Australian National University

Position Description

College/Division:	ANU College of Science
Faculty/School/Centre:	Research School of Astronomy and Astrophysics
Department/Unit:	AITC Technical Program
Position Title:	Postdoctoral Fellow
Classification:	Academic Level A
Position No:	TBC
Responsible to:	A/Prof Michael Ireland
Number of positions that report to this role:	NA
Delegation(s) Assigned:	NA

PURPOSE STATEMENT:

The ANU College of Science (CoS) comprises: the Research School of Astronomy and Astrophysics, the Research School of Biology, the Research School of Chemistry, the Research School of Earth Science, the Fenner School of Environment and Society, the Mathematical Sciences Institute, the Research School of Physics, and the Centre for the Public Awareness of Science. Staff and students within the ANU College of Science conduct research and delivers a research-led education program that encompasses the entire breadth of the sciences, supported by extensive international networks and by world-class facilities. The College has a strong tradition of research excellence that has fostered distinguished Nobel Laureates and Kyoto Prize winners and that trains scientific leaders in disciplines in which the ANU is consistently ranked in the top twenty in the world.

The Research School of Astronomy and Astrophysics is a leading centre of astronomical instrumentation research in Australia. It is part of Australian Astronomical Optics (AAO), has successfully delivered world-class instruments for the Gemini telescope, and is currently designing instruments for world leading telescopes such as ESO's Very Large Telescope and the Giant Magellan Telescope.

The Postdoctoral Fellow is expected to undertake work in all three areas of academic activity –research, education and service (including outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment. The Postdoctoral Fellow may also be required to supervise or assist in the supervision of students, and contribute cooperatively to the overall intellectual life of the School, College and University.

POSITION DIMENSION AND RELATIONSHIPS:

The Postdoctoral Fellow will be a member of Research School of Astronomy and Astrophysics, accountable to A/Prof Michael Ireland and Director of the School. The Postdoctoral Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within the all academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

Role Statement:

In their role as an Academic Level A the Postdoctoral Fellow is expected to:

1. Work as part of a team on increasing the technological readiness level of technologies for formation flying interferometry, especially inter-spacecraft metrology.
2. Undertake independent research in the area of astronomical and space instrumentation 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. This includes working as part of a team on an externally funded project subject to deadlines.
3. Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.
4. Subject to the requirements of the funding source and where an opportunity exists, the occupant may be required to 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, and with students or acting as subject coordinators.

5. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
6. Assist to supervise research support staff in your research area.
7. Actively contribute to all aspects of the operation of the School.
8. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
9. Maintain high academic standards in all education, research and administration endeavours.
10. Take responsibility for their own workplace health and safety and not willfully place at risk the health and safety of another person in the workplace.
11. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.
12. Other duties as required that are consistent with the classification of the position.

Skill Base

A Level A academic will work with the support and guidance from more senior academic staff and is expected to develop their expertise in teaching and research with an increasing degree of autonomy. A Level A academic will normally have completed four years of tertiary study or equivalent qualifications and experience and may be required to hold a relevant higher degree.

A Level A academic will normally contribute to teaching at the institution, at a level appropriate to the skills and experience of the staff member, engage in scholarly, research and/or professional activities appropriate to their profession or discipline, and undertake administration primarily relating to their activities at the institution. The contribution to teaching of Level A academics will be primarily at undergraduate and graduate diploma level.

SELECTION CRITERIA:

1. A PhD (or awarding of a PhD within six months of appointment commencement) in photonics or astronomical optical instrumentation, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of photonic or astronomical instrumentation as evidenced by publications in peer-reviewed journals and conferences.
2. Evidence of experience that is relevant to space and astronomical instrumentation research in some or all of the following areas: space instrumentation, optical design, interferometric beam combination including optical fiber systems, mechanical design, electronic design and real-time or low-level software design.
3. An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
4. Evidence of an ability and willingness to teach at all levels.
5. The ability to assist in the supervision of students working on research projects.
6. The ability to work as part of a team and to meet deadlines.
7. 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.
8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Delegate Signature:		Date:	
Printed Name:	Associate Professor Michael Ireland	Position:	

References:
Academic Minimum Standards

Australian National University

Position Description

College/Division:	ANU College of Science
Faculty/School/Centre:	Research School of Astronomy and Astrophysics
Department/Unit:	AITC Technical Program
Position Title:	Research Fellow
Classification:	Academic Level B
Position No:	TBC
Responsible to:	Associate Professor Michael Ireland
Number of positions that report to this role:	NA
Delegation(s) Assigned:	NA

PURPOSE STATEMENT:

The ANU College of Science (CoS) comprises: the Research School of Astronomy and Astrophysics, the Research School of Biology, the Research School of Chemistry, the Research School of Earth Science, the Fenner School of Environment and Society, the Mathematical Sciences Institute, the Research School of Physics, and the Centre for the Public Awareness of Science. Staff and students within the ANU College of Science conduct research and delivers a research-led education program that encompasses the entire breadth of the sciences, supported by extensive international networks and by world-class facilities. The College has a strong tradition of research excellence that has fostered distinguished Nobel Laureates and Kyoto Prize winners and that trains scientific leaders in disciplines in which the ANU is consistently ranked in the top twenty in the world.

The Research School of Astronomy and Astrophysics (RSAA) is a leading centre of astronomical instrumentation research in Australia. It is part of Australian Astronomical Optics (AAO), has successfully delivered world-class instruments for the Gemini telescope, and is currently designing instruments for world leading telescopes such as ESO's Very Large Telescope and the Giant Magellan Telescope. The headquarters of ANU InSpace are located at RSAA, where several mission concepts are being worked on. The RSAA also is the location of a wide suite of laboratories and space testing facilities.

The Research Fellow is expected to undertake work in all three areas of academic activity –research, education and service (including outreach). The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment. The Research Fellow may also be required to supervise or mentor less senior staff, and undertake leadership roles as applicable. The staff member will contribute cooperatively to the overall intellectual life of the School, College and University.

POSITION DIMENSION AND RELATIONSHIPS:

The Research Fellow will be a member of Research School of Astronomy and Astrophysics, accountable to A/Prof Michael Ireland and Director of the School. The Research Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within the all academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

Role Statement:

In their role as an Academic Level B the Research Fellow is expected to:

1. Work as part of a team on increasing the technological readiness level of technologies for formation flying interferometry, especially inter-spacecraft metrology.
2. Undertake independent research in the area of astronomical and space instrumentation 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.
3. Actively seek and secure external funding including the preparation and submission of research proposals to external funding bodies.

4. 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 subject coordinators and the initiation and development of course/subject material.
5. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Supervision of research students.
6. Supervise Postdoctoral Fellow's and research support staff in your research area.
7. Actively contribute to all aspects of the operation of the School. This may include representation through committee memberships.
8. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
9. Maintain high academic standards in all education, research and administration endeavours.
10. Take responsibility for their own workplace health and safety and not willfully place at risk the health and safety of another person in the workplace.
11. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.
12. Other duties as required that are consistent with the classification of the position.

Skill Base

A Level B academic will undertake independent teaching and research in their discipline or related area. In research and/or scholarship and/or teaching a Level B academic will make an independent contribution through professional practice and expertise and coordinate and/or lead the activities of other staff, as appropriate to the discipline.

A Level B academic will normally contribute to teaching at undergraduate, honours and postgraduate level, engage in independent scholarship and/or research and/or professional activities appropriate to their profession or discipline. The academic will normally undertake administration primarily relating to their activities at the institution and may be required to perform the full academic responsibilities of and related administration for the coordination of an award program of the institution.

SELECTION CRITERIA:

1. A PhD in photonics, space instrumentation or astronomical optical instrumentation or a related area, with a track record of independent research in the field of photonics, space instrumentation or astronomical optical instrumentation as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.
2. Evidence of the ability to articulate and prosecute innovative research in the field of photonics, space instrumentation or astronomical optical instrumentation and a vision for the activities they will undertake at the ANU.
3. A demonstrated ability and commitment to apply for competitive external funding to support individual and collaborative research activities.
4. Evidence of an ability and willingness to teach at all levels.
5. An ability to supervise and graduate high quality PhD/Masters research students.
6. The demonstrated ability to work as part of a team, contributing to team management and a demonstrated ability to meet deadlines.
7. 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.
8. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Delegate Signature:		Date:	
Printed Name:	Associate Professor Michael Ireland	Position:	

References:

Academic Minimum Standards

Pre-Employment Work Environment Report

Position Details

College / Div / Centre	College of Science	**Dept / School / Section**	RSAA
Position Title	Postdoctoral Research / Research Fellow	**Classification**	TBC
Position No.	TBC	**Reference No.**	NA

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a primary duty of care, so far as reasonably practicable, to ensure the health and safety of all staff while they are at work in the University.

- This form must be completed by the supervisor of the advertised position and forwarded with the job requisition to Appointments and Promotions Branch, Human Resources Division. Without this form jobs cannot be advertised.
- This form is used to advise potential applicants of work environment and health and safety hazards prior to application.
- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see https://services.anu.edu.au/human-resources/health-safety/measurement-and-evaluation/monitoring-testing
- The hazards identified below are of generic nature in relation to the position. It is not correlated directly to training required for the specific staff to be engaged. Identification of individual WHS training needs must be in accordance with WHS Local Training Plan and through the WHS induction programs and Performance Development Review Process.
- 'Regular' hazards identified below must be listed as 'Essential' in the Selection Criteria - see ' Employment Medical Procedures' at http://info.anu.edu.au/Policies/_DHR/Procedures/Employment_Medical_Procedures.asp

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
key boarding	☒	☐	laboratory work	☒	☐
lifting, manual handling	☐	☒	work at heights	☐	☐
repetitive manual tasks	☐	☒	work in confined spaces	☐	☐
Organizing events	☐	☒	noise / vibration	☐	☐
fieldwork & travel	☐	☒	electricity	☐	☒
driving a vehicle	☐	☒			
NON-IONIZING RADIATION			**IONIZING RADIATION**		
solar	☐	☒	gamma, x-rays	☐	☐
ultraviolet	☐	☒	beta particles	☐	☐
infra red	☒	☐	nuclear particles	☐	☐
laser	☒	☐			
radio frequency	☐	☒			
CHEMICALS			**BIOLOGICAL MATERIALS**		
hazardous substances	☒	☐	microbiological materials	☐	☐
allergens	☐	☐	potential biological allergens	☐	☐
cytotoxics	☐	☐	laboratory animals or insects	☐	☐
mutagens/teratogens/ carcinogens	☐	☐	clinical specimens, including blood	☐	☐
pesticides / herbicides	☐	☐	genetically-manipulated specimens	☐	☐
			immunisations	☐	☐

OTHER POTENTIAL HAZARDS (please specify):

Note that we're not aware of any of the laboratory chemicals being labelled as "allergens" or "carcinogens" but we'll make it standard laboratory procedure to consult the MSDS.

Supervisor's		**Print Name:**	**Associate Professor Michael Ireland**	**Date:**	