


Elliot Gould

PHD CANDIDATE, RESEARCH ASSISTANT

School of BioSciences, University of Melbourne

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Elliot Gould is a PhD candidate at the School of BioSciences, and a Quantitative Research Assistant on the repliCATS project at the School of BioSciences, University of Melbourne. Their PhD investigates the transparency and reproducibility of ecological models in applied ecology and conservation decision-making. In their role as a Quantitative Research Assistant, Elliot has managed a small team of researchers to develop a data provisioning platform for the repliCATS project, and taken lead responsibility for data management, as well as contributing to research on metascience. They have an enthusiasm for teaching and skill-sharing, particularly with regard to building a strong community of practice in emerging open-science methodology and computational biology within ecology and conservation. Elliot has co-designed a learning and assessment module for the subject Vegetation Management and Conservation that aimed to teach recent developments in open-science practice whilst improving subject-specific learning outcomes. Elliot's primary research interest is in building ecological models for aiding ecological management and conservation decisions. Other research interests include decision-theory, Structured Decision Making, plant ecology (especially grasslands of the Victorian Volcanic Plains), data visualisation and building new tools for open-science.

Education

Doctor of Philosophy, Science

UNIVERSITY OF MELBOURNE

November 2017 - August 2023 (expected)

- Thesis Title: Reproducibility and Transparency of Ecological Models in Applied Ecology and Conservation Science

Master of Science (Distinction)

UNIVERSITY OF MELBOURNE

March 2012 - December 2015

- Research Training Degree, with 70% original research and 30% coursework. Course Weighted Average Mark: 82.312
- Thesis Title: Managing Grasslands with Models: Resolving uncertainty and allocating effort among a suite of sites.

Bachelor of Science

UNIVERSITY OF MELBOURNE

March 2005 - November 2011

- Major in Ecology, First Class Honours Average

Bachelor of Arts

UNIVERSITY OF MELBOURNE

March 2005 - November 2011

- Major in Indonesian, First Class Honours Average

Employment History

Quantitative Research Assistant - repliCATS, SCORE Program

University of Melbourne

SCHOOL OF HISTORICAL AND PHILOSOPHICAL STUDIES, SCHOOL OF BIOSCIENCES

February 2019 - Present

- Systematising Confidence in Open Research and Evidence (SCORE) is a Research Program initiated by the Defense Advanced Research Projects Agency (DARPA) that aims to develop and deploy automated tools to assign 'confidence scores' to Social and Behavioural research results and claims in light of recent evidence about the 'Replication Crisis' besetting Science. The repliCATS project is one team within the SCORE project, based in Melbourne. In this role, Elliot lead a small team within the repliCATS project to build data analysis software and infrastructure to manage and deliver data products to internal teams and external partners. Research components of the role include modelling to investigate predictors of replication success.

Demonstrator / Tutor

University of Melbourne

SCHOOL OF BIOSCIENCES

2012 - 2020

- Vegetation Management and Conservation, 2018, 2019. In addition to demonstrating, I co-developed a teaching and learning module, and developed and delivered a workshop teaching the basics of data-science in R using data collected by the students.
- Environmental Risk Assessment: 2016, 2017, 2018.
- Applied Ecology: 2014, 2015.
- Ecology: 2014.
- Biology of Cells and Organisms: 2012, 2013, 2014, 2015.

Research Assistant

University of Melbourne

SCHOOL OF BIOSCIENCES

August 2015 - Present

- National Environmental Science Programme, Threatened Species Recovery Hub: Conservation actions for Threatened Ecological Communities.
- Various plant ecology and Structured Decision Making projects, involving: data analysis and visualisations, building shiny Apps, model building and testing.

Research Assistant

University of Melbourne

SCHOOL OF GEOGRAPHY

August 2015 - January 2017

- Modelling Drinking Water Availability in the Yangtze River Estuary with Bayesian Belief Networks.

Scholarships and Awards

Australian Government Research Training Program (RTP) Scholarship

THE UNIVERSITY OF MELBOURNE

2017 - Current

- Awarded to high-achieving students undertaking graduate research at the University of Melbourne.

G.A.M. Scott Research Award

SCHOOL OF BOTANY FOUNDATION, THE UNIVERSITY OF MELBOURNE

2012

- Supports a graduate research student, or an honours or equivalent student, in the discipline of botany, within the School of BioSciences undertaking research that involves field work in the areas of either bryophytes or plant ecology.

Muriel Ramm Science Bursary

FACULTY OF SCIENCE, THE UNIVERSITY OF MELBOURNE

2012

- Awarded to a student entering honours or a postgraduate degree in the Faculty of Science. It goes to the candidate judged most likely to benefit academically from it, taking into account financial need or hardship.

Graduate Access Bursary

MELBOURNE SCHOLARSHIPS, THE UNIVERSITY OF MELBOURNE

2012

- Awarded to graduate coursework students who have experienced difficult circumstances that impacted on their tertiary studies.

Commonwealth Education Costs Scholarship

COMMONWEALTH GOVERNMENT OF AUSTRALIA

2006 - 2010

- Commonwealth Scholarships were established to increase higher education participation by students from low socio-economic backgrounds and from rural and regional areas.

Talks and Workshops

Model Based Research and Reproducibility Workshop

Centre for Open Science, Virginia,

USA

WORKSHOP: 'PREREGISTRATION TEMPLATES FOR MODEL-BASED RESEARCH'

2020

Department of Land Water & Planning

Melbourne

WORKSHOP: 'PREREGISTRATION TEMPLATES FOR ECOLOGY AND CONSERVATION'

2020

Society for the Improvement of Psychological Sciences

Rotterdam

WORKSHOP: 'TRANSPARENCY & REPRODUCIBILITY IN NON-HYPOTHESIS TESTING RESEARCH'

2019

MetaScience Symposium & Association for Interdisciplinary Meta-Research and Open Science Conference

San Francisco & Melbourne

POSTER PRESENTATION: 'QUESTIONABLE RESEARCH PRACTICES IN NON-HYPOTHESIS TESTING RESEARCH'

2019

Quantitative and Applied Ecology Group

Melbourne

TALK: 'CHOOSE YOUR OWN ADVENTURE: RESEARCHER DEGREES OF FREEDOM AND QUESTIONABLE RESEARCH PRACTICES IN

2018

ECOLOGICAL MODELLING FOR DECISION SUPPORT'

Credibility Revolution 2018

Melbourne

TALK: 'QUESTIONABLE RESEARCH PRACTICES IN NON-HYPOTHESIS TESTING RESEARCH'

2018

UQ Open Science Conference

Brisbane

TALK 'BEYOND P-HACKING: QUESTIONABLE RESEARCH PRACTICES IN NON-NULL HYPOTHESIS SIGNIFICANCE TESTING'

2018

Quantitative and Applied Ecology Group Annual Retreat

Melbourne

TALK 'QUESTIONABLE RESEARCH PRACTICES IN ECOLOGY AND CONSERVATION'

2018

Victorian Biodiversity Conference

Melbourne

WORKSHOP: 'DATA WRANGLING FOR ECOLOGISTS'

2017

Research Consultancy, Professional Membership

Department of Environment Land Water & Planning

Consultancy

TESTING AND DEVELOPING PREREGISTRATION TEMPLATES FOR ECOLOGY AND CONSERVATION USING A CASE STUDY OF

March 2020 - Present

ENVIRONMENTAL FLOWS MANAGEMENT IN VICTORIA, AUSTRALIA

- This research consultancy contributes to Elliot's PhD. This work involved the design and delivery of a collaborative workshop with DELWP in order to develop preregistration templates and methodology relevant to ecological modelling, in particular within decision-making and applied contexts.

Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology (SORTEE)

Professional Membership

SECRETARY / TREASURER, WWW.SORTEE.ORG

September 2020 - Present

- SORTEE is a service organization which brings together researchers working to improve reliability and transparency through cultural and institutional changes in ecology, evolutionary biology, and related fields broadly defined. Anyone interested in improving research in these disciplines is welcome to join, regardless of experience. The society is international in scope, membership, and objectives. Elliot is a founding member and co-chair of the executive committee.