

POSITION DESCRIPTION

Academic Positions

(In addition to the Position Classification Standards)

Position Title: Associate Research Fellow Level: A
 Faculty/Division: Engineering and Information Sciences
 Department/Location: Mechanical, Materials and Mechatronics Engineering

Primary Purpose of the Position:

The position will conduct experimental and simulation-based research into the development of innovative high precision rolling technology in micro manufacturing. The appointee will develop the technology of profile rolling and flexible rolling in micro scale for manufacturing micro tailor rolled blank products with high feasibility and efficiency, and establish accurate simulation methodology for high precision micro rolling process.

Position Environment:

The position will be located within the School of Mechanical, Materials and Mechatronic (MMM) Engineering at the Wollongong Campus. MMM has a comprehensive research program which includes the current research on advanced manufacturing technology.

The position involves full time research and will conduct experimental preparation, testing and data analysis of high precision micro rolling of metals, and the finite element simulation of advanced micro rolling of metals.

The appointee will contribute to the School and the University includes:

- Providing excellent research results in micro rolling mechanics area
- Preparation of research proposal submission to external body such as ARC
- Making an excellent personal contribution to the conducted research project
- Significant achievements in micro rolling area
- Supervision of postgraduate research project
- Enhancing the international collaboration
- Enhancing the research students and staff exchanges

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Conduct experimental and simulation-based research	High quality research data	
2.	Analyse research data	Informed analysis of research outcomes	
3.	Assisi in the preparation of scientific papers and reports	Submitted papers for publication	
4.	Provide specialist assistance in the area of micro manufacturing of metals in experiments and simulation	Establish and monitor quality in terms of micro manufacturing tests and	

		modelling of micro forming	
5.	Assist with undergraduate and post-graduate research students	Laboratory and modelling assistance where needed	
6.	Supervisory roles: Communicate and consult with staff on workplace and staffing matters.	To foster direct relationships with staff and enhance engagement with the organisation.	Ongoing
7.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	
8.	Have OH&S responsibilities, accountabilities and authorities as outlined in the http://staff.uow.edu.au/ohs/commitment/responsibilities/ document	To ensure a safe working environment for self & others.	

Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

Reporting Relationships:

Position Reports to:	Professor Zhengyi Jiang
The position supervises the following positions:	Nil.
Other Key Contacts:	Prof Chris Cook (Executive Dean of EIS), Prof Gursel Alici (Head, MMM)

Key Relationships:

Contact/Organisation:

Prof Zhengyi Jiang

Purpose & Frequency of contact

Progress review; weekly meeting

Key Challenges:

1. Conducting experimental and simulation work designed to develop the high precision micro rolling technology.
2. Timely publication of research findings and communication of research outcomes through multiple outlets.
3. Provide supervision and guidance to higher degree research students and undergraduate student researchers.
4. Maintenance / calibration of laboratory equipment relating to micro manufacturing tests.

Knowledge & Skills:

Essential:

- Detailed understanding of mechanics of micro rolling of metals.
- Ability to design micro rolling device and establish micro rolling equipment.
- Well-developed skill to simulate the micro rolling of metals.
- Ability to communicate with and respond to partners in experimental and testing environments.

Desirable:

- Ability to provide formal supervision of higher degree research and / or undergraduate research students.

Education & Experience:

Essential:

- ME or PhD or equivalent in mechanical engineering or materials processing engineering from a recognised institution.
- Relevant research and development experience in micro rolling of metals.
- Experience with development of micro rolling device, testing micro rolling and evaluation of micro rolled parts.
- Experience with finite element modelling of micro rolling process.

Desirable:

- Publication record in field(s) relevant to micro rolling of metals.
- Ability to work in an academic and development environment.

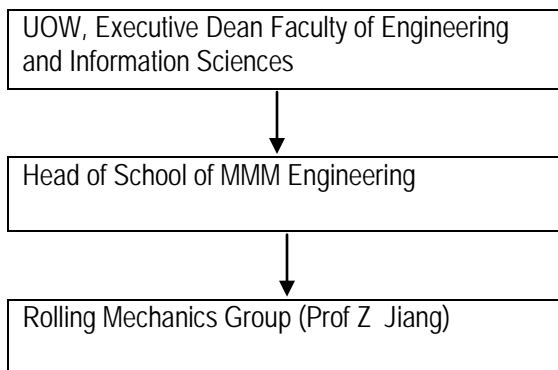
Personal Attributes:

- Ability to work co-operatively with all members of the collaborative group at UOW.
- Developing relationships with other group members regarding research.
- Ability to work under minimum supervision.

Special Job Requirements:

- Comply with relevant Occupational Health & Safety policies and procedures.
- Comply with all conditions as set down in the code of conduct.
- The person will not work with children.

Organisational Chart:



Approval:

Approved by Head of Unit: _____

Date: _____

Approved by Human Resources: _____

Date: _____

POSITION CLASSIFICATION STANDARD - Research Only

Level: A
Title: Associate Fellow

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level A research-only academic is expected to contribute towards the research effort of the institution, and to develop her/his research expertise through the pursuit of defined properties relevant to the particular field of research.

Specific Duties

Specific duties required of a Level A research-only academic may include

- The conduct of research under limited supervision either as a member of a team or, where appropriate, independently, and the production or contribution to the production of conference and seminar papers and publications from that research.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Limited administrative functions primarily connected with the area of research of the academic.
- Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff.
- Occasional contributions to teaching in relation to his/her research project(s).
- Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.
- Advice within the field of the staff member's research to postgraduate students.
- A Level A research-only academic shall work with support, guidance and/or direction from staff classified at Level B and above and with an increasing degree of autonomy as the research academic gains in skill and experience.

Skill Base

A Level A research-only academic will normally have completed four years of tertiary study in the relevant discipline or have equivalent qualifications or research experience. In many cases a position at this level will require an honours degree or higher qualifications or equivalent research experience. Research experience may have contributed to or resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research potential.