

# UNSW@ADFA

CANBERRA • AUSTRALIA

## POSITION DESCRIPTION

<b>Date:</b>	JANURARY 2012
<b>Position:</b>	Research Associate
<b>Faculty/School:</b>	SEIT
<b>Position Number:</b>	<b>RA SEIT (CBT)</b>
<b>ADFA Level:</b>	Level A
<b>Reports To:</b>	Associate Professor Valeri Ougrinovski

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### JOB PURPOSE

The aim of the position is to undertake research on a project related to A/Prof Ougrinovski's ARC Discovery Project "CONSENSUS-BASED THEORY OF ROBUST AND RESILIENT ESTIMATION".

### STATEMENT OF DUTIES

This position will involve research in the project named above and in particular on the development of robust estimation theory for interconnected uncertain systems.

- This position will involve research in the project "CONSENSUS-BASED THEORY OF ROBUST AND RESILIENT ESTIMATION" and in particular on the development of robust estimation theory for interconnected uncertain systems.
- The position will involve research within the Control and Control Applications group at ADFA under the supervision of A/Prof Ougrinovski.
- The position will also involve interaction with prospective PhD students and help in their supervision.
- The position will involve the development of research results and their publication in high-ranked international conferences and journals such as the Automatica, IEEE Transactions on Automatic Control, IEEE CDC, etc.
- Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that their actions or omissions do not impact on the health and safety of others in the university.
- Undertake casual teaching duties as required.

## **REPORTING RELATIONSHIPS**

The position is funded under the project "CONSENSUS-BASED THEORY OF ROBUST AND RESILIENT ESTIMATION" which is an ARC Discovery project.

Supervised by A/Prof Valeri Ougrinovski.

## **PRINCIPAL ACCOUNTABILITIES**

Successfully demonstrate the usefulness of robust estimation approaches in the design and estimation of complex interconnected systems.

Publish high quality research papers describing the obtained research results in high-ranked international conferences

Publish high quality research papers describing the obtained research results in high-ranked international journals

Make high quality teaching contribution to the School teaching programs, as required

## **SELECTION CRITERIA**

### ***Essential***

1. Knowledge of robust control and filtering theory at a research level demonstrated by research publications in academic journals and conference proceedings.
2. Record of high quality papers in international journals of high ranking in the field, such as IEEE TAC, Automatica.
3. Record of publications of refereed research papers in international conferences of high ranking in the field such as IEEE CDC.
4. PhD in the field of Control Theory or Applied Mathematics with specialization in control theory.
5. Knowledge of OHS responsibilities and commitment to attending relevant OHS training.
6. Knowledge of equal opportunity principles.

### ***Desirable***

1. Knowledge and prior expertise in the theory of networked control systems, control and estimation theory of interconnected systems, stochastic control systems theory, game theory, robust control and filtering theory at a research level.
2. Ability to teach in a range of engineering disciplines at undergraduate and post-graduate levels.