Todd M. **Ellis**

DATA ANALYST & STATISTICAL PROGRAMMER

Greater Hobart Region, Tasmania, Australia
September 2023

☐ +61 466 683 552 | ✉ toddellis.wa@gmail.com | ⬡ 0000-0002-4410-8676 | 🔍 q6vTAroAAAAJ | ℞ Todd-Ellis-4 |

⬛ toddellis | 𝐢𝐧 tmichaelellis

PROFESSIONAL SUMMARY

I'm a data analyst and early career researcher with a varied background in forest ecology, pyrogeography, climate change, geospatial science, and higher education. I've worked as an analyst and researcher in a variety of laboratory, field, and office settings throughout the United States and Australia. Over the course of my career, I've developed novel mathematical tools and statistical models; maintained relational databases and statistical packages used for conducting data analysis and producing standardized reports; trained countless staff, students, and volunteers in institutional policies and procedures, as well as methodological approaches to statistical analysis; and managed both complex and transformative projects for higher education, government agencies, and private industry. My research has been published in high-impact, peer-reviewed journals, and I'm also skilled at conveying complex data and information to both casual and experienced stakeholders.

As at 2023-09-01, I have 3 peer-reviewed publications with an h-index of 2. I am the first author on 2 of these publications and have received a total of 46 or 62 citations based on Scopus and Google Scholar, respectively.

EDUCATION

Doctor of Philosophy, Biological Sciences
UNIVERSITY OF TASMANIA
Sandy Bay, TAS, Australia
2019 - present
- Dissertation: Dynamic mapping and analysis of New South Wales fire regimes: Past, present, and future
- Supervisors: Drs. Grant J. Williamson and David M.J.S. Bowman

Master of Science, Geography
WESTERN WASHINGTON UNIVERSITY
Bellingham, WA, USA
2013 - 2016
- Thesis: Climatic drivers of western spruce budworm outbreaks in the Okanogan Highlands
- Supervisor: Dr. Aquila Flower

Bachelor of Science, Physical Geography and Geology
TEXAS STATE UNIVERSITY
San Marcos, TX, USA
2007 - 2012

PROFESSIONAL EXPERIENCE

Data Insights Analyst
UNIVERSITY OF TASMANIA: DIVISION OF FUTURE STUDENTS (FULL-TIME)
Sandy Bay, TAS, Australia
2023-01 - present
- Managing the development and implementation of a transformative statewide program to improve equity of access to higher education
- Leading the development of statistical models and reporting tools for managing offers and course quotas
- Streamlining and automating the higher education admissions system for school leavers
- Providing insights and consultations to institutional and external stakeholders

Adjunct Researcher
UNIVERSITY OF TASMANIA: COLLEGE OF SCIENCES AND ENGINEERING (FULL-TIME)
Sandy Bay, TAS, Australia
2019-09 - 2023-03
- Developed complex data-processing and analysis pipelines using high-performance computing and big data
- Oversaw multi-year projct design and implementation addressing wildfire and global climate change challenges
- Managed custom platform for interactive web-mapping, on-the-fly statistical analyses, and novel data visualisation
- Collaborated with national and international research teams tackling climate change risk and mitigation

Data Analyst
UNIVERSITY OF TASMANIA: DIVISION OF FUTURE STUDENTS (PART-TIME / FULL-TIME)
Sandy Bay, TAS, Australia
2021-02 - 2023-01
- Developed statistical models and tools for meeting target university milestones
- Managed design and implementation of broad-scale university ML models for directing future university marketing, funding, and course creation
- Designed and implemented programming and data analytics training seminars for institution staff
- Oversaw development of internal reporting and statistical packages

PUBLICATIONS

1. Williamson, G.J., **Ellis, T.M.**, and Bowman, D.M.J.S. (2022). Double-Differenced dNBR: Combining MODIS and Landsat Imagery to Map Fine-Grained Fire Mosaics in Lowland Eucalyptus Savanna in Kakadu National Park, Northern Australia. *Fire*, 5(5), 160, doi:10.3390/fire5050160 — *2 citations*

2. **Ellis, T.M.**, Bowman, D.M.J.S., Jain, P., Flannigan, M.D., and Williamson, G.J. (2022). Global increase in wildfire risk due to climate-driven declines in fuel moisture. *Global Change Biology*, 28(4), 1544-1559, doi:10.1111/gcb.16006 — *39 citations*

3. **Ellis, T.M.**, and Flower, A. (2017). A multicentury dendrochronological reconstruction of western spruce budworm outbreaks in the Okanogan Highlands, northeastern Washington. *Canadian Journal of Forest Research*, 47(9), 1266-1277, doi:10.1139/cjfr-2016-0399 — *5 citations*

CONSULTING

RESEARCH

2020-08	**Predicting fire behaviour using historical satellite imagery** Frontier Development Lab	*AUD$1,000*
2019-06	**Post-fire logging effects on reburn severity** USDA Forest Service	*USD$2,500*
2018-08	**Restoration treatment effects on ponderosa pine growth sensitivity to climate** USDA Forest Service	*USD$2,500*

MANUSCRIPT REVIEWER

Climatic Change (since 2023-06)

Earth's Future (since 2022-09)

Fire Ecology (since 2019-01)

Global Change Biology (since 2022-10)

New Phytologist (since 2022-11)

HONOURS

GRANTS, SCHOLARSHIPS AND AWARDS

2022-11	**Future Students Staff Excellence 2022 Sustainability Award** University of Tasmania	*AUD$50*
2021-10	**NSW Environment, Energy and Science (DPIE) Eureka Prize for Applied Environmental Research** Australian Museum	*AUD$10,000*
2020-08	**Bushfire Data Quest 2020** Frontier Development Lab	*AUD$1,000*
2019-09	**Tasmania Graduate Research Scholarship (3.5x)** NSW Bushfire Risk Management Research Hub	*AUD$28,000 p.a.*
2019-09	**NSW Bushfire Risk Management Research Hub Top-Up (3.5x)** NSW Bushfire Risk Management Research Hub	*AUD$5,000 p.a.*

OUTREACH

CONFERENCES AND PRESENTATIONS

2022-12	**Removing Barriers and transforming access to tertiary education: The Schools Recommendation Program in Tasmania** Australasian Association for Institutional Research Forum 2022	*Macquarie Park, NSW*
2022-06	**Dynamic mapping and analysis of fire regimes, past, present, and future** Bushfire Risk Management Research Hub Showcase 2022 (poster)	*Wollongong, NSW*
2021-05	**Fuel moisture trend tool** Bushfire Risk Management Research Hub Researchers' Meeting 2021 (poster)	*Wollongong, NSW*
2020-03	**Changes in moisture availability drive fire risk** Bushfire Risk Management Research Hub Researchers' Meeting 2020 (presentation)	*Wollongong, NSW*