University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Associate/Fellow	Job family and level	Research and Teaching Level 4 Training Grade/Level 4
School/ Department	Sustainable Process Technologies Research Group, Department of Mechanical, Materials and Manufacturing Engineering	Location	Faculty of Engineering, University Park

Purpose of role

The purposes of this role are to: 1) develop process simulation models of biochemical conversion of methanol to higher value products; and 2) develop techno-economic and life cycle assessment methodologies to quantify the technical, financial, and environmental implications of using methanol as a feedstock for biochemical processes. The role holder will liaise with project partners to acquire data relevant to develop models of hypothetical integrated production processes, and to estimate potential markets for the case study products. Outcomes of this work are expected to be of broad significance to the chemical process, techno-economic, and life cycle assessment communities, and as such the role holder will be expected to prepare their work for publication in appropriately targeted journals. The role holder will have career development opportunities and will have the opportunity to use their initiative and creativity to identify areas for research, develop research methods and extend their research portfolio.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	**% time per year**
1	▪ To plan and conduct research using recognised approaches, methodologies and techniques within the research area. ▪ To analyse and illuminate data, interpret reports, and bring new insights to research area. ▪ To write up research work for publication and/or contribute to the dissemination at national/international conferences, resulting in successful research outputs. ▪ To plan and manage own research activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others	85%
2	▪ To develop research objectives and proposals for own and/or collaborative research area. ▪ To identify opportunities and assist in writing bids for research grant applications. Prepare proposals and applications to both external and/or internal bodies for funding purposes. ▪ To build relationships with both internal and external contacts in order to exchange information, to form relationships for future collaborations and identify potential sources of funds and/or opportunities for collaboration.	10%

	▪ To co-ordinate the operational aspect of research networks, for example, arranging meetings and contribute to collaborative decision making with colleagues in area of research. ▪ To collaborate with academic colleagues on areas of shared interest for example, course development, collaborative or joint research projects.	
3	▪ To provide support, guidance and supervision to other staff, where appropriate in own area of expertise. ▪ To supervise undergraduate and/or postgraduate students projects, as appropriate. To participate in the assessment of student knowledge and co-supervise projects at Masters level. ▪ To utilise and contribute to organising research resources and facilities, laboratories and workshops as appropriate.	5%

Person specification

	Essential	**Desirable**
Skills	▪ Excellent oral and written communication skills, including the ability to communicate with clarity on complex information. ▪ High analytical ability to analyse and illuminate data, interprets reports, and bring new insights. ▪ Ability to creatively apply relevant research approaches, models, techniques and methods. ▪ Ability to build relationships and collaborate with others, both internally and externally.	▪ Making individual/team decisions about design and development of process, techno-economic, and life cycle assessment models. ▪ Preparing applications for new research funding.
Knowledge and experience	▪ Practical experience in developing process models and techno-economic models of emerging process technologies. ▪ Awareness of life cycle assessment methodologies and their application to process engineering.	▪ Previous success in gaining support for externally funded research projects. ▪ Experience of developing new approaches, models, techniques or methods in the area of techno-economics and/or life cycle assessment.
Qualifications, certification and training (relevant to role)	▪ PhD or equivalent (or near completion) in a relevant subject area or the equivalent in professional qualifications and experience in research area.	

Athena SWAN Silver Award

The University strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women's careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
Taking ownership	Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
Forward thinking	Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
Professional pride	Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
Always inclusive	Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others