



UNSW
SYDNEY



Scientia PhD Scholarship in Process Control @UNSW Sydney 2019

The University of New South Wales, Sydney, Australia has launched a global recruitment drive for the world's best research minds. Unprecedented investment is being made to recruit new world-leading researchers and rising stars into the UNSW Scientia Fellowship Program, as well as new scholars into the UNSW Scientia PhD Scholarship Scheme over the coming years. UNSW's research drives discoveries, inventions and innovations from all faculties to transform and improve lives worldwide.

A Scientia PhD scholarship in the area of *Process Systems Engineering/Process Control* at School of Chemical Engineering, the University of New South Wales (UNSW Sydney) is available:

Project title: Distributed Control for Next Generation Smart Flexible Process Plants

Supervisory team:

Professor Jie Bao (j.bao@unsw.edu.au), School of Chemical Engineering, UNSW Engineering
Professor Sami Kara, School of Mechanical Engineering, UNSW Engineering
Dr Stuart Prescott, School of Chemical Engineering, UNSW Engineering

Project summary:

Globalization of the world economy has led to increasing dynamics of the market demand. The business in the process industry needs to have the flexibility to dynamically adjust the volume and specifications of the products and deal with diverse sources of raw materials and utilities to remain competitive. This project aims to develop a fundamental process control framework for flexible production and optimized process economy, a key feature of next generation smart plants (as a component of INDUSTRY 4.0), based on the dissipativity and contraction control theories, chemical process design, machine learning and flexible manufacturing principles. This novel control approach will be applied to formulation and production of pharmaceuticals for personalized medicine.

This project is also supported by *Australian Research Council* Discovery Projects Grant **DP180101717**.

Benefits of the Scholarship:

- **Work on high quality research projects** with the best supervisory teams in world class environments
- **40K Australian dollars per year stipend (tax free)** for four years
- **Tuition fees covered** for the full 4 year period
- **Coaching and mentoring** will form a critical part of your highly personalised leadership development plan
- **Up to 10K Australian dollars each year** to build your career and support your international research collaborations

The PhD program starts early 2019 (February 2019). Applicants from Chemical Engineering, Electrical Engineering, Mechanical Engineering and Computer Science with experience in control theory and applications are welcome.

If you are interested, please submit an expression of interest to Prof. Jie Bao via the following website **by 20 July 2018**:

<https://www.2025.unsw.edu.au/apply/scientia-phd-scholarships/distributed-control-next-generation-smart-flexible-process-plants-0>

More information regarding the *UNSW Scientia PhD Scholarship Scheme* can be found at:

<http://www.2025.unsw.edu.au/apply/?interest=scholarships>

More information regarding the *Process Control Research Group* at UNSW can be found at:

<http://www.ceic.unsw.edu.au/processcontrol/processcontrol.htm>

