

Laurence Datrier

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EDUCATION

UNIVERSITY OF GLASGOW PHD IN PHYSICS AND ASTRONOMY, INSTITUTE FOR GRAVITATIONAL RESEARCH

Glasgow, UK | October 2017 - June 2023

"Exploring the calibration of cosmological probes used in gravitational-wave and multi-messenger astronomy", supervised by Prof. Martin Hendry and Prof. Graham Woan.

Funded by STFC as part of ScotDist, the Scottish Data-Intensive Science Triangle.

UNIVERSITY OF GLASGOW MSc BY RESEARCH IN PHYSICS AND ASTRONOMY, INSTITUTE FOR GRAVITATIONAL RESEARCH

Glasgow, UK | October 2016 - June 2018

"Investigating the prospects for constraining the Hubble constant using compact binary coalescences as standard sirens", supervised by Prof. Martin Hendry and Dr. Chris Messenger.

UNIVERSITY OF GLASGOW BSc IN PHYSICS AND ASTRONOMY

Glasgow, UK | September 2011 - June 2016

Final grade awarded: 2:1

Extra-curricular: Astronomy Society President, Physics Society Publicity Officer 2015-2016

BRUNEL UNIVERSITY BA IN FILM AND TV STUDIES

Uxbridge, UK | September 2008 - June 2011

WORK

CALIFORNIA STATE UNIVERSITY FULLERTON POSTDOCTORAL ASSOCIATE

Fullerton, CA, USA | February 2025 - Current

Postdoctoral Associate in Gravitational-Wave Physics for the Cosmic Explorer Project, as part of the Site Evaluation team.

UNIVERSITY OF GLASGOW HONORARY RESEARCHER

Glasgow, UK | August 2023 - Current

GLASGOW SCIENCE CENTRE PLANETARIUM PRESENTER

Glasgow, UK | January 2023 - November 2023

Full time from January to March 2023, casual worker from March 2023.

- Presenting planetarium shows to all audiences
- Helping with the running of daily operations at the GSC

CAMK PAN TORUN SUMMER INTERN

Torun, Poland | August 2015

Model fitting of stellar evolution models and chemical abundance data for red giants in stellar clusters, using MESA and python

UNIVERSITY OF GLASGOW ASTRONOMY OUTREACH PROGRAMME DEMONSTRATOR

Glasgow, UK | March 2015 - 2021

Outreach during March 2015 solar eclipse viewing event • Multiple tours of the Acre Road Observatory for various audiences • Astrophysics workshops for high school students • Stargazing nights • Science Festivals

VISITS AND SUMMER SCHOOLS

CALTECH VISITING SCIENTIST

Pasadena, CA, USA | August 2019

Mentor: Michael Coughlin

Three week visit at Caltech to discuss projects involving kilonova light curves and the applications of Gaussian Processes.

LIGO HANFORD LSC FELLOW

Richland, WA, USA | May 2019 - August 2019

Mentors: Rick Savage, Sheila Dwyer, Jenne Driggers

- Data analysis for the photon calibrator, investigation of temperature dependence of integrating spheres, other routine measurements
- Investigation of the impact of wind gusts on detector duty cycles and observing range
- Work on offline feedforward filters

PHYSICS OF MACRONOVAE SUMMER SCHOOL

Stockholm, Sweden | June 2018

CONFERENCES AND TALKS

NAM 2022 POSTER

Warwick, UK | July 2022

A robust test of galaxy catalogue completeness for cosmology with dark standard sirens

CIERA NORTHWESTERN INVITED VIRTUAL TALK

Evanston, IL, USA | October 2021

A robust test of galaxy catalogue completeness for cosmology with dark standard sirens

NAM 2021 TALK

Online conference, UK | July 2021

Prospects for multi-messenger astronomy with serendipitous kilonova discoveries with LSST

LIGO HANFORD INVITED TALK

International Physics and Astronomy Educators Program

LIGO Hanford, WA, USA | June 2019

Kilonovae, Neutron Stars and Gravitational Waves

MERGING VISIONS

Exploring Compact-Object Binaries with Gravity and Light

Santa Barbara, WA, USA | June 2019

CORMACK MEETING POSTER

Edinburgh, UK | November 2018

Constraining binary neutron star merger times from kilonova observations

UCL MACHINE LEARNING CONFERENCE POSTER

London, UK | July 2018

Detecting and classifying kilonovae

7 MINUTES OF SCIENCE PUBLIC TALK

Glasgow, UK | February 2018

Public talk on gravitational wave cosmology

CAFE SCIENTIFIQUE EN FRANCAIS INVITED PUBLIC TALK

Alliance francaise, Glasgow, UK | February 2017

Public talk on the detection of gravitational waves, in French

CONFERENCE FOR ASTRONOMY AND PHYSICS STUDENTS ORGANISER, PUBLIC TALK

Glasgow, UK | June 2016

Conference Organiser • public talk: "The Physics of Interstellar"

OUTREACH

I'M A SCIENTIST, GET ME OUT OF HERE

Summer 2019

Online chats with students in the UK and other countries

LIGO HANFORD TOURS

LIGO Hanford, WA, USA | May 2019 - August 2019

Leading tours of the LIGO Hanford Observatory for the public

JIMFEST

Glasgow, UK | February 2019

Volunteer, brochure design for the celebration of Sir James Hough's work

FESTIVAL OF PHYSICS

Glasgow, UK | February 2018

Volunteer for Institute for Gravitational Research stall

PRIZES AND AWARDS

RESEARCH FIRSTS EXHIBITION WINNING ENTRY

June 2023

The Triumph of GW150914 - Artwork

LIGO LABORATORY AWARD FOR EXCELLENCE IN DETECTOR CHARACTERIZATION AND CALIBRATION HONORABLE MENTION 2020

"For the development, deployment, and commissioning of a novel absolute calibration system via direct gravitational forces, a 'Newtonian Calibrator', to provide increased confidence in the absolute calibration of LIGO detector data in future observing runs."

TANNAHILL BEQUEST

2015-2016

Best Astronomy 4H Student

ASTRONOMY 4H PRIZE

2015-2016

Best Astronomy 4H Lab Student

KERR BURSARY

2015-2016

Best Combined Physics 4H Student

SKILLS

PROGRAMMING

Languages:

Python • MatLAB

Familiar:

C • C++

Techniques:

Data Analysis • Bayesian Inference • Gaussian Process Regression •

Cluster Computing

LANGUAGES

French (Native language)

English (Fluent)

Italian (Basic to Intermediate)

Scottish Gaelic (Basic)

OTHER

Outreach • Teaching • Public Speaking • Graphic

Design • Art