

# David Hendel

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Columbia University  
Department of Astronomy  
Mail Code 5246  
550 West 120th Street  
New York, NY 10027 USA

phone: 828-455-0893  
office: 1411 Pupin Hall  
hendel@astro.columbia.edu  
US Citizen

## CURRENT POSITION

Ph.D. candidate, Columbia University Department of Astronomy  
Advisor: Kathryn V. Johnston; degree anticipated August 2018  
Thesis title: Dynamics and detection of tidal debris

## EDUCATION

M.Phil., Astronomy, Columbia University, New York, NY 2014  
M.S., Astronomy, Columbia University, New York, NY 2013  
B.S., Physics, with Distinction; Minor, Mathematics, The University of North Carolina at Chapel Hill, Chapel Hill, NC 2011

## HONORS AND AWARDS

Yeh Family Fellowship, 2013-2014  
Columbia University Faculty Fellowship, 2011-2012  
UNC-CH Summer Undergraduate Research Fellowship, 2011  
North Carolina Space Grant Undergraduate Research Scholarship, 2011  
Sigma Xi Grant in Aid of Research, 2011

## PUBLICATIONS

Erin Kado-Fong, Jenny E. Greene, **David Hendel**, Adrian M. Price-Whelan, Johnny P. Greco, Andy D. Goulding, Song Huang, Kathryn V. Johnston, Yutaka Komiyama, Chien-Hsiu Lee, Nate B. Lust, Michael A. Strauss, and Masayuki Tanaka. Tidal Features at  $0.05 < z < 0.45$  in the Hyper Suprime-Cam Subaru Strategic Program: Properties and Formation Channels. *ArXiv e-prints*, art. arXiv:1805.05970, May 2018

Callie E. Hood, Sheila J. Kannappan, David V. Stark, Ian P. Dell’Antonio, Amanda J. Moffett, Kathleen D. Eckert, Mark A. Norris, and **David Hendel**. The Origin of Faint Tidal Features around Galaxies in the RESOLVE Survey. *ApJ*, 857, April 2018. doi: 10.3847/1538-4357/aab719

**David Hendel**, Victoria Scowcroft, Kathryn V. Johnston, Mark A. Fardal, Roeland P. van der Marel, Sangmo Tony Sohn, Adrian M. Price-Whelan, Rachael L. Beaton, et al. SMHASH: Anatomy of the Orphan Stream using RR Lyrae stars. *ArXiv e-prints*, November 2017

**David Hendel** and Kathryn V. Johnston. Tidal debris morphology and the orbits of satellite galaxies. *MNRAS*, 454:2472–2485, December 2015. doi: 10.1093/mnras/stv2035

Amanda J. Moffett, Sheila J. Kannappan, Andreas A. Berlind, Kathleen D. Eckert, David V. Stark, **David Hendel**, Mark A. Norris, and Norman A. Groggin. ECO and RESOLVE: Galaxy Disk Growth in Environmental Context. *ApJ*, 812, October 2015. doi: 10.1088/0004-637X/812/2/89

Adrian M. Price-Whelan, David W. Hogg, Kathryn V. Johnston, and **David Hendel**. Inferring the Gravitational Potential of the Milky Way with a Few Precisely Measured Stars. *ApJ*, 794, October 2014. doi: 10.1088/0004-637X/794/1/4

## SELECTED PRESENTATIONS

“Tidal debris morphology and the orbits of satellite galaxies,” *Princeton University, Princeton, NJ*, November 2017

“Dark Matters,” *Macaulay Honors Seminar, American Museum of Natural History, New York, NY*, April 2016

“SMHASH: The Orphan Stream,” *Stream Team meeting, Columbia University, New York, NY*, June 2016

“Tidal debris morphology and the orbits of satellite galaxies,” *Mocking the Universe, Space Telescope Science Institute, Baltimore, MD*, June 2015

“Tidal debris morphology and the orbits of satellite galaxies,” *CU-PUC Joint Meeting, Pontificia Universidad Catolica de Chile, Santiago, Chile*, May 2015

“Tidal debris morphology and the orbits of satellite galaxies,” *UNC Chapel Hill, Chapel Hill, NC*, May 2015

“Tidal debris morphology and the orbits of satellite galaxies,” *Carnegie Observatories, Pasadena, CA*, March 2015

“An extremely gas-rich galaxy in the COSMOS field,” *Carnegie Observatories, Pasadena, CA*, March 2015

“Using tidal debris morphology to constrain the orbital parameters of infalling substructures,” *Baryons at low densities: the stellar halos around galaxies*, *ESO Headquarters, Garching, Germany*, February 2015

## RESEARCH EXPERIENCE

Graduate student, Columbia University

Galactic dynamics, advisor: K. V. Johnston, 2011-

Radio source detection, advisor: J. van Gorkum, 2012-2013

Undergraduate Research Assistant, University of North Carolina at Chapel Hill

Department of Mathematics, Fluid dynamics, advisor: R.M. McLaughlin, 2008-2011

Department of Physics & Astronomy, Neutrino physics, advisor: J. Wilkerson, 2009

Department of Physics & Astronomy, Galaxy formation, advisor: S. J. Kannappan, 2010-2011

## TEACHING EXPERIENCE & TRAINING

Instructor, *Astronomy Laboratory*, Fall 2012 - Spring 2014

Teaching Assistant, *Earth, Moon and Planets*, instructor: J. Applegate, Spring 2012

Teaching Assistant, *Stars & Atoms*, instructor: K. V. Johnston, Fall 2011

Undergraduate assistant, Computational Astronomy and Physics (CAP) REU, UNC-CH, Summer 2011

## TECHINICAL EXPERIENCE

Programming: Python, FORTRAN, IDL

Software Packages: L<sup>A</sup>T<sub>E</sub>X, AstroPy, SciPy, Scikit Learn, emcee, IRAF, Photoshop CS5, DAOPHOT, Git, multiprocessing for HPC

## SERVICE

Assistant Director of Outreach, Columbia University Department of Astronomy, 2017-2018

Graduate Student Representative to the Faculty, Columbia University Department of Astronomy, 2013-2017

## PUBLIC OUTREACH

Outreach event organizer, Columbia University Public Outreach, recurring 2011-2018

Science advisor for a Columbia University student film, “Moonshot,” 2017

“Dark Matters,” guest speaker for South Caldwell High School STEM Advanced Placement classes, Hudson, NC, 2017

“Re-Tuning the Hubble Diagram,” talk for Astronomy On Tap, The Way Station, NY, NY, 2016

“Re-Tuning the Hubble Diagram,” talk for Columbia University Public Outreach, 2015

“Voyager’s Voyage,” talk for Astronomy On Tap, Ding Dong Lounge, NY, NY, 2014

Guest astronomer accompanying the Sufjan Stevens collaboration *Planetarium*, Brooklyn Academy of Music, NY, NY 2014

Guest astronomer as part of an immersive film experience, “Lost Children,” The Film Society of Lincoln Center, NY, NY, 2013

World Science Festival star party site organizer, Brooklyn Bridge Park, NY, NY, 2013

“Voyager’s Voyage,” talk for Columbia University Public Outreach, 2013

Volunteer, space shuttle *Enterprise* exhibit premier, USS *Intrepid*, NY, NY, 2012

Venus Transit viewing site organizer, Union Square, NY, NY, 2012

## MEDIA COVERAGE

“Watch the Milky Way Eat Its Neighbors,” *Scientific American*, 2014

## PROFESSIONAL MEMBERSHIPS

Junior Member, American Astronomical Society

Member, New York Academy of Sciences

## COLLABORATIONS

*WFIRST* Infrared Nearby Galaxy Survey (WINGS) Science Investigation Team

*Spitzer* Merger History and Shape of the Galactic Halo (SMHASH)

Hyper Suprime-Cam (HSC) Subaru Strategic Survey External Collaborator

The COSMOS HI Large Extragalactic Survey (CHILES)

## REFERENCES

**Prof. Kathryn V. Johnston**  
Department of Astronomy  
Columbia University  
Mail Code 5246  
550 West 120th Street, Pupin Hall  
New York, NY 10027, USA  
kvj@astro.columbia.edu

**Prof. Sheila J. Kannappan**  
Department of Physics & Astronomy  
University of North Carolina at Chapel Hill  
290 Phillips Hall, CB 3255  
Chapel Hill, NC 27599, USA  
sheila@physics.unc.edu

**Dr. Victoria Scowcroft**  
Department of Physics  
University of Bath  
3 West Claverton Down  
Bath, BA2 7AY, United Kingdom  
v.scowcroft@bath.ac.uk