

# SHANY DANIELI

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## EDUCATION

- 2015 – Present      *Yale University*  
PhD candidate in Physics, expected 2020  
Advisor: Prof. Pieter van Dokkum
- 2014 – 2015      *Yale University*, M.Phil Physics
- 2013 – 2014      *Yale University*, M.Sc Physics
- 2009 – 2012      *Tel Aviv University*  
B.Sc, Physics & Astronomy (Magna Cum Laude)
- 2004 – 2005      *The Hebrew University of Jerusalem*  
Cadet in IDF Talpiot Program

## RESEARCH INTERESTS

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

## SELECTED TALKS

- IAU Symposium 355 - ‘The Realm of the Low Surface Brightness Universe’ (**Invited talk**)      **2019**  
‘*TBD*’
- IAU Symposium 353 - ‘Galactic Dynamics in the Era of Large Surveys’      **2019**  
‘*TBD*’
- Harvard University, ITC Luncheon (**Invited talk**)      **2019**  
‘*Galaxies Missing Dark Matter*’
- UConn, Astronomy Seminar (**Invited talk**)      **2018**  
‘*Hunting Low Surface Brightness Galaxies with the Dragonfly Telephoto Array*’
- The Lorentz Center, Leiden - ‘The Bewildering Nature of Ultra-diffuse Galaxies’      **2018**  
‘*The Size-Luminosity Relation in the Coma Cluster*’
- The Lorentz Center, Leiden - ‘The Bewildering Nature of Ultra-diffuse Galaxies’      **2018**  
‘*Ultra Diffuse Galaxies in the Dragonfly Wide-Field Survey*’
- University of Chicago - ‘Near-Field Cosmology with the Dark Energy Survey’s DR1 ’      **2018**  
‘*Hunting Low Surface Brightness Galaxies in the Local Volume with the Dragonfly Telephoto Array*’

The Hebrew University of Jerusalem, Cosmo Lunch ( <b>Invited talk</b> ) 'Hunting Low Surface Brightness Galaxies with the Dragonfly Telephoto Array'	<b>2017</b>
Harvard-Smithsonian Center for Astrophysics, Lunch Talk 'The Luminosity Function of the M101 Group'	<b>2016</b>
Tel Aviv University, Lunch Talk 'Exploring the low surface brightness universe with the Dragonfly Telescope'	<b>2016</b>
DESY, Zeuthen, 20 <sup>th</sup> FCAL Collaboration Workshop 'Luminosity Spectrum from Acollinearity Using Bhabha Events at CLIC'	<b>2016</b>
CERN, Geneva, LCD meeting 'Studies on the Measurement of Differential Luminosity Using Bhabha Events at the Future $e+e-$ Collider – CLIC'	<b>2011</b>

## PUBLICATIONS

### LEAD AUTHOR

1. **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
2. **Danieli, S.** and van Dokkum, P.  
*Revisiting the Size-Luminosity Relation in the Era of Ultra Diffuse Galaxies*  
2019, ApJ, 875, 2
3. **Danieli, S.**, van Dokkum, P. and Conroy, C.  
*Hunting Faint Dwarf Galaxies in the Field Using Integrated Light Surveys*  
2018, ApJ, 856, 69
4. **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

5. 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, submitted to ApJ (arXiv:1904.04838)
6. 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

7. 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

8. 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

9. 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

10. 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, Accepted to publication in ApJ, arXiv:1807.06016

11. 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

12. 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

13. 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

14. 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

15. 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*  
2016, arXiv: 1612.06415

## OBSERVATIONAL EXPERIENCE

The Dragonfly Telephoto Array, Keck Telescope (KCWI, DEIMOS and LRIS), Hubble Space Telescope.

## HONORS & AWARDS

- |           |   |
|-----------|---|
| 2013      | <i>Leigh Paige Award</i> , Yale Physics Department  |
| 2012      | <i>Merit-based Memorial Scholarship</i> , Tel Aviv University   |
| 2010-2012 | <i>Honors Program for undergraduate students</i> , Tel Aviv University  |
| 2010-2011 | <i>Dean's list, B.Sc in Physics (top 5%)</i> , Tel Aviv University  |
| 2009      | <i>Head of Intelligence Directorate Prize for Creativity</i> , Winning project for significant breakthroughs of intelligence.         |
| 2009      | <i>Merit Certificate from Head of Intelligence Directorate</i> , for exceptional contribution to the security of the state of Israel. |
| 2007      | <i>Honored Cadet</i> , officers training course (BAHAD 1).  |

## TEACHING & OUTREACH

- |             |  |
|-------------|--|
| Summer 2016 | <i>Banneker &amp; Aztlán Summer Program</i><br>Mentor  |
| 2013-2015   | <i>Yale University: Teaching Assistant</i><br>PHYS 200: Fundamentals of Physics<br>PHYS 180: University Physics<br>PHYS 171: University Physics for the Life Sciences II<br>PHYS 170: University Physics for the Life Sciences I |
| 2013-2014   | <i>Women In Science At Yale (WISAY)</i><br>Mentor  |
| 2010-2011   | <i>Tel Aviv University: Teaching Assistant</i><br>Physics 3 for Engineers<br>Mathematical Methods for Physicists 2<br>Electronics  |
| 2011        | <i>CERN, PH-LCD group</i><br>Advisors: Dr. Lucie Linssen & Dr. Konrad Elsener<br>CLIC Physics and Detectors study  |

## WORK EXPERIENCE

2011 – 2013

*Prime Minister's Office, Israel*

Physicist and analyst

2004-2009

*Israeli Defense Force, in an elite unit of the intelligence corps*

Discharge Rank: First Lieutenant. Performed several roles including:

Head of training section, Analysis & Research Department, Military Intelligence Directorate. Commanded 25 soldiers, including teaching high level technological and Intelligence subjects.

Analysis Officer, exclusive team in the Analysis & Research Department.