

CLARE WETHERS

FINCA, University of Turku, Finland, FI-20014
clare.wethers@utu.fi

I am interested in exploring the role of quasars in galaxy evolution. My current research strives to characterise the host galaxies of various quasar classes over multiple wavelengths, placing particular focus on their star formation rates and environments.

Keywords: **galaxy evolution; galaxy-quasar connection; multi-wavelength spectroscopy**

RESEARCH EXPERIENCE

University of Turku **2018 - present**

FINCA postdoctoral research fellow in quasar-galaxy co-evolution with Prof. Jari Kotilainen

Key topics: *SFRs of quasar hosts, LoBALs, quasars in GAMA*

EDUCATION

University of Cambridge **2014 - 2018**

Ph.D in Astronomy

Thesis: *“Exploring the Hosts of the Most Massive and Luminous Reddened Quasars”*

Supervisors: Dr. Manda Banerji Prof. Paul Hewett

University of Nottingham **2010 - 2014**

MSc (Hons) in Physics and Astronomy

Class I

Thesis: *“H α Emission Lines From Proto-Galaxies”*

Supervisors: Prof. Christopher Conselice

PRIZES & AWARDS

STFC Studentship 2014 - 2018

Institute of Physics Research Grant 2013

PriceWaterHouseCooper First Year Prize 2011

Sir Peter Mansfield High-Achiever’s Scholarship 2010

TEACHING EXPERIENCE

Co-supervision of Masters student, Nischal Acharya

Title: *“The environments and SFRs of Quasar Hosts in GAMA”*

Galaxies and Cosmology (2020), taught Masters course

University of Turku

Guest lecture: *“Quasars: what are they, how do we find them, and why should we care?”*

The Structure and Evolution of Stars (2015-2017), third year Physics course

Institute of Astronomy, University of Cambridge

Small group tutoring [30 hours]

OBSERVING EXPERIENCE

- 2 nights IR spectroscopy and imaging at the Nordic Optical Telescope (NOT)
- 8 nights optical imaging with DECam as part of the Dark Energy Survey (DES)

SUCCESSFUL OBSERVING PROPOSALS

SALT-RSS (22.6 hours): *“Is UV Emission in Dust-Obscured Hyper-luminous Quasars Dominated by Star Formation or Scattered Light?”*, 2019, **P.I.**

EFOSC-MOS (4 nights): *“Quasar activity in the neighboring Universe: the role of the environments and star formation”*, 2019, **Co.I** (P.I. Bettoni)

NOTCam (16.0 hours): *“Testing the Evolutionary Picture of LoBALs”*, 2019, **P.I.**

JCMT-SCUBA2 (21.5 hours): *“The SCUBA-2 Red Quasar Survey”*, 2017, **Co.I.** (P.I. Banerji)

COMPUTING SKILLS

- Languages: Python, MATLAB, bash, LaTeX, HTML, IRAF, PyRAF
- Software: Le PHARE, DS9, GAIA, TOPCAT
- Data reduction: SCUBA-2 Reduction Pipeline, SALT RSS Long-slit Data Reduction, HIPE

CONFERENCES & WORKSHOPS

IAU Symposium 359: Galaxy Evolution and Feedback Across Different Environments (GALFEED), Bento Goncalves, Brazil (**speaker**) Mar. 2020

IAU Symposium 356: Nuclear Activity in Galaxies Across Cosmic Time, Addis Ababa, Ethiopia (**speaker**) Oct. 2019

Supermassive Black Holes: Environment and Evolution, Corfu Town, Greece (**speaker**) Jun. 2019

Einasto’s Profile: Tartu-Tuorla Cosmology Meeting, Tartu, Estonia (**speaker**) Feb. 2019

Tartu-Tuorla Cosmology Meeting, Turku, Finland (**speaker**) Oct. 2018

Cosmic Mergers Workshop, Birmingham, UK (**speaker**) Sep. 2017

National Astronomy Meeting, Hull, UK (**speaker**) Jul. 2017

Galaxy Evolution Across Time, Paris, France (**poster**) Jun. 2017

DES Collaboration Meeting, Cambridge, UK (**plenary talk**) Dec. 2016

OUTREACH ACTIVITIES

School visits: In collaboration with the Ethiopian Space Science and Technology Institute (ES-STI), I visited a secondary school in Addis Ababa to talk about careers in Astronomy.

Astronomy Open Evenings: I led groups of 30 children and young adults from local scout and guide groups in telescope tours and amateur observing sessions at the Institute of Astronomy.

Science Festival: I talked about and demonstrated Astronomy concepts to the general public and school groups.

Darwin College Science Society: As a founding member, I was responsible for organising regular events covering all Science disciplines, including seminars with guest speakers, discussion panels, field trips and social activities.