Husni Almoubayyed

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EDUCATION

- ➤ *Ph.D., Physics*   2016 − 2021
- ➤ *M.S., Physics*   2016 − 2018
  Carnegie Mellon University, Pittsburgh, PA.

- ➤ *B.Sc. (Hons), Physics with Astrophysics, with Honours of the First Class.* 2012 − 2016
  University of Glasgow, Glasgow, UK.

RESEARCH

- ➤ *McWilliams Center for Cosmology, Carnegie Mellon Univ.* Jan 2017 − Present
  LSST − I work on (a) optimizing the observing strategy for the LSST for weak lensing science, (b) placing requirements on photometric redshift bias and scatter, and (c) Software development for Dark Energy Science Collaboration tools (Core Cosmology Library) *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*

PUBLICATIONS

1. Lochner, et al. 2018, Optimizing the LSST Observing Strategy for Dark Energy Science: DESC Recommendations for the Wide-Fast-Deep Survey, arXiv e-prints, arXiv:1812.00515

2. Chisari, et al. 2018, Core Cosmology Library: Precision Cosmological Predictions for LSST arXiv e-prints, arXiv:1812.05995

3. Abbott, et al. 2017, Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model , PhRvD, 95, 122003

4. Abbott, et al. 2017, Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO, PhRvD, 96, 22001

AWARDS & TRAVEL GRANTS

➢ LSSTC Data Science Fellowship   2018 − 2020

➢ LSST DESC travel grant   Apr, July 2017; Feb, Oct 2018

➢ CMU Provost/GSA travel grant   July 2017

➢ Carnegie Mellon University Teaching Assistant Award   2016 − 2017

➢ Royal Astronomical Society travel grant.   Aug 2015

TALKS

1. Data Visualization in Python (programming talk) *Carnegie Mellon University* Nov 29, 2018

2. LSST Observing Strategy considerations for Weak Lensing. *DESC Meeting, SLAC, CA.*   Feb 7, 2018

3. Stop Writing For-Loops (programming talk) *University of Pittsburgh, PA* Nov 14, 2017

4. Staring At The Sun: Solar Gravitational Waves. *University of Glasgow, UK* Dec 1, 2015

5. DESI Fibre Assignment and Mitigating Redshift Incompleteness. *12th International Symposium on Cosmology and Particle Astrophysics, Daejeon, South Korea.*   Oct 13, 2015

6. Challenges in DESI Fibre Assignment. *Institute for Computational Cosmology, Durham University, UK.*   Sep 11, 2015

CONFERENCE POSTERS

1. Husni Almoubayyed, Rachel Mandelbaum, PSF Modelling Errors for LSST *Cosmology on the Beach, Punta Mita, Mexico*   Dec 10 − 16, 2017

2. Husni Almoubayyed, Matthew Pitkin. Solar Gravitational Waves. *NGCM Summer Academy, University of Southampton, UK.*   Jun 21−25, 2016

3. 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

➢ Teaching Assistant, *Carnegie Mellon University*, Pittsburgh, PA

    ☐ 33-121 Physics 1 for Science Students.   Fall 2016

    ☐ 33-122 Physics 2 for Biology and Chemistry Students.   Spring 2017

➢ Teaching Assistant, *University of Glasgow*, Glasgow, UK.

    ☐ Physics 1 & Physics 2   AY 2015 − 2016

WORKSHOPS AND SUMMER SCHOOLS

➢ LSST Sprint Week, *Edinburgh, UK.*   Oct 2018

➢ Cosmology on the Beach, *Punta Mita, Mexico.*   Dec 2017

➢ LSST Hack Week, *Fermilab, IL, USA.*   Apr 2017

➢ Next Generation Computational Modelling Summer Academy, *University of Southampton, Southampton, UK.*   Summer 2016

➢ Next Generation Computational Modelling Summer Academy, *University of Southampton, Southampton, UK.*   Summer 2015

➢ 71st Scottish Universities Summer School in Physics, *University of Strathclyde, Glasgow, UK.*   Summer 2015

COMPUTATION

➢ *Github:* www.github.com/hsnee
➢ *Python:* pandas, matplotlib, seaborn, numpy, scipy, sklearn, plotly, emcee
➢ SQL, C++, Matlab, Mathematica.

LEARNED SOCIETIES AND AFFILIATIONS

➢ *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)*, Associate Member.	Jan 2015 − Present

Formerly:
➢ *Int'l Society on GR and Gravitation*, Student Member.	Nov 2015 − Dec 2016
➢ *LIGO Scientific Collaboration*, Member.	Oct 2015 − Sep 2016
➢ *Institute of Math & Its Applications*, Student Member.	Nov 2015 − Dec 2016

OUTREACH

➢ The GIST, *Specialist Editor*.	Mar 2016 − Present
➢ Glasgow Science Festival, *Media Reporter*.	Jun 2015
➢ Science Connects, *STEM Ambassador*.	May 2015 − Jun 2016
➢ UKSEDS, *Assistant Officer*	Jul 2016 − Mar 2016