

# Laurence Datrier

(she/her)

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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

### 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 française, 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