



MACQUARIE
University



UNSW
SYDNEY

PROJECT BACKGROUND

Macquarie University, UCL, in partnership with University of New South Wales, has been awarded **two PhD scholarships** by the British Tinnitus Association to develop diagnostic tools for tinnitus ('ringing in the ears').

One PhD position would suit a student with a background in neuroscience and/or audiology, and will be focussed on recording neural responses from human participants with and without tinnitus, and to secure data from existing, published data sets.

The second PhD position would suit a student with expertise or interests in applying machine-learning techniques to develop explainable models of tinnitus from neural recordings made from tinnitus patients.

The overall aim of the project is to develop a model for classifying tinnitus from human brain recordings ABRs. A specific, objective marker for tinnitus will help progress treatments and interventions for this often-debilitating condition.

The PhD research student will work under the supervision team including

- Prof. David McAlpine (<https://researchers.mq.edu.au/en/persons/david-mcalpine>) from Macquarie University
- Dr. Roland Schaett (<https://www.ucl.ac.uk/ear/research/profiles/schaette>) from The Ear Institute, Faculty of Brain Sciences UCL;
- Dr. Jessica Monaghan (<https://researchers.mq.edu.au/en/persons/jessica-monaghan>) from Nation Acoustic Laboratories and Macquarie University
- A/Prof. Lina Yao (<http://www.linayao.com/>) from University of New South Wales

ELIGIBILITY

Candidates should meet the following criteria:

- **hold Australian citizenship;**
- holds an Honours or Research Masters degree or equivalent in Computer Science or related discipline with outstanding grades;
- has a interest in audiology, neuroscience or machine learning;
- shows evidence of research ability – e.g. an Hons thesis, a minor thesis, publication(s), and a well-developed preliminary research proposal, developed under the guidance of the supervisor;
- has programming skills in one or more languages: C/C++, Java and/or Python;
- has proficient English skills, particularly in writing and speaking;

HOW TO APPLY

To apply for the project, you must prepare an initial application consisting of:

- A detailed curriculum vitae (CV) with publications (if applicable);

- Undergraduate and honours/master transcripts;

If you are interested, please submit your initial application documents to **both** A/Prof. Lina Yao (lina.yao@unsw.edu.au) and Dr. Jessica Monaghan (Jessica.Monaghan@nal.gov.au). An interview will be conducted once shortlisted.