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## PHD SCHOLARSHIPS IN FOOD AND BEVERAGE SUPPLY CHAIN OPTIMISATION (3)

### INSTITUTE OF TRANSPORT AND LOGISTICS STUDIES

**Closing Date: 30 October 2014**

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The [University of Sydney Business School](#) is regarded as a leader in the region, with an outstanding reputation for the quality of its research across a wide range of academic disciplines. The School enjoys considerable national and international research standing and is recognised as one of the leading schools contributing to business practice, policy and regulation both nationally and internationally.

The [Institute of Transport and Logistics Studies](#) (ITLS) within the University of Sydney Business School undertakes graduate teaching, management development programs, grant and contract research and development in transport, infrastructure, logistics, and supply chain management. It is internationally recognised for its research and education programs. The transportation and logistics research in the Business School received the highest possible ranking of “well above world standard” in the latest Australian Government’s research assessment exercise (Excellence for Research Australia). The ITLS is part of Australia’s Key Centre of Excellence in Transport Research and Education and celebrates its 23rd year in 2014. Through the establishment of the key centre and a memorandum of understanding signed between the University of Sydney and the University of Johannesburg, ITLS is an international collaboration at three nodes: ITLS Sydney, ITS Monash (Melbourne) and ITLS Africa.

The food industry is important for the Australian economy with 15% of the Australian workforce being involved in food production and food exports of \$30.5 billion annually. The National Food Plan White Paper states: “Our vision for Australia’s food system is a sustainable, globally competitive, resilient food supply supporting access to nutritious and affordable food”. To make this a reality (i.e. to grow Australia’s food industry and make it more globally competitive), the design and management of safe, sustainable, and cost-effective food supply chains will be vital. The ARC Training Centre for Food and Beverage Supply Chain Optimisation will train the next generation of multidisciplinary researchers capable of designing and managing these supply chains. The University of Sydney in collaboration with the University of Newcastle is establishing this centre in partnership with Commonwealth Scientific and Industrial Research Organisation (CSIRO), Georgia Institute of Technology, NSW Department of Primary Industries, Coca-Cola Amatil Australia, SunRice, the Batlow Fruit Co-operative, and Sanitarium Health and Wellbeing.

We are looking for 3 PhD students to join the centre and work on supply chain design and management projects in close collaboration with our industry partners. Special focus of these projects will be placed on developing decision tools and optimisation models for designing efficient, resilient, and sustainable supply chains in food and beverage industry.

#### **Each successful candidate will:**

- work in a team environment with academic staff, PhD students and industry partners;
- spend significant time with partner organisations to collect the related data;
- develop mathematical optimisation models and solution algorithms;
- analyse and evaluate numerical results;
- develop decision tools and software packages for use by industry partners;
- participate in Centre workshops and related industry seminars; and
- publish research findings in reputable journals and present in national and international conferences.

#### **Eligibility:**

Applicants need to hold an undergraduate degree with 1st class honours or equivalent Masters degree, specialising in supply chain management, operations management/research, applied mathematics, industrial engineering, or other relevant disciplines completed no more than 5 years ago. Adequate knowledge and experience of mathematical optimisation modelling (linear and nonlinear programming), and algorithmic approaches such as heuristic and meta-heuristic solution techniques are required. Applicants should also have

good written and verbal communication skills and the ability to work both independently and as part of research team. Ability to code and solve optimisation problems using standard software packages (such as CPLEX, Lingo, Lindo, and GAMS) and statistical data analysis skills would be of benefit for the position.

**Amount awarded:**

The scholarships are valued at \$29,844 per annum (tax exempt) and may be renewed for up to three years, subject to satisfactory progress. Domestic students will receive an additional bonus stipend of \$10,156 per annum and international students will be entitled to a fee waiver. All scholarship holders will also receive a \$1,500 per annum travel allowance to attend national and international conferences during the scholarship period.

**Application guide:**

Further information can be obtained from:

Associate Professor Behnam Fahimnia  
[behnam.fahimnia@sydney.edu.au](mailto:behnam.fahimnia@sydney.edu.au)

Applications should be sent direct to Associate Professor Behnam Fahimnia at the above email address and should include a curriculum vitae, a copy of an academic transcript, and the names and contact details of at least two referees.

*\*Please note that this scholarship is conditional on the University signing an agreement with the Partner Organisations named in the Industrial Transformation Training Centres grant.*

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