# Siobhan Mackenzie **Hall**

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## Academics

**University of Oxford** (DPhil Surgical Sciences, October 2021 - )
- [Oxford Neural Interfacing](#), led by Professors [James FitzGerald](#) and [Brian Andrews](#)
- Thesis: Electrode Design for Localised Cortical Stimulation - A Computational Study

**Stellenbosch University** (Master of Physiotherapy, 2018 – 2019, average 81 %)
- Biomedical Engineering Research Group
- Thesis: [Determining the nature of free will using machine learning](#)

**University of Pretoria** (Bachelor of Physiotherapy, 2013 – 2016, average 78 %)
- Thesis: The effect of positive expiratory pressure on the airway hyper-reactivity in the partially controlled to uncontrolled adult asthma patient

## Experience

**University of Cambridge - Centre for Human-Inspired Artificial Intelligence: Research Assistant** (October – December 2025)
- Contributed to the engineering development of an experimental platform and data analysis pipeline to support experiments looking at the second order effects of human-AI interactions

**Google DeepMind: Student Researcher** (September 2024 – February 2025)
- Contributed to the research and development of methods, such as regularisation, to adapt models in the fine-tuning stage to improve outcomes on standardised fairness metrics

**Microsoft Research: Research Intern** (May 2024 – August 2024)
- Contributed to the research development and engineering of a data flywheel to support under-represented communities by building a platform to responsibly collate data and develop deep learning models for classifying and generating long-tail concepts

**Mamba Insights: Software Engineer** (September 2020 – July 2021, part time)
- Created unique algorithms to generate business insights based on the inference of deep learning models on CCTV footage. These were deployed to production in June 2021

**University of Amsterdam: Cognitive Systems Neuroscience Internship** (May 2020 – March 2021)
- Implemented a data processing pipeline for granger causal analysis of electrocorticography datasets as recorded during attention and decision-making tasks performed by macaques.

**Aerobotics: Data Science Internship** (December 2019 – February 2020)
- Developed an automated feedback loop for assessment of model accuracy in automatic labelling of fruit. These labelled data and models laid the foundation for further investigation into methods for automated assessment and is an open question

**Tembisa Provincial Tertiary Hospital: Community Service Physiotherapist** (2017)
- Frontline clinical physiotherapist, working in multidisciplinary teams in high-pressured departments such as adult and neonatal intensive care units and out-patient departments

## Selected Publications *Please see Google Scholar for a comprehensive list*

**The World Wide recipe: A community-centred framework for fine-grained data**

**collection and regional bias operationalisation** ([ACM FAccT 2025 Best Paper: Honourable Mention](#)) || Jabez Magomere, Shu Ishida, Tejumade Afonja, Aya Salama, Daniel Kochin, Foutse Yuehgoh, Imane Hamzaoui, Raesetje Sefala, Aisha Alaagib, Samantha Dalal, Beatrice Marchegiani, Elizaveta Semenova, Lauren Crais, **Siobhan Mackenzie Hall**

**VisoGender: A dataset for benchmarking gender bias in image-text pronoun resolution** ([NeurIPS 2023: Track on Datasets and Benchmarks](#)) || **Siobhan Mackenzie Hall**, Fernanda Gonçalves Abrantes, Hanwen Zhu, Grace Sodunke, Aleksandar Shtedritski, Hannah Rose Kirk

**SMRS: advocating a unified reporting standard for surrogate models in the artificial intelligence era** ([NeurIPS 2025: Position Papers](#)) || Elizaveta Semenova, Alisa Sheinkman, Timothy James Hitge, **Siobhan Mackenzie Hall**, Jon Cockayne

**The Human Labour of Data Work: Capturing Cultural Diversity through World Wide Dishes** ([CSCW 2025](#)) || **Siobhan Mackenzie Hall**, Samantha Dalal, Raesetje Sefala, Foutse Yuehgoh, Aisha Alaagib, Imane Hamzaoui, Shu Ishida, Jabez Magomere, Lauren Crais, Aya Salama, Tejumade Afonja

**A Prompt Array Keeps the Bias Away: Debiasing Vision-Language Models with Adversarial Learning** ([AACL 2022](#)) || Hugo Berg, **Siobhan Mackenzie Hall**, Yash Bhalgat, Wonsuk Yang, Hannah Rose Kirk, Aleksandar Shtedritski, Max Bain

**Finite Element Modelling for Biophysical Models of Nervous System Stimulation: Best Practices for Multiscale Adaptive Meshing** ([IEEE Transactions on Neural Systems and Rehabilitation Engineering](#)) || Rodrigo Osorio L., **Siobhan Mackenzie Hall**, Francisco Saavedra R., Pablo Aqueveque N., James J. FitzGerald, Brian Andrews

**10 Simple Rules for pushing boundaries of inclusion at academic events** ([PLoS Computational Biology](#)) || **Siobhan Mackenzie Hall**, Daniel Kochin, Carmel Carne, Patricia Herterich, Kristen Lenay Lewers, Mohamed Abdelhack, Arun Ramasubramanian, Juno Felecia Michael Alphonse, Visotheary Ung, Sara El-Gebali, Christopher Brian Currin, Esther Plomp, Rachel Thompson, Malvika Sharan

**10 Simple Rules for Establishing a Mentorship Programme** ([PLoS Computational Biology](#))
Anne M. Treasure, **Siobhan Mackenzie Hall**, Igor Lesko, Derek Moore, Malvika Sharan, Menno van Zaanen, Yo Yehudi, Anelda van der Walt

## Awards and Grants

**2025 ACM FAccT's Best Paper Award: Honourable Mention**
- The World Wide recipe: A community-centred framework for fine-grained data collection and regional bias operationalisation

**Google's Compute for Underrepresented Researchers Grant** (2022, 2023)
- Awarded a total of $20 000 in GCP credits for my work in investigating social biases in large vision-language and generative models

**OpenAI's API Researcher Access Programme** (2024)
- Awarded $20 000 in API credits for my work in investigating social biases in large language and vision-language models

## Leadership and Service

**Deep Learning Indaba Steering Committee**

- **Mentorship Programme** (2020 -)**:** We have facilitated > 600 successful matches, with many success stories of papers being accepted and mentees successfully getting into postgraduate programmes
- **Ideathon Programme** (2022 - )**:** Assist in planning and managing the programme to facilitate research and application-based projects on the African continent
- **Communications Committee** (2022 - )**:** Manage and support external communications from the Deep Learning Indaba, most notably as editor of the Sauti Yetu newsletter.
- **Baobab Committee (2019-2022)** Code and administrative contributions to the open-source web-application designed to support inherently complex logistical processes such as application process for the Deep Learning Indaba [Tech stack: Python, PostgresSQL, SQLAlchemy, Flask]
- **Applications and Selections Committee (2021-2022):** Supporting the Deep Learning Indaba through the creation of selection criteria, and managing the participant application, review and selection process

### Peer review for AI/ML conferences
- Neural Information Processing Systems Main Track 2025
- ACM Conference on Fairness, Accountability, and Transparency 2025, 2026

### Workshop Organiser committee roles
- **Trustworthy AI Workshop:** Deep Learning Indaba 2023, 2025; IJCAI 2024
- **Centring Data in African AI:** Deep Learning Indaba 2025

### St Hugh's College Middle Common Room Committee (2022 - 2024)
- **2022:** Secretary. Responsible for supporting the MCR President in their duties and facilitating communication between the College Staff and the graduate student body
- **2023:** Equity, Diversity and Inclusivity Officer.
- **2023-2024:** Development and maintenance of the St Hugh's MCR website: https://sthughsmcr.uk/

## Notable Extra-curriculars

### The Oxford Artificial Intelligence Society: Labs (November 2021 - May 2024)
- OxAI Labs is a student-led extra-curricular project group. Selection is based on technical interviews

### Oxford Character Project: Global Leadership Initiative (2023)
- The Oxford Character Project's flagship programme set up to develop an individual's intellectual and practical understanding of leadership to enable effective and ethical leadership to drive positive change across government, business, and civil society.

### The Neural Engineering Research Venture (NERV) (2020 - 2021) || YouTube 🔗
- Co-host of a webinar focused on AI and computational neuroscience, with an audience that extended across five continents, including more than 20 African countries

### KU Leuven / Stellenbosch University Think Tank (2019)
- Selected as one of 30 postgraduate students from the participating universities to partake in a ten month intensive ThinkTank titled, Health. Well-being and the Future of Healthcare. Selection was based upon academic merit and leadership potential

## Speaking Invitations
- SonyAI - Ethics Seminar (18 February 2025): *World Wide Dishes: Collecting Cultural Representation through Social Networks to Operationalise Bias in large-scale AI models*
- Trustworthy AI workshop - Deep Learning Indaba (8 September 2023): Invited panelist for the panel titled, *Going beyond buzzwords and metrics: what will it actually take to achieve equitable, accessible and transparent AI?*