

## Husni Almoubayyed

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### EDUCATION

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- *PhD, Physics* 2016 – 2021  
Carnegie Mellon University, Pittsburgh, PA.
- *BSc (Hons), Physics with Astrophysics, with Honours of the First Class.* 2012 – 2016  
University of Glasgow, Glasgow, UK.

### RESEARCH

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- *McWilliams Center for Cosmology, Carnegie Mellon Univ.* Jan 2017 – Present  
LSST – Testing the impact of PSF modelling errors for weak lensing with LSST using Galsim. *Supervisor: Rachel Mandelbaum*
- *Institute for Gravitational Research, Univ. of Glasgow* Oct 2015 – Aug 2016  
LIGO – I worked on gravitational wave data analysis, particularly on investigating potential gravitational wave signal from the sun emitted by a magnetohydrodynamic dynamo. *Supervisor: Matthew Pitkin*
- *Institute for Computational Cosmology, Durham Univ.* Jun 2015 – Sep 2015  
DESI – I worked on fibre assignment in the Dark Energy Spectroscopic Instrument (DESI)'s Bright Galaxy Survey (BGS) group, investigating the impact of galaxy clustering on redshift incompleteness caused by galaxies that are not assigned fibres. *Supervisor: Shaun Cole*

### TALKS AND SEMINARS

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1. Challenges in DESI Fibre Assignment. *Institute for Computational Cosmology, Durham University, UK.* Sep 11, 2015
2. DESI Fibre Assignment and Mitigating Redshift Incompleteness. *12th International Symposium on Cosmology and Particle Astrophysics, Daejeon, South Korea.* Oct 13, 2015
3. Staring At The Sun: Solar Gravitational Waves. *University of Glasgow, UK* Dec 1, 2015

### CONFERENCE POSTERS

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1. Husni Almoubayyed, Matthew Pitkin. Solar Gravitational Waves. *NGCM Summer Academy, University of Southampton, UK.* Jun 21–25, 2016
2. Shaun Cole, Alex Smith, Husni Almoubayyed. Large Scale Halo Light Cones. *MPA/ESO/MPE/Excellence Cluster Universe Joint Conference: Theoretical and Observational Progress on Large-scale Structure of the Universe. Garching, Germany.* Jul 20–24, 2015

## TEACHING

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- Teaching Assistant, *Carnegie Mellon University*, Pittsburgh, PA
  - 33-121 Physics 1 for Science Students. Fall 2016
    - \* Rewrote computer labs for Fall 2017  
Available at [www.github.com/hsnee/Jupyterize33121](http://www.github.com/hsnee/Jupyterize33121)
    - \* Evaluation results: 9.4/10; 1.3  $\sigma$  (SD) above department average.
  - 33-122 Physics 2 for Biology and Chemistry Students. Spring 2017
- Teaching Assistant, *University of Glasgow*, Glasgow, UK.
  - Physics 1 AY 2015 – 2016
  - Physics 2 AY 2015 – 2016

## GRANTS AND AWARDS

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- Royal Astronomical Society travel grant. Aug 2015
- LSST DESC travel grant Apr 2017

## WORKSHOPS AND SUMMER SCHOOLS

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- LSST Hack Week *Fermilab, IL, USA*. Apr 2017
- Next Generation Computational Modelling Summer Academy *University of Southampton, Southampton, UK*. [Bursary funded] Summer 2016
- Next Generation Computational Modelling Summer Academy *University of Southampton, Southampton, UK*. [Bursary funded] Summer 2015
- 71st Scottish Universities Summer School in Physics *University of Strathclyde, Glasgow, UK*. [Bursary funded] Summer 2015

## COMPUTATION

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- *Github*: [www.github.com/hsnee](http://www.github.com/hsnee)
- *Programming Languages*: Python (IPython, Pandas, Scikit-Learn, PyCUDA, Fenics), C (OpenML, CUDA), Matlab, Mathematica.

## LEARNED SOCIETIES AND AFFILIATIONS

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- *LSST Dark Energy Scientific Collaboration*, Member. Jan 2017 – Present
- *Royal Astronomical Society*, Fellow. May 2015 – Present
- *American Physical Society*, Student Member. Apr 2015 – Present
- *Institute of Physics (UK)*, Student Member. Jan 2015 – Present
- *International Society on General Relativity and Gravitation*, Student Member. Nov 2015 – Present

Formerly:

- *LIGO Scientific Collaboration*, Member. Oct 2015 – Sep 2016
- *Institute of Mathematics and Its Applications*, Student Member. Nov 2015 – Dec 2016

## OUTREACH

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- Glasgow Science Festival, *Media Reporter*. Jun 2015  
I was an official media reporter for Glasgow Science Festival 2015, and wrote articles for the multi award-winning science communication magazine, The GIST (Glasgow Insight into Science & Technology). Available at [www.the-gist.org/author/hsnealmoubayed/](http://www.the-gist.org/author/hsnealmoubayed/)
- Science Connects, *STEM Ambassador*. May 2015 – Jun 2016  
I joined the STEM Ambassador program and became a STEM Ambassador for the West of Scotland in spring 2015; taking part in events at schools to encourage young students to pursue STEM topics.
- The GIST, *Specialist Editor*. Mar 2016 – Present  
I am a specialist editor for the GIST for articles on cosmology and gravitational-wave astrophysics.
- UKSEDS, *Assistant Officer* Jul 2016 – Mar 2016  
I became an Assistant Officer for UKSEDS in summer 2015, part of the international SEDS student space society, which supports students to get involved in projects, conferences and outreach events.
- WikiProject Physics, *Contributor* Jul 2016 – Present  
I am a member of WikiProject Physics. An online collaborative effort to increase the quality, breadth, and depth of wikipedia articles on the physical sciences.