

## POSITION DESCRIPTION

- Job Title:** Lecturer / Senior Lecturer in Mining Engineering  
Geomechanics/mechanical rock cutting/blasting
- Organisation Unit:** Joint appointment between the School of Engineering (60%) and the Sustainable Minerals Institute (40%).
- Reference Number:** 3020658
- Type of Employment:** Continuing
- Classification:** Academic Level B (Lecturer) / Academic Level C (Senior Lecturer)
- Remuneration:** **Academic Level B**  
Gross salary package from \$83,033.71 to \$98,602.27 per annum.
- A salary package consisting of:  
Salary range from \$70,968.99 to \$84,275.44 per annum, plus employer superannuation of up to 17%.
- Academic Level C**  
Gross salary package from \$101,715.95 to \$117,284.49 per annum.
- A salary package consisting of:  
Salary range from \$86,936.71 to \$100,243.16 per annum, plus employer superannuation of up to 17%.
- Appointments on a short term contract basis qualify for 9% of employer contribution.
- For staff entitled to 17% employer contributions, UniSuper does not mandate a level of member contribution to superannuation. However, in order to receive the full standard range of benefits under UniSuper, the member must pay 7% contribution from their salary (or a salary sacrifice equivalent contribution of 8.25%). It will be assumed that a 7% member contribution will apply unless the member formally notifies UniSuper of a decision of pay a lesser member contribution (or no member contribution).
- Other options for salary sacrifice include a motor vehicle, laptop computer, campus car parking and "in-house" benefits
- Closing Date:** 29 June 2009
- Further Information:** Professor Peter Knights +617 3365 3915 or [p.knights@uq.edu.au](mailto:p.knights@uq.edu.au) or Professor Alan Bve +617 3346 4072 or [a.bve@smi.uq.edu.au](mailto:a.bve@smi.uq.edu.au)

## **BACKGROUND**

### **Organisational Environment**

This appointment is a joint appointment between The School of Mechanical and Mining Engineering and the Sustainable Minerals Institute of The University of Queensland.

Engineering at UQ offers the largest choice of Engineering programs in Queensland with 13 specialisations and a number of minors servicing an undergraduate population of over 3000 students. Each year the University provides over 900 new students with their first experience of what it takes to become an Engineering professional. The School of Mechanical and Mining Engineering comprises Divisions of Mechanical, Mining and Materials Engineering plus a number of research centres. The School addresses issues of critical importance to the resources industry, including: Geomechanics, Geothermal energy, Low emissions coal technology, Mineral Economics and Mine Planning, Mining Asset Management, Rock fragmentation and excavation efficiency, Spontaneous Coal Combustion, Ventilation and Heat Research, and Virtual reality in mining.

The Division of Mining Engineering is responsible for undergraduate and postgraduate degree programs with over 170 students in years 2, 3 and 4 of the Bachelor of Engineering (BE) degree, and approximately 15 research higher degree students. The Division operates an Experimental Mine located at Indooroopilly for use in student tuition and research work. It has a long and proud record of academic achievement and involvement with the profession and industry. Details of the research interests of academic staff may be accessed on the school's web site at <http://mining.eng.uq.edu.au/>

The Sustainable Minerals Institute is one of six research Institutes within The University of Queensland, and has a revenue budget over \$31m. It incorporates the Office of the Director and six research centres – the JKMRC, CMLR, BRC, MISHC, CSRM and CWiMI, with research foci encompassing minerals processing, mine closure, mining and geology, health & safety risk assessment, social responsibility and water. Five of its centres are located at the St Lucia campus of the University and the other, JKMRC, is located at the University's mine at Indooroopilly. Institute capability includes research, postgraduate education, consulting, professional training, technology transfer and commercialisation. The latter two are conducted through JKTech. Further information on the SMI can be obtained from the web site at <http://www.smi.uq.edu.au>

The W.H. Bryan Research Centre (BRC) in Mining and Geology is active in the following research areas: Mass Mining, blasting fundamentals and applied blast engineering, geotechnical engineering, orebody modelling, and optimisation in mine design and planning. The BRC's strategy is to focus on providing solutions for complex, large scale mining operations and, in conjunction with the other five SMI research centres, is ideally positioned to offer an integrated and highly skilled service to the mining industry. Details of the BRC Mining and Geology Centre's research activities may be accessed on SMI's web site at <http://www.smi.uq.edu.au/mining> .

### **Information for Prospective Staff**

Information about the University, State of Queensland, living in Brisbane and employment at the University is at the University's web site. (<http://www.uq.edu.au/>) For a comprehensive guide to family friendly work practices and services visit the Work and Family web site at [http://www.uq.edu.au/gender\\_equity/famwork.html](http://www.uq.edu.au/gender_equity/famwork.html)

The University of Queensland Enterprise agreement (Academic Staff) outlines the position classification standards for Levels A to E.

## **DUTY STATEMENT**

### **Primary Purpose of Positions**

Teaching and Learning Responsibilities: To engage, as a lecturer (Level B) or senior lecturer (Level C), in undergraduate and postgraduate and professional development in teaching and learning activities, including postgraduate supervision, and the further development of the Mining Engineering academic program.

Research responsibilities: To undertake high quality research within the School of Mechanical and Mining Engineering and the BRC. Current BRC research projects are in areas of blasting engineering, geomechanics, mine planning and ore reserve evaluation.

Administrative duties: Foster the School of Mechanical and Mining Engineering and BRC's relationships with industry, government departments, professional bodies and the wider community and perform a range of administrative functions.

### **Duties**

Duties and responsibilities include, but are not limited to:

#### Teaching and Learning

- Undertake teaching, tutoring, demonstrating and examining of undergraduate students in the Mining Engineering program.
- Initiate, develop and maintain course (subject) material.
- Coordinate courses.
- Teach and supervise at honours and postgraduate level.
- Consult with students.
- Provide support for other positions during absences.
- Provide leadership in developing courses (Level C).
- Deliver industry training courses.

#### Research

- Develop a program of fundamental, applied and contract research in the area of geomechanics, mechanical rock cutting and/or blasting.
- The prospective employee will be expected and encouraged to build collaborative research projects between the School and the BRC.
- Conduct research and publish scholarly papers in high standard refereed international journals, books and conference proceedings.
- Actively seek research funding from internal and various external sources including the commonwealth research granting agencies, the state government and industry.
- Work with colleagues and postgraduates in the development of joint research projects both within the School of Mechanical and Mining Engineering and the BRC.

#### Community Service

- Foster the School's and BRC's relationships with industry, government departments, professional bodies and the wider community.

### Administration

- Perform a range of administrative functions in the Division of Mining Engineering, the School of Mechanical and Mining Engineering, the BRC and the University more widely.
- Contribute to the processes that enable the academic team to manage the work of the Division/School, including participate in Division/School decision-making and serve on Division/School committees.

### Other:

- Comply with requirements of Queensland workplace health and safety (WH&S) legislation and related responsibilities and procedures developed by the University or School.
- Comply with the University's Code of Conduct (see the University's web site at <http://www.uq.edu.au/staff/employment/>)

### **Reporting Relationships**

The position reports to the Head of the School of Mechanical and Mining Engineering through the Head of Division of Mining Engineering and the Director of the W.H. Bryan Research Centre.

## **SELECTION CRITERIA**

### **Qualifications**

#### Essential

- Honours Degree in Engineering
- Ph.D. in geomechanics, mechanical rock cutting or blasting

### **Knowledge and Skills**

#### Essential

- Demonstrated expert knowledge in one of the fields of geomechanics, mechanical rock cutting or blasting
- Demonstrated teaching skills at undergraduate and postgraduate levels (Level C)
- Ability (for level C, demonstrated ability) to establish effective relationships and to represent and promote Mining Engineering at a university and wider community level, including industry, government and professional bodies
- Demonstrated skills as a research participant including the capacity to conceptualise, develop and review research project objectives
- Well developed presentation skills, verbal and written communication skills

#### Desirable

- Knowledge of alternative modes of teaching

### **Experience**

#### Essential

- Evidence of publication in the fields of geomechanics, mechanical rock cutting and/or blasting in refereed journals and conferences
- Evidence of independent contribution to research including successful external grant applications (Level C) and/or significant professional experience working in or with industry (Level C).
- Evidence of successful supervision of higher degree research students (Level C)

### Desirable

- Experience in alternative modes of teaching
- Experience in liaising and collaborating with external agencies to develop co-operative research initiatives (Level C)

### **Personal Qualities**

#### Essential

- Ability to work collaboratively with colleagues
- High level communication and interpersonal skills
- Ability to relate to students
- An enjoyment of teaching and research
- Ability to work harmoniously within a team, while maintaining a high individual profile in a research area

### **Seminar**

Applicants invited for interview will be expected to present a seminar in conjunction with the selection interview process.

## **APPLICATION**

Applications must consist of the following:

1. Covering Letter. The covering letter should include the vacancy reference number, your contact address and telephone number. It is an opportunity in not more than one page to introduce yourself and highlight the key reasons you should be considered for the role. In addition, you should also include the names and contact details (address, phone, fax and e-mail) of three referees, including if possible a senior person closely associated with your current work (preferably your supervisor or the Head of your organisational unit).
2. Resume or Curriculum Vitae. A brief history of your employment and experience that covers the following areas:
  - educational qualifications and professional affiliations that detail the full title of the qualification, the year awarded and the title of the institution attended;
  - employment history in chronological order, starting with your current position and specifying dates of employment, title of the position, name of employer, main duties or accountabilities and achievements.
  - research fields and current interests, publications (full list as attachment with three most significant marked with an asterisk), research grants awarded and, if applicable, details of teaching evaluation.
3. Selection Criteria. A statement addressing how each of the selection criteria have been met is required to assist the Selection Committee determine whether you have the relevant qualifications, knowledge/skills, experience and personal qualities.

Applications are to be sent to:

Human Resources Officer  
Faculty of Engineering, Architecture and Information Technology  
The University of Queensland  
Brisbane QLD 4072  
Australia

Or e-mail: [applications@eait.uq.edu.au](mailto:applications@eait.uq.edu.au)

Please note:

- applications should be typed;
  - please do not send applications that are bound, or enclosed in plastic or manilla folders;
  - simply staple the application at the top left hand corner; and
  - retain a copy for your reference, because the University does not return copies to applicants.
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## SELECTION PROCESS

A Selection Committee will consider all applications and shortlist candidates for interview who appear to meet the selection criteria at the highest level. They will be invited to attend an interview and the remaining unsuccessful applicants will be notified accordingly.

An invitation to attend an interview provides an opportunity to provide further information to the Selection Committee to substantiate your claims against the selection criteria or demonstrate your capabilities. Please note that for some positions, interviews may be conducted by teleconference in the first instance.

The Selection Committee will subsequently seek referee reports, if not sought prior to interview, before making a decision to make an offer of appointment to the preferred candidate. The purpose of referee checks is to obtain, in confidence, factual information about your past work history, as well as opinions regarding the quality of your work, behaviour in the work place and suitability for the position. Referee reports may be sought orally, or for academic staff, in writing by post or e-mail. Referees should normally include current supervisors or and/or managers. A referee must be able to comment on your work experience, skills and performance with respect to the selection criteria. Referee checks conducted after the interview process can sometimes delay notification of the successful candidate and other interviewees.

If you are the preferred candidate, you will receive a written offer of appointment to the position. Do not take any action, such as resigning from your current position, before you receive a written offer of appointment.

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The University of Queensland is an equal opportunity employer.

Smoking is prohibited in all University buildings.

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## POSITION DESCRIPTION

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#### Research

- Develop a program of fundamental, applied and contract research in the area of reserve estimation/ orebody modeling and/or mine planning.
- The prospective employee will be expected and encouraged to build collaborative research projects between the School and the BRC.
- Conduct research and publish scholarly papers in high standard refereed international journals, books and conference proceedings.
- Actively seek research funding from internal and various external sources including the commonwealth research granting agencies, the state government and industry.
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**Reporting Relationships**

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**SELECTION CRITERIA**

**Qualifications**

Essential

- Honours Degree in Engineering  
Ph.D. in Reserve Estimation/ Orebody Modeling and/or Mine Planning..

**Knowledge and Skills**

Essential

- Demonstrated expert knowledge in one of the fields of Reserve Estimation/ Orebody Modeling and/or Mine Planning
- Demonstrated teaching skills at undergraduate and postgraduate levels (Level C)
- Ability (for level C, demonstrated ability) to establish effective relationships and to represent and promote Mining Engineering at a university and wider community level, including industry, government and professional bodies
- Demonstrated skills as a research participant including the capacity to conceptualise, develop and review research project objectives
- Well developed presentation skills, verbal and written communication skills

Desirable

- Knowledge of alternative modes of teaching

**Experience**

Essential

- Evidence of publication in the fields of Reserve Estimation/ Orebody Modeling and/or Mine Planning in refereed journals and conferences
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2. Resume or Curriculum Vitae. A brief history of your employment and experience that covers the following areas:
  - educational qualifications and professional affiliations that detail the full title of the qualification, the year awarded and the title of the institution attended;
  - employment history in chronological order, starting with your current position and specifying dates of employment, title of the position, name of employer, main duties or accountabilities and achievements.
  - research fields and current interests, publications (full list as attachment with three most significant marked with an asterisk), research grants awarded and, if applicable, details of teaching evaluation.
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