

# SHANY DANIELI

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## EDUCATION

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Ph.D, Physics, Yale University Advisor: Prof. Pieter van Dokkum	in progress expected March 2020
M.Phil, Physics, Yale University	2015
M.Sc, Physics, Yale University	2014
B.Sc, Physics & Astronomy, <i>Magna Cum Laude</i> , Tel Aviv University	2013

## RESEARCH INTERESTS

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Galaxy formation and evolution; large scale structure; dark matter; dwarf galaxies; ultra-diffuse galaxies; low surface brightness imaging; galactic dynamics; instrumentation.

## HONORS & AWARDS

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CCAPP Price Prize in Cosmology and AstroParticle Physics	2019
Leigh Paige Award, Yale Physics Department	2013
Merit-based Memorial Scholarship, Tel Aviv University	2012
Honors Program for undergraduate students, Tel Aviv University	2010-2012
Dean's list, B.Sc in Physics (top 5%), Tel Aviv University	2012
Head of Intelligence Directorate Prize for Creativity, winning project for significant breakthroughs of intelligence	2009
Honored Cadet, officers training course (BAHAD 1)	2007

## SELECTED TALKS

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<i>The Dragonfly Wide Field Survey - 400 square degrees imaged to 31 mag/arcsec<sup>2</sup></i> - AAS 235, Hawaii	2020
<i>TBD</i> - Stony Brook University ( <b>Invited</b> )	2020
<i>TBD</i> - BGU, Israel ( <b>Invited</b> )	2019
<i>Low mass galaxies beyond the Local Group with Dragonfly</i> - Subaru Telescope Anniversary, Hawaii	2019
<i>Diffuse galaxies as a probe for dark matter</i> - Thunch, Princeton University	2019
<i>Diffuse galaxies as a probe for dark matter</i> - KIPAC Tea, Stanford ( <b>Invited</b> )	2019
<i>Galaxies Missing Dark Matter</i> - Lunch talk, UC Berkeley	2019
<i>Diffuse galaxies as a probe for dark matter</i> - Astronomy Tea Talk - Caltech, CA	2019
<i>Galaxies Missing Dark Matter</i> - Keck Science Meeting - UCLA	2019
<i>Diffuse galaxies as a probe for dark matter</i> - UC Santa Cruz	2019
<i>Diffuse galaxies as a probe for dark matter</i> - CCAPP Price Prize lecture, Ohio State ( <b>Invited</b> )	2019
<i>Discovering Low Surface Brightness Galaxies with Dragonfly</i> - IAU Symposium 355 ( <b>Invited</b> )	2019
<i>Galaxies Missing Dark Matter</i> - IAU Symposium 355	2019
<i>Galaxies Missing Dark Matter</i> - ITC Luncheon, Harvard University ( <b>Invited</b> )	2019
<i>Hunting Low Surface Brightness Galaxies with Dragonfly</i> - Astronomy Seminar, UConn ( <b>Invited</b> )	2018
<i>The Size-Luminosity Relation in the Coma Cluster</i> - Lorentz Center workshop, Leiden ( <b>Invited</b> )	2018
<i>UDGs in the Dragonfly Wide-Field Survey</i> - Lorentz Center workshop, Leiden ( <b>Invited</b> )	2018

<i>Hunting Low Surface Brightness Galaxies with Dragonfly</i> - DES DR1 meeting, U.Chicago	2018
<i>Hunting Low Surface Brightness Galaxies with Dragonfly</i> - Cosmo Lunch - The Hebrew University	2017
<i>The Luminosity Function of the M101 Group</i> - Lunch Talk - Harvard University	2016
<i>Exploring the Low Surface Brightness Universe with the Dragonfly Telescope</i> - Lunch talk, TAU	2016
<i>Luminosity Spectrum from Acollinearity Using Bhabha Events at CLIC</i> - DESY, Zeuthen	2011
<i>Measurement of Differential Luminosity Using Bhabha Events at the Future e+e- Collider</i> - CERN	2011

## OBSERVATIONAL EXPERIENCE

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**The Dragonfly Telephoto Array:** operational lead (2017-now); target selection; operations; staging and management; data reduction; data analysis.

**Keck Telescope** (KCWI, DEIMOS and LRIS): a total of 20 nights, including 6 as sole observer.

**Hubble Space Telescope:** extensive experience with *HST*/ACS data.

## TEACHING, SERVICE AND LEADERSHIP

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AAS 235th Meeting Special Session Organizer and Host	2020
Journal Referee: ApJ, ApJS, MNRAS	2017-2019
Mentor, Banneker & Aztlán Summer Program, Harvard University	2016
Teaching Assistant, Phys 200: Fundamentals of Physics, Yale	2015
Teaching Assistant, Phys 180: University Physics, Yale	2014
Teaching Assistant, Phys 171: University Physics for the Life Sciences II, Yale	2014
Teaching Assistant, Phys 170: University Physics for the Life Sciences I, Yale	2013
Mentor, Women In Science At Yale (WISAY), Yale	2013-2014
Teaching Assistant, Physics 3 for Engineers, Tel Aviv University	2011
Teaching Assistant, Mathematical Methods for Physicists 2, Tel Aviv University	2010
Teaching Assistant, Electronics, Tel Aviv University	2010

## PUBLICATIONS (22 TOTAL, 6 FIRST AUTHOR)

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### LEAD AUTHOR

- Danieli, S.**, van Dokkum, P., Conroy, C., Abraham, R., Romanowsky, A.J. and Dolphin, A., “*The Tip of the Red Giant Branch Distance to the Dark Matter Deficient Galaxy NGC1052-DF4 from Deep HST data*”, 2019, ApJL, submitted (arXiv: 1910.07529).
- Danieli, S.**, Lokhorst, D., van Dokkum, Abraham, R., P., Conroy, C., Merritt, A., Greco, J.P., Gilhuly, C., Zhang, J. and Miller, T., “*The Dragonfly Wide Field Survey. I. Telescope, Survey Design and Data Characterization*”, ApJ, to be submitted in November 2019.
- Danieli, S.**, van Dokkum, P., Conroy, C., Abraham, R. and Romanowsky, A.J., “*Still Missing Dark Matter: KCWI High-Resolution Stellar Kinematics of NGC1052-DF2*”, 2019, ApJL, 874, 12.
- Danieli, S.** and van Dokkum, P., “*Revisiting the Size-Luminosity Relation in the Era of Ultra Diffuse Galaxies*”, 2019, ApJ, 875, 2.
- Danieli, S.**, van Dokkum, P. and Conroy, C., “*Hunting Faint Dwarf Galaxies in the Field Using Integrated Light Surveys*”, 2018, ApJ, 856, 69.
- Danieli, S.**, van Dokkum, P., Merritt, A., Abraham, R., Zhang, J., Karachentsev, I. D., and Makarova, L. N. “*The Dragonfly Nearby Galaxies Survey. III. The Luminosity Function of the M101 Group*”, 2017, ApJ, 837, 136

## CO-AUTHOR

7. Gilhuly, C., Hendel, D., Merritt, A., Abraham, R., **Danieli, S.**, Lokhorst, D., van Dokkum, P., Conroy, C., Greco, J.P., “*First results from the Dragonfly Edge-on Galaxies Survey: Shaping the outer disc of NGC 4565 via accretion*”, 2019, ApJ, submitted (arXiv:1910.05358).
8. van Dokkum, P., Gilhuly, C. Bonaca, A., Merritt, A., **Danieli, S.**, Lokhorst, D., Abraham. R., Conroy, C., Greco, J.P., “*Dragonfly Imaging of the Galaxy NGC5907: a revised view of the iconic stellar stream*”, 2019, ApJL, 883, 32.
9. van Dokkum, P., Wasserman, A., **Danieli, S.**, Abraham, R., Brodie, J., Conroy, C., Forbes, D., Martin, C., Matuszewski, M., Romanowsky, A.J., Villaume, A., “*Spatially-resolved Stellar Kinematics of the Ultra Diffuse Galaxy Dragonfly 44. I. Observations, Kinematics, and Cold Dark Matter Halo Fits*”, 2019, ApJ, 880, 91.
10. van Dokkum, P., **Danieli, S.**, Abraham, R., Conroy, C. and Romanowsky, A.J., “*A Second Galaxy Missing Dark Matter in the NGC1052 Group*”, 2019, ApJL, 874, 5.
11. van Dokkum, P., **Danieli, S.**, Romanowsky, A.J. Abraham, R. and Conroy, C., “*The Distance to NGC 1042 in the Context of its Proposed Association with the Dark Matter-deficient Galaxies NGC 1052-DF2 and NGC 1052-DF4*”, 2019, RNAAS, 3b, 29.
12. van Dokkum, P., **Danieli, S.**, Cohen, Y., Romanowsky, A.J, Conroy, C., “*The Distance of the Dark Matter Deficient Galaxy NGC 1052—DF2*”, 2018, ApJ, 864, 18.
13. Wasserman, A. , Romanowsky, A.J., Brodie, J., van Dokkum, P., Conroy, C., Abraham, R., Cohen, Y., **Danieli, S.** , “*A Deficit of Dark Matter from Jeans Modeling of the Ultra-diffuse Galaxy NGC 1052-DF2*”, 2018, ApJ, 863, 15.
14. van Dokkum, P., Cohen, Y., **Danieli, S.**, Romanowsky, A., Abraham, R., Brodie, J., Conroy, C., Kruijssen, J. M. D., Lokhorst, D., Merritt, A., Mowla, L., Zhang, J., “*A Revised Velocity for the Globular Cluster GC-98 in the Ultra Diffuse Galaxy NGC 1052-DF2*”, 2018, RNAAS, 2b, 54.
15. Cohen, Y., van Dokkum, P., **Danieli, S.**, Romanowsky, A.J., Abraham, R., Merritt, A., Zhang, J., Mowla, L., Kruijssen, J. M. D., Conroy, C., Wasserman, A., “*The Dragonfly Nearby Galaxies Survey. V. HST/ACS Observations of 23 Low Surface Brightness Objects in the Fields of NGC1052, NGC1084, M96, and NGC4258*”, 2018, ApJ, 868, 96.
16. Abraham, R., **Danieli, S.**, van Dokkum, P., Conroy, C., Kruijssen, J., Cohen, Y., Merritt, A., Zhang, J., Lokhorst, D., Mowla, L., Brodie, J., Romanowsky, A. J., Janssens, S., “*The Maybe Stream: A Possible Cold Stellar Stream in the Ultra-diffuse Galaxy NGC1052-DF2*”, 2018, RNAAS, 2b, 16.
17. van Dokkum, P., Cohen, Y., **Danieli, S.**, Kruijssen, J. M. D., Romanowsky, A. J., Merritt, A., Abraham, R., Brodie, J., Conroy, C., Lokhorst, D., Mowla, L., O’Sullivan, E., Zhang, J., “*An Enigmatic Population of Luminous Globular Clusters in a Galaxy Lacking Dark Matter*”, 2018, ApJ, 856, 30.
18. van Dokkum, P., **Danieli, S.**, Cohen, Y., Merritt, A, Romanowsky, A.J., Abraham, R., Brodie, J., Conroy, C., Lokhorst, D., Mowla, L., O’Sullivan, E., Zhang, J., “*A galaxy lacking dark matter*”, 2018, Nature, 555, 629.
19. van Dokkum. P., Abraham, B., Romanowsky, A.J., Brodie, J., Conroy, C., **Danieli, S.**, Lokhorst, D., Merritt, A., Mowla. L., Zhang, J., “*Extensive Globular Cluster Systems Associated with Ultra Diffuse Galaxies in the Coma Cluster*”, 2017, ApJL, 844, 11.
20. Abraham, R., van Dokkum, P., Conroy, C., Merritt, A., Zhang, J., Lokhorst, D., **Danieli, S.**, Mowla, L., “*Future Prospects: Deep Imaging of Galaxy Outskirts using Telescopes Large and Small*”, 2017, ASSL, 434, 333.
21. Merritt, A., van Dokkum, P., **Danieli, S.**, Abraham, R., Zhang, J., Karachentsev, I. D., and Makarova, L. N., “*The Dragonfly Nearby Galaxies Survey. II. Ultra-Diffuse Galaxies near the Elliptical Galaxy NGC 5485*”, 2016, ApJ, 833, 168.
22. van Dokkum, P., Abraham, R., Brodie, J., Conroy, C., **Danieli, S.**, Merritt, A., Mowla, L., Romanowsky, A., Zhang, J., “*A High Stellar Velocity Dispersion and ~100 Globular Clusters for the Ultra-diffuse Galaxy Dragonfly 44*”, 2016, ApJL, 828, L6.

## WORK EXPERIENCE

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Physicist and analyst, Prime Minister's Office, Israel	2011-2013
Head of training section, Analysis & Research Department, Military Intelligence Directorate, IDF	2008-2009
Analysis Officer, exclusive team in the Analysis & Research Department	2004-2008