Position Description

College/Division:	ANU College of Sciences
School/Centre:	Research School of Physics and Engineering
Department/Unit:	Department of Theoretical Physics
Position Title:	Research Fellow
Classification:	Academic Level A
Position No:	TBA
Responsible to:	Director, Research School of Physics and Engineering

PURPOSE STATEMENT:

The purpose of this appointment is to strengthen the Research School of Physics and Engineering as an internationally centre of excellence in Theoretical Physics and contribute to the objectives of an externally funded project.

The Department of Theoretical Physics at the Australian National University has obtained funding from the Australian Research Council for one research position, to investigate a profound problem in physics: the quantum tunnelling of composite systems such as atoms, molecules and atomic nuclei. Using new theoretical concepts and tools to describe low-energy fusion between atomic nuclei, this project is expected to generate new knowledge and improve understanding of nuclear reactions, the formation of elements in the cosmos, and underpin future nuclear technologies. The project aims to leverage Australian capacity in quantum and nuclear theory to produce the first predictive model of quantum tunnelling with a modern microscopic treatment of nuclear dynamics. It will provide new theoretical guidance to experimental programs with exotic beams and focussing on nucleosynthesis.

The position is located within the Research School of Physics and Engineering, associated with the Department of Theoretical Physics. The appointee is accountable to the Head of the Department and the Director of the Research School.

The post is funded by an external Australian Research Council (ARC) Discovery Project grant. While this grant continues the appointee will also be accountable to the lead CI on the grant.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

As an academic member of the Research School of Physics and Engineering, the appointee will be required to contribute to research and education agendas of the School both nationally and internationally in a manner that is appropriate to the level of appointment. Education activities may include the supervision of students involved in the staff member's research.

The staff member is expected to contribute cooperatively to the overall intellectual life of the School, College and University.

In this specific position the appointee will also be required to work full-time on research, under the supervision of Prof. C. Simenel. The work will principally be directed towards the research project(s) for which funding was received from the Australian Research Council, into quantum tunnelling of composite systems, developing new theoretical modelling and numerical simulations, and publication.

Role Statement:

In their role as academic level A in the Research School of Physics and Engineering, the appointee will be expected to:

1. Undertake independent research in the area of Quantum Tunnelling with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national level.
2. Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.
3. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
4. Actively contribute to all aspects of the operation of the School.
5. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
6. Maintain high academic standards in all education, research and administration endeavours.

7. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
8. Other duties as required consistent with the classification level of the position.

SELECTION CRITERIA:

1. A PhD (or awarding of a PhD within six months of appointment commencement) in Physics, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of Quantum, Atomic, or Nuclear Physics as evidenced by publications in peer-reviewed journals and conferences
2. Evidence of the ability to articulate and prosecute innovative research in the field of Quantum Tunnelling.
3. An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
4. The ability to assist in the supervision of students working on research projects.
5. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
6. A demonstrated high-level understanding of equal opportunity principles and a commitment to the application of these policies in a University context.

Supervisor Signature: 

Printed Name: Cedric Simenel

References:

General Staff Classification Descriptors

Academic Minimum Standards

Pre-Employment Work Environment Report

Please note the Pre-Employment Work Environment Report form http://info.anu.edu.au/Policies/_DHR/Forms/HR51.asp must be completed by the supervisor of the advertised position and provided electronically as a separate document, as it will be uploaded into the Recruit@ANU system and available for applicants to download when reviewing the position documentation. Without this form jobs cannot be advertised.

Position Description

College/Division:	College of Sciences
School/Centre:	Research School of Physics and Engineering
Department/Unit:	Department of Theoretical Physics
Position Title:	Research Fellow
Classification:	Academic Level B
Position No:	TBA
Responsible to:	Director, Research School of Physics and Engineering

PURPOSE STATEMENT:

The purpose of this appointment is to strengthen the Research School of Physics and Engineering as an internationally centre of excellence in Theoretical Physics and contribute to the objectives of an externally funded project.

The Department of Theoretical Physics at the Australian National University has obtained funding from the Australian Research Council for one research position, to investigate a profound problem in physics: the quantum tunnelling of composite systems such as atoms, molecules and atomic nuclei. Using new theoretical concepts and tools to describe low-energy fusion between atomic nuclei, this project is expected to generate new knowledge and improve understanding of nuclear reactions, the formation of elements in the cosmos, and underpin future nuclear technologies. The project aims to leverage Australian capacity in quantum and nuclear theory to produce the first predictive model of quantum tunnelling with a modern microscopic treatment of nuclear dynamics. It will provide new theoretical guidance to experimental programs with exotic beams and focussing on nucleosynthesis.

The position is located within the Research School of Physics and Engineering, associated with the Department of Theoretical Physics. The appointee is accountable to the Head of the Department and the Director of the Research School.

The post is funded by an external Australian Research Council (ARC) Discovery Project grant. While this grant continues the appointee will also be accountable to the lead CI on the grant.

KEY ACCOUNTABILITY AREAS:
Position Dimension & Relationships:

As an academic member of the Research School of Physics and Engineering the appointee will be required to contribute to research and education agendas of the School both nationally and internationally in a manner that is appropriate to the level of appointment. Education activities may include supervision of students. The appointee may also be asked to supervise or mentor less senior staff.
The staff member is expected to contribute cooperatively to the overall intellectual life of the School, College and University.
In this specific position the appointee will also be required to work full-time on research, under the supervision of Prof. C. Simenel. The work will principally be directed towards the research project(s) for which funding was received from the Australian Research Council, into quantum tunnelling of composite systems, developing new theoretical modelling and numerical simulations, and publication.

Role Statement:

In their role as ANU academic level B in the Research School of Physics and Engineering the appointee will be expected to:

1. Undertake independent research in the area of Quantum Tunnelling with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national and/or international level.
2. Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
3. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
4. Supervise less senior academic staff and research support staff in your research area.
5. Actively contribute to all aspects of the operation of the School.
6. Assist in outreach activities including to prospective students, research institutes, industry,

government, the media and the general public.

7. Maintain high academic standards in all education, research and administration endeavours.
8. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
9. Other duties as required consistent with the classification level of the position.

SELECTION CRITERIA:

1. A PhD in Physics or a related area, with a track record of independent research in the field of Quantum, Atomic of Nuclear Physics as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, invitations to give talks at leading conferences etc.
2. Evidence of the ability to articulate and prosecute innovative research in the field of Quantum Tunnelling and a vision for the activities they will undertake at the ANU.
3. An ability and commitment to win bids for competitive external funding to support individual and collaborative research activities.
4. The ability to supervise and graduate high quality PhD/Masters research students
5. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
6. A demonstrated high-level understanding of equal opportunity principles and a commitment to the application of these policies in a University context.

Supervisor Signature: 

Printed Name: Cedric Simenel

References:

General Staff Classification Descriptors

Academic Minimum Standards

Pre-Employment Work Environment Report

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Position Description

College/Division:	College of Sciences
School/Centre:	Research School of Physics and Engineering
Department/Unit:	Department of Theoretical Physics
Position Title:	Research Fellow
Classification:	Academic Level C
Position No:	TBA
Responsible to:	Director, Research School of Physics and Engineering

PURPOSE STATEMENT:

The purpose of this appointment is to strengthen the Research School of Physics and Engineering as an internationally centre of excellence in Theoretical Physics and contribute to the objectives of an externally funded project.

The Department of Theoretical Physics at the Australian National University has obtained funding from the Australian Research Council for one research position, to investigate a profound problem in physics: the quantum tunnelling of composite systems such as atoms, molecules and atomic nuclei. Using new theoretical concepts and tools to describe low-energy fusion between atomic nuclei, this project is expected to generate new knowledge and improve understanding of nuclear reactions, the formation of elements in the cosmos, and underpin future nuclear technologies. The project aims to leverage Australian capacity in quantum and nuclear theory to produce the first predictive model of quantum tunnelling with a modern microscopic treatment of nuclear dynamics. It will provide new theoretical guidance to experimental programs with exotic beams and focussing on nucleosynthesis.

The position is located within the Research School of Physics and Engineering, associated with the Department of Theoretical Physics. The appointee is accountable to the Head of the Department and the Director of the Research School.

The post is funded by an external Australian Research Council (ARC) Discovery Project grant. While this grant continues the appointee will also be accountable to the lead CI on the grant.

KEY ACCOUNTABILITY AREAS:

Position Dimension & Relationships:

As an academic member of the Research School of Physics and Engineering the appointee will be required to lead and contribute to research, education and outreach agendas of the School both nationally and internationally in a manner that is appropriate to the level of appointment. Education activities may include the preparation and delivery of tutorials, lectures, practical classes etc as well as the supervision of research, professional and administrative support staff involved in the staff member's research. The appointee may also be asked to supervise or mentor less senior staff and undertake general leadership roles as applicable.

The staff member is expected to contribute cooperatively to the overall intellectual life of the School, College and University.

In this specific position the appointee will also be required to work intensively on research, under the supervision of Prof. C. Simenel. The work will principally be directed towards the research project(s) for which funding was received from the Australian Research Council, into quantum tunnelling of composite systems, developing new theoretical modelling and numerical simulations, and publication.

Role Statement:

In their role as ANU academic level B in the Research School of Physics and Engineering the appointee will be expected to:

1. Undertake high impact independent research in the area of Quantum Tunnelling with a view to publishing original and innovative results in international refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national and/or international level.
2. Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.
3. Contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students, acting as a subject coordinator, the initiation and development course/subject material and actively lead overall curriculum development in the discipline.

4. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Supervision of research students.
5. Lead, supervise and develop less senior academic and research support staff in your research area.
6. Proactively contribute to all aspects of the operation of the School and College. This may include representation through committee membership
7. Lead outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
8. Maintain and actively promote high academic standards in all education, research and administration endeavours.
9. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
10. Other duties as required consistent with the classification level of the position.

SELECTION CRITERIA:

1. A PhD in Physics or a related area, with a strong track record of independent research in the field of Quantum, Atomic, or Nuclear Physics as evidenced by cited publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, invitations to give talks at leading conferences etc.
2. A track record of articulating and prosecuting innovative research in the field of Theoretical Physics and a vision for the activities they will undertake at the ANU.
3. A record of winning bids for competitive external funding to support individual and collaborative research activities.
4. Evidence of effective teaching at all levels and of the ability to contribute to setting the education agenda of the School in the area of Physics.
5. A track record of successfully supervising and graduating high quality PhD/Masters research students
6. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
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