** (2021) 023015 [2104.00804].

3. **Alex Pandya**, Frans Pretorius, "The Rotating Black Hole Interior: Insights from Gravitational Collapse in AdS_3" *Phys. Rev. D* **101** (2020) 104026, [2002.07130].

4. **Alex Pandya**, Mani Chandra, Abhishek Joshi, Charles F. Gammie, "Numerical Evaluation of the Relativistic Magnetized Plasma Susceptibility Tensor and Faraday Rotation Coefficients" *ApJ*, 868:13 (2018)

5. **Alex Pandya**, Zhaowei Zhang, Mani Chandra, Charles F. Gammie, "Polarized Synchrotron Emissivities and Absorptivities for Relativistic Thermal, Power-Law, and Kappa Distribution Functions" *ApJ*, 822:34 (2016)

Talks

1. **Alex Pandya**, Frans Pretorius, "Numerical methods for relativistic dissipative fluids", *APS April Meeting 2021 (virtual)*

Poster Presentations

1. **Alex Pandya**, Zhaowei Zhang, Mani Chandra, Charles F. Gammie, "Polarized Synchrotron Emissivities and Absorptivities for Relativistic Thermal, Power-Law, and Kappa Distribution Functions" (2016)

2. **Alex Pandya**, Ryan Jacobs, Jason Fong, Neelu Puri, "Synergistic Effects of c-Met and BRAF Inhibitors in Overcoming Tyrosine Kinase Inhibitor Resistance in Malignant Melanoma" (2012)

Teaching

Assistantship in Instruction, Physics 104: General Physics II 2021
Assistantship in Instruction, Physics 103: General Physics I 2020
Assistantship in Instruction, Physics 115: Physics for Future Leaders 2019
Assistantship in Instruction, Physics 102: Introductory Physics II 2019
Assistantship in Instruction, Physics 103: General Physics I 2018

Outreach

Princeton Physics Ambassador 2021-Present

Worked to plan and staff a series of informational webinars for underrepresented minorities interested in pursuing graduate degrees in physics.

ReMatch Peer Mentor 2018-2019

Mentoring freshmen and sophomore undergraduates as they begin their first research experiences in science, with the aim of bridging the gap between faculty advisors and inexperienced new researchers.

Princeton Society of Physics Students Mentor 2018-2019

Mentoring undergraduate physics majors as they begin coursework and search for research opportunities.

Cosmology for Kids 2018

Presented and explained cosmology-themed physics demonstrations to parents and children of all ages.

YMCA of Trenton STEM Camp 2018

Designed curricula for and instructed children aged 5-13 – primarily from communities underrepresented in STEM – with the aim of making science accessible and interesting.

UIUC Physics Peer Mentor 2016

Mentored incoming undergraduate physics majors as they began their first semester of college.

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