Position Description
Postdoctoral Fellow in
Smooth Ergodic Theory and Dynamical Systems
School of Mathematics and Statistics

Level: A  Date: 28/1/15
School/Unit: Mathematics and Statistics  Faculty/Division: Science
Written by: Gary Froyland

POSITION DESCRIPTION

JOB PURPOSE
To undertake collaborative and self-directed research on an ARC-funded Discovery Project.

DUTIES
- Create appropriate mathematical frameworks for the ergodic and differential theory of non-autonomous dynamical systems.
- Publish in internationally refereed journals.
- Create and implement algorithms based on the newly created mathematical theory.
- Perform research collaboratively and individually.
- Liaise with co-investigators at UNSW, the University of Paderborn, Technical University Munich, and the University of Victoria, Canada.

STATISTICS
The School of Mathematics and Statistics at UNSW is a leading research mathematics school in Australia and enjoys a strong international reputation: http://www.maths.unsw.edu.au/about/about-school. The Department of Applied Mathematics at UNSW is one of the largest and most successful in Australia. It is an active centre for research, both fundamental and applied, and has particular strength in dynamical systems and ergodic theory.

REPORTING RELATIONSHIPS
Supervisor: Professor Gary Froyland
PRINCIPAL ACCOUNTABILITIES
- Development of theory and algorithms that significantly advance the field of ergodic theory and dynamical systems for non-autonomous systems and are highly effective in applications.
- Collaborative publications in internationally refereed journals; at least two per year over the life of the project, in leading mathematical and applications-based journals.

MINIMUM EDUCATION REQUIRED
PhD in Mathematics or close to completion.

SELECTION CRITERIA

Essential Criteria:
- PhD in Mathematics or close to completion, preferably in Ergodic Theory or Dynamical Systems.
- Excellent oral and written communication skills.
- Proven, or demonstrated excellent potential for, an outstanding publication record.
- Demonstrated ability to work as part of a team.
- Demonstrated ability to work with minimal supervision.
- Demonstrated high level analytical and problem solving skills.
- Demonstrated capacity to deliver high quality project outcomes in a timely manner.
- Understanding of equity and diversity principles.
- Knowledge of OHS responsibilities and commitment to attending relevant OH training.
- Some computer programming experience, preferably with Matlab and/or c++.