

Invitation for expressions of interest for a PhD student scholarship at the School of Mathematical Sciences, University of Adelaide

Project: Transport quantification within floating liquid marbles, funded by the Australian Research Council

Duration: 3 years (100% research)

Available for international or domestic students who have:

1. A First-Class Honours Degree in Mathematics or related area from a Australian/British university, or comparable qualification (usually a Masters degree) from another university;
2. Strong numerical skills, with those related to computational fluid dynamics being preferred;
3. At least one confidential letter of recommendation will be required for applicants making it to the final selection stage.

Brief description:

This PhD project is a part of a larger project on “floating liquid marbles” funded through the Australian Research Council, which includes a transdisciplinary research team of engineers, mathematicians and biologists. A floating liquid marble is a new biotechnology in which a water droplet of radius approximately 0.5mm is coated in hydrophobic powder and floated in a water bath. Cells can be cultured into globular spheroids within the marble, within which there are nutrients to support cell growth. This PhD project focusses on the transport that can be generated within a floating liquid marble when it is subject to various movement protocols (sliding, rolling, etc) on the surface of the water bath. The PhD student will need to perform numerical simulations as well as work with the classical Stokes equations of fluid dynamics.

Funding: This scholarship is expected to cover tuition fees at the University of Adelaide, as well as a living stipend for the student. [Funding approval is pending.]

Setting: The University of Adelaide is ranked among the top 150 universities in the world (Times-Higher Education, QS, and ARWU rankings). It is located in the city centre of Adelaide, a city of over a million people boasting world-class beaches, vineries and cultural activities, and ranked the world’s fifth most livable city by the Economist. Mathematical Sciences is a vibrant School comprising about 40 staff members in pure and applied mathematics, and statistics.

Preliminary applications / expressions of interest: Please send (i) a curriculum vitae (ii) unofficial copies of tertiary educational transcripts, and (iii) a letter of interest (explaining why your background is appropriate for the project) as email attachments to:

[Sanjeeva Balasuriya](mailto:sanjeeva.balasuriya@adelaide.edu.au) (sanjeeva.balasuriya@adelaide.edu.au)

More information:

Please contact [Sanjeeva Balasuriya](mailto:sanjeeva.balasuriya@adelaide.edu.au) (sanjeeva.balasuriya@adelaide.edu.au)

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