

Duncan A. Campbell

Astronomy Department
52 Hillhouse Avenue
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EDUCATION

- Yale University, New Haven, CT — PhD. Candidate, 2011-present
Advisors: Nikhil Padmanabhan, Frank C. van den Bosch
Thesis: The Galaxy-Halo Connection in a Universe with Assembly Bias, 2017
- Yale University, New Haven, CT — Master of Science, 2015
- Yale University, New Haven, CT — Master of Philosophy, 2015
- University of Michigan, Ann Arbor, MI — Bachelor of Science, 2011
Physics and Astrophysics, Highest Honors
Mentor: Marta Volonteri

RESEARCH INTERESTS

- Galaxy formation and evolution
- Cosmology and large-scale structure
- Dark matter haloes and substructure

REFERENCES

- Nikhil Padmanabhan
Associate Professor of Physics and Astronomy, Yale University
52 Hillhouse Avenue
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- Frank C. van den Bosch
Associate Professor of Astrophysics, Yale University
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- Andreas Berlind
Associate Professor of Physics and Astronomy, Vanderbilt University
2401 Vanderbilt Place
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- Andrew Hearin
YCAA Postdoctoral Fellow, Yale University
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SCIENTIFIC TALKS

- University of Utah, November 2016
- Stanford University Cosmology Seminar, November 2016
- University of Michigan, November 2016
- New York University CCPP Seminar, November 2016
- *Connecting Galaxies to Dark Matter Haloes in a Universe with Assembly Bias*
University of Pittsburgh Astronomy Seminar, October 2016
- *The Visible and the Invisible: Understanding Galaxy Evolution Through the Galaxy-Dark Matter Connection*
CUNY CCNY, September 2016
- *Abundance Matching in a Universe with Assembly Bias*
SnowPAC: The Galaxy-Halo Connection, March 2016
- *Studying Galaxy Quenching Models with Group Catalogues*
In the Footsteps of Galaxies, September 2015
- *An Empirical Model of Galaxy Quenching*
Steward/NOAO Galaxy Group, May 2015
- *Galactic Conformity in Group Catalogues*
OSU Assembly Bias Workshop, November 2014

PROFESSIONAL ACTIVITIES

- Journal Referee, MNRAS, 2015-present
- Yale Galaxy Lunch, Board Member, 2015-present
- SciCoder Workshop, New York, 2014
- School on Dark Energy and Galaxy Redshift Surveys, Corfu Greece, 2014
- Summer School in Statistics for Astronomers VIII, Pennsylvania State University, 2012

TEACHING

- Yale University - Teaching Fellow
designed weekly discussion sessions, led homework/exam review sessions, developed supplemental and complementary curricula, supervised observing runs, graded
 - Astronomy 170: Introduction to Cosmology – Section Leader
 - Astronomy 120: Galaxies and the Universe – Section Leader
 - Astronomy 155: Introduction to Astronomical Observing – Laboratory Leader
 - Astronomy 160: Controversies in Astrophysics – Section Leader
 - Astronomy 135: Archaeoastronomy – Section Leader
- University of Michigan - Teaching Assistant
ran observing sessions, supervised laboratory work, led homework/exam review sessions, graded
 - Astronomy 102: Introductory Astronomy: Stars, Galaxies, and the Universe – Classroom Leader

SKILLS

- Programming Languages: Python (Numpy, SciPy), Cython, C/C++, IDL, R
- Parallel Programming: OpenMP, Python Multiprocessing
- Databases: SQL
- Scientific Computing: UNIX, GNU/Linux
- Project Management Tools: distributed version control, unit-testing

OBSERVING EXPERIENCE

- SMARTS 0.9 meter, 7 nights imaging

HONORS AND AWARDS

- Yale Gruber Science Fellow
- University of Michigan Astronomy Research Award
- University of Michigan Dean's List
- University of Michigan University Honors
- University of Michigan Scholar's Award

PUBLICATIONS

- [Assessing Colour-dependent Occupation Statistics Inferred from Galaxy Group Catalogues](#)
D. Campbell, F.C. van den Bosch, A. Hearin, N. Padmanabhan, A. Berlind, H. J. Mo, J. Tinker, 2015, MNRAS, 452:444
- [The Galaxy Clustering Crisis](#)
D. Campbell, et. al., 2016 (in preparation, available upon request)
- [High-Precision Forward Modeling of Large-Scale Structure: An open-source approach with Halotools](#)
A. Hearin, **D. Campbell**, E. Tollerud, et al., 2016, submitted, arXiv:1606.04106
- [Approximate Bayesian Computation in Large Scale Structure: constraining the galaxy-halo connection](#)
C. Hahn, M. Vakili, K. Walsh, A. Hearin, D. Hogg, **D. Campbell**, 2016, submitted, arXiv:1607.01782
- [Introducing decorated HODs: modelling assembly bias in the galaxy-halo connection](#)
A. Hearin, A. Zentner, F. C. van den Bosch, **D. Campbell**, E. Tollerud, 2016, MNRAS, 460:2552
- [On the segregation of dark matter substructure](#)
F. C. van den Bosch, F. Jiang, **D. Campbell**, and P. Behroozi, 2016, MNRAS, 455:158
- [Coming of age in the dark sector: how dark matter haloes grow their gravitational potential wells](#)
F. C. van den Bosch, F. Jiang, A. Hearin, **D. Campbell**, D. Watson, N. Padmanabhan, 2014, MNRAS, 445:1713
- [Massive Black Holes in Stellar Systems: “Quiescent” Accretion and Luminosity](#)
M. Volonteri, M. Dotti, **D. Campbell**, M. Mateo, 2009, APJ, 730:145