2025 Election Round

Last updated 10 July 2024

# INFORMATION TO COMPLETE AN ONLINE FELLOWSHIP NOMINATION 

For Ordinary Election, Special Election, and Corresponding Membership

This document is to assist Fellows gather information to nominate a candidate (prior to logging into the online nomination system). Fellows may find it useful to send this document to their candidate. All changes since the previous round are identified in green text.

The Fellowship Nomination System (FNS) is for Fellows (only) to nominate candidates. Only Fellows are permitted to access the system. Go to the Academy's website https://www.science.org.au and select 'FNS' (at the top
 right of the screen) and follow the prompt to enter your email address. Do this each time to access the system to be sent a new login token/link. All Fellows will be sent an email confirming when the system is open (around 22 July).

## FOR NOTING

- All continuing nominations must be updated and resubmitted to be considered in this round - including new consent to nomination and declaration forms for 2025 (see below).
- Fellows serving on a Sectional Committee or on Council should not nominate any candidates. Sectional Committee members must not be a referee for a candidate under consideration in the committee in which they are serving, and Council members must not be a referee for any candidate.
- For Corresponding Member and Special Election nominations, also refer to pages 9-10 (for details on referees and citations).


## FORMS and RESOURCES | 2025 ROUND

- Consent to Nomination Form 2025
- Candidate Declaration of Open Disclosure Form 12025
- Proposer Declaration of Open Disclosure Form 12025
- Timeline for Election 2025 Round
- Sectional Committee Members 2025
- Council Members $\operatorname{~2024/25}$


## ASSISTANCE

For IT help to access or use the system (including uploading documents) email ict@science.org.au

## KEY DATES

by 31 July 2024 | New candidates must be 'registered'

To register a candidate, start a new nomination in the system and enter and save the candidate's name, email, gender, and the proposed Sectional Committee to assess the candidate.
by 31 August 2024 | All nominations must be completed and submitted

## As early as possible | Referees

TIP: contact your referees ASAP to confirm they are able to provide an assessment for your candidate (see pages 7-8). Candidates without the required number of independent assessments cannot be recommended for Fellowship election.

Requests are sent to referees on submission of the nomination and are due within 3 weeks of that date.

Nomination enquiries: including to check the eligibility of a candidate or suitability of a referee, contact the Fellowship Director, Karen Holt, at fellowship@science.org.au If required, enquiries will be referred to:

Prof Ivan Marusic FAA FRS
Secretary Physical Sciences (A-side)

Prof Bob Graham AO FAA
Secretary Biological Sciences (B-side)

TIP: checklist of all documents to upload into the system on page 18.

## ELIGIBILITY FOR ELECTION

1. Candidates for Ordinary and Special Election must be Australian citizens or permanent residents in Australia and have an attachment to an Australian research organisation. For recent arrivals to Australia, who are not Australian citizens, candidates should be a resident for two years (by the date of the election meeting in early February) and contributing to Australian science.
2. Candidates for Corresponding Membership shall be persons, not normally resident in Australia, who are eminent in some branch of natural knowledge.

## FELLOWSHIP NOMINATION SYSTEM \| INFORMATION REQUIRED FOR EACH SECTION

## SECTION 1: CANDIDATE DETAILS

- Title, given name and surname
- Gender* - man; woman; non-binary; I use a different term (please specify); prefer not to answer
* Gender includes anyone who identifies as cisgender (personal gender identity corresponds with sex assigned at birth), or transgender (personal gender identity does not correspond with sex assigned at birth). We also recognise that there are individuals who experience discrimination because of gender or sexual identity who do not identify either fully or partially as a woman or a man e.g. intersex and non-binary individuals, who we also welcome to be considered for Fellowship of the Academy.
- Contact details - residential address, email, phone/mobile
- Date of birth, country of birth, Australian citizenship/residency (or nationality for Corresponding Member candidates)
- Post-nominals (including qualifications, academy memberships)
- Current job title/position, institution/organisation
- Year awarded PhD (or highest academic qualification)


## For Continuing Candidates

(Candidates may be considered for up to 5 years or until elected).

REMINDER: new consent and declaration forms need to be completed in each round. (See page 1 for links to these forms).

TIP: proposers are strongly advised to confirm and update the candidate's details for each year of nomination.

## Diversity and Inclusion | Additional Information

The Academy aims to be a leader in diversity and inclusion in Australia's science sector. While excellence in science is the overarching consideration for election to the Academy, we recognise that to achieve this we must celebrate and embrace diversity and inclusion in all its forms. Diversity dimensions within the Fellowship (including but not limited to gender, age, culture, state and region of residence, emerging disciplines, and interdisciplinary science) will be further taken into account by Council in considering the final list of candidates.

Additional personal information is requested from the candidate via the Consent to Nomination Form (that must be updated each year). This is optional and only for those who wish to provide this information:

- Any personal information the candidate wishes to disclose, such as (but not limited to): 'cultural background, Indigenous heritage, carer responsibilities (past or present that have impacted your career), neurodiversity, or other diversity information'. (Up to 200 words)
- The proposer may also provide additional comments on the nomination. (Up to 200 words)
- The proposer is also asked: 'Based on the candidate's response, and your knowledge of the candidate, do you consider this candidate to have a diverse background?'


## SECTION 2: OPPORTUNITY TO DEMONSTRATE SCIENTIFIC EXCELLENCE

Achievement will be judged relative to opportunity. An assessment of a candidate's opportunity to demonstrate scientific excellence will take into account the factors below, based on the Research Opportunity and Performance Evidence (ROPE) guidelines of the Australian Research Council (including years since PhD).

A response to each of the points below should be provided - stating also where opportunities have been available to the candidate. (Up to 200 words)

1. Number of years post-PhD or since graduation from highest educational qualification.
2. Available time for research, averaged over career.
3. Mentoring, research support and funding available to the candidate.
4. Career interruptions, including those due to employment outside academia, unemployment, parttime employment, childbirth, parental leave, carer responsibilities, misadventure, orillness.
5. Family, medical or other circumstances.
6. Any other aspects of career or opportunities to demonstrate scientific excellence that are relevant to assessment.
7. Total number of years of career interruption/s, and an estimate of Full Time Equivalent (FTE) available for scientific pursuits.

Has the candidate's career been interrupted? Yes/No

## SECTION 3: SHORT CITATION |Ordinary Election

Please provide a statement on the candidate's qualifications for election, written in a way that can be understood by non-specialists in the field and that is suitable for public release. The short citation should clearly illustrate why the candidate is eminent in their field, their key discoveries and achievements, and how they have advanced the field. (Up to 100 words)

## SECTION 4: SUGGESTED SECTIONAL COMMITTEE and DISCIPLINE AREAS

Please suggest the primary Sectional Committee that will consider yourcandidate and up to two discipline descriptors/discipline areas. The list of Sectional Committees and the discipline descriptors/areas (at Attachment 1 from page 11) are provided to assist proposers identify the most appropriate committee to evaluate their candidate. This will also assist The Secretaries to identify further committee members that cover the expertise of the candidates (where this is possible).
A. For candidates that cross A-Side and B-Side, or otherwise meet the Academy's definition for Interdisciplinary, select 'SC13: Interdisciplinary'.
B. If your candidate does not meet the definition for Interdisciplinary (SC13) but crosses two Sectional Committees within A-Side (Physical Sciences) or B-Side (Biological Sciences), select a 'primary' Sectional Committee and then select the Sectional Committee with which they 'overlap'. (See page 16 for further guidance on Interdisciplinary).

All candidate placements will be reviewed and approved by The Secretaries, prior to the Sectional Committee evaluations. Candidates will be moved into a different committee by The Secretaries, should this be necessary.

## SECTION 5: SIGNATURES OF PROPOSER, SECONDER AND SUPPORTERS

The signatures (or written declaration of support) of at least four Fellows, including the proposer and seconder, are necessary to render the nomination valid. Proposers may upload, on behalf of the seconder and supporters, either an electronic signature, a document with a signature confirming support, or an email confirming support for the candidate (sent from the seconder or supporter to the proposer).

Proposers of candidates for all types of election (Ordinary, Special and Corresponding Membership) are required to submit a signed Proposer Declaration form - $\mathbf{2 0 2 5}$ Round and upload it into the proposer upload at Section 5. (Note that this form replaces the proposer signature).

## SECTION 6: EXTENDED CITATION (Ordinary Election) ${ }^{1}$

The Academy is committed to celebrating and supporting diversity within the Fellowship. Achievement will be judged relative to opportunity, taking into account any breaks in, or late commencement of, career. Gender balance and diversity issues within the Fellowship will also be taken into account.

Since the 2024 Round, more flexibility in the weightings of the criteria for election (below) have been adopted for Sectional Committees and Council to better assess contributions of candidates who may not have had a full-time research career path or opportunities to undertake leadership roles.

Proposers are not to choose weightings. This information is provided for reference only. The flexibility is for Sectional Committees to adjust the weightings as they see fit given the circumstances as described in the nomination. Normally the weighting used would be: 60:20:20, and any adjustments made by a committee need to be commented on in the Chair's report to Council.

The weighting of criterion 1 is a minimum of $60 \%$ and a maximum of $85 \%$, however, criteria 2 and 3 may also now be adjusted by the Sectional Committee (to range from 15 to $40 \%$ combined) with a minimum weighting of $10 \%$ for criteria 2 and $5 \%$ for criteria 3). Please refer to the exemplars (including for neurodiversity) provided at Attachment 2 (on page 17) to demonstrate use of the revised weighting criteria.

Please upload a document addressing each of the three criteria below and using the word limit as guide. Also provide an Executive Summary (up to 100 words).

1. Scientific achievement: This dimension focuses on the impact of the candidate's research in the field (including the translation or applied impact of that research). Scientific excellence is based on contributions with major impact in the field. This may be either a single contribution, or multiple contributions with clear impact. For candidates whose research has been interrupted, their scientific achievement should be considered for the period in which they were active scientists plus ongoing citations.

- Minimum 60\% weighting but for singular exceptional contributions, this may be adjusted higher up to a maximum of 85\%. (Criteria 1: 60-85\% weighting)

Indicators of impact may include but are not limited to: main publications especially the papers that best support the nomination; citation of those publications; 'textbook' science; patents; significant impact on practice or translation of the research; or other indicators relative to the standards for each discipline. (Up to 1,500 words)

[^0]For 'applied' candidates (where there is a significant impact of their applications of scientific knowledge to the invention or development of new devices, constructions, products or processes) these additional indicators of impact should also be addressed in this section and within the 1,500-word limit.
2. National and international profile: This dimension focuses on how others have responded to the candidate's collective achievements.

- Normally $20 \%$ weighting but may be adjusted in line with the conditions stated further below but must not be less than 10\%. (Criteria 2: 10-35\%)

Indicators include: invitations to speak; grants and Fellowships; journal editorships; honours, awards and prizes; membership of prestigious organisations or committees; and supportive letters from referees. (Up to 800 words)
3. Leadership, mentorship, promotion of science and potential to advance the work of the Academy: This dimension focuses on what the candidate has done other than their own research.

- Normally 20\% weighting but may be adjusted in line with the conditions stated further below but must not be less than 5\%. (Criteria 3: 5-30\%)

Indicators include: executive and leadership roles in science (not just within the specific research area of the candidate); conference organisation; high-level peer review functions; science education, outreach, advocacy and/or policy development; successful mentorship of the next generation of scientists; other contributions to the discipline. (Up to 800 words)

## SECTION 7: CURRICULUM VITAE

Please upload the candidate's full CV, including the following information:

- Full name, date of birth, citizenship, address and contact details
- Current and previous appointments/positions
- Awards and honours, including election to Fellowship of scientific societies and academies
- Academic record and qualifications; Teaching and mentoring, including research supervision; and Academic and researchleadership
- Professional service including professional societies, journal refereeing, editorial boards, public lectures, national and international committees
- Research grants
- Conference presentations, including plenary/keynote lectures, invited symposium lectures etc., and conference organisation.

Do not include publication lists or discussions of publications in this part of the nomination.

## SECTION 8: MOST SIGNIFCANT PUBLICATIONS

Please upload a list of up to $\mathbf{1 0}$ of the candidate's most significant publications that have changed the field. These may not always be the most highly-cited publications, rather they should be publications that have contributed most to the candidate's scientific achievements, and which demonstrate how the candidate has advanced their field of research.

If significant impact is across more than one field and the candidate is being considered by more than one Sectional Committee (a primary and a secondary committee) or by the Interdisciplinary Committee, then more than 10 papers (up to 20 ) would be allowable.

Use standard bibliographic form and for each publication, please include:

1. All authors (in the order listed on the publication), year of publication, title, name of journal, volume, page numbers (full span); and
2. A short description of up to 50 words explaining:

- why the publication is important
- the candidate's specific role in the research, and
- the percentage of the candidate's contribution to the research.

If publications are 'in press', please include the acceptance date. Do not include publications submitted but not yet accepted, or any retracted papers (in this list).

## SECTION 9: PUBLICATION LIST

Please upload a comprehensive list of all publications (from most recent) divided into the following sections:

1. Books
2. Scholarly book chapters
3. Refereed journal articles
4. Refereed conference proceedings
5. Patents

Use standard bibliographic form and include: all authors (in the order listed on the publication): year of publication: title: name of journal; volume; and page numbers (full span). If publications are 'in press', include the acceptance date. Do not include publications submitted but not yet accepted.

## Retracted Papers and Corrections

Retracted papers (and papers with corrections) must be included in the Publication List, clearly marked as such and with explanatory notes. These must also be outlined in the Candidate's Declaration of Open Disclosure. The Academy recognises that some retractions and corrections are to be commended, and where there are multiple authors, they might not necessarily all bear equal responsibility.

On the Declaration of Open Disclosure form (to be uploaded into Section 1) candidates are asked to disclose (with other matters) any retracted papers, papers with corrections, or papers where concerns have been raised, and to append further details with their full list of publications.

## SECTION 10: REFEREES

For Ordinary Election, please identify:

- six eminent referees (proposer referees), at least four of whom are based overseas.
- None of the referees are to have a direct conflict of interest with the candidate and at least three referees must be independent and not associated with the candidate either in a professional or personal manner.

For Special Election and Corresponding Membership, proposers should identify:

- four eminent referees who do not have any direct conflicts with the candidate.
- None of the referees are to have a direct conflict of interest with the candidate and at least two referees must be independent and not associated with the candidate either in a professional or personal manner.

For Ordinary Election and Corresponding Membership, referees should include scientists who are acknowledged leaders in the candidate's field of research, and who have the ability to provide an assessment of the wider impact of the candidate's work on his/her scientific discipline. Referees who can identify and substantiate the candidate's contributions and role in collaborative efforts will strengthen the candidate's case.

## ADDITIONAL NOTES ON REFEREES | FOR ALL TYPES OF ELECTION

All referees should preferably (but not necessarily) be Fellows of a national Academy (or their country's equivalent). Referees from Australia should normally be Fellows of this Academy, however, exceptions to this may be approved by The Secretaries. Prior to entering a non-FAA Australian based referee, email the Fellowship Director at fellowship@science.org.au for approval (and to check that the referee is not a candidate). The proposer, seconder and supporters for the nomination must not be used as referees.

Proposers must contact each referee prior to entering them into the nomination system to confirm their email address (and other details required), that they do not have any direct conflicts of interest with the candidate, and that they are available and willing to provide a report, thereby reducing the number of declines due to direct conflicts, ill health, lack of time or lack of knowledge of the candidate.

Proposers must ensure they have the required number of 'independent' referees (up to three for Ordinary Election and up to two for Special Election and Corresponding Membership). You may copy and send to your referees the information on the Academy's definition of conflicts of interest (on page 8).

The request to provide a report will be automatically sent to referees as soon as the proposer submits the nomination. Referees will be given three weeks from the date the request is sent. We will provide your referee with the criteria for election and access to the candidate's CV, lists of publications and extended citation. We will though ask that they decline the request to provide an assessment if they have a direct conflict with the candidate.

[^1]
## CONFLICTS OF INTEREST | FOR REFEREES

None of the referees are to have a direct conflict of interest with the candidate and none of the independent referees should have an indirect conflict with the candidate.

A direct conflict can occur for several reasons including, but not limited to, if the referee and the candidate:

1. have or have had a close personal relationship (including enmity)
2. have a professional research relationship, including:
a) are negotiating/hold/have held within the past two years a research proposal conjointly. (In proposals with a very large number of investigators, such as large centres or infrastructure grants, this may not be a direct conflict unless there is closecollaboration)
b) have been a collaborator or co-author on a research output within the past four years. (In fields with very large numbers of co-authors, co-authorship may not be a direct conflict unless there is close collaboration)
c) have ever been an academic supervisor of the candidate
d) have been an employment supervisor (or the candidate is/was a direct report) within the past five years
e) have been a member of a technical committee, such as a review committee, where a close working relationship has occurred within the past five years.
3. have been in the same division/department/section of the organisation employing the candidate, or the same research centre as the candidate, and in the same research field, or a closely related research field, as the candidate during the past two years.

Referees may be deemed to have an indirect conflict with a candidate if any of the following apply:

1. they have ever had any of the professional research relationships listed in ' 2 ' above at any time in the past (except ' $c$ ' 'academic supervisor' in which case this is a direct conflict)
2. they have been in the same division, department, section or centre as the candidate (but are not in the same research field or a related research field as the candidate), or
3. they have been a co-editor with the candidate of a book, journal, compendium, or conference proceedings within the past two years.

## REFEREE | INFORMATION REQUIRED

The Following information is required to enter each referee into the online system:

- Title, first name and last name
- Email (check email address, or the referee will not receive the request)
- Institution or organisation
- Country of residence
- Academy membership/s (or equivalent).

REMINDER: Proposers must contact each referee prior to entering them into the nomination system to confirm the nature of any conflicts of interest with the candidate. If they have a direct conflict of interest they cannot be used and if they have any indirect conflicts of interest, they cannot be used as an 'independent' referee. (See notes at top of page 7).

TIP: Copy and send the information on conflicts of interest, and 'referee /information required' to your referee, when you check they are available and willing to provide an assessment. We will provide your referees with the criteria for election and access to the candidate's CV, publication lists, and citation.

## CORRESPONDING MEMBERSHIP | ADDITIONAL INFORMATION

Candidates for Corresponding Membership must be persons of eminence in the field/s of their endeavors. The primary criterion for Corresponding Membership is scientific excellence at the highest level. It is expected that candidates for Corresponding Membership would unquestionably be elected to the Fellowship by Ordinary Election if they were resident and active in Australia. It is also expected that candidates have a high international profile and are Fellows/members of Academies or bodies in their country of residence, equivalent in standing to the Academy.

The strength of the connection of the candidate with Australian science shall be viewed as important in the evaluation process. This connection should be more extensive than conducting a collaborative research project or sharing supervision of one or two research students and may be broader than research activity. Corresponding Members are expected to be able to advance the work of the Academy in science education, advocacy, policy or international engagement.

At the top of the nomination form, select Corresponding Member for type of election, and then complete all the 'Sections' of the form (as per the instructions for 'Ordinary election') except for:

- Section 3: Short citation (see below)
- Section 4: Sectional Committee - select Corresponding Member and Special Election
- Section 6: Extended citation (see below)
- Section 10: Referees - proposers should identify four eminent referees who do not have any direct conflicts with the candidate. None of the referees are to have a direct conflict of interest with the candidate and at least two referees must be independent and not associated with the candidate either in a professional or personal manner.


## SHORT CITATION | Corresponding Member

Please provide a statement on the candidate's qualifications for Corresponding Membership, written in a way that can be understood by non-specialists in the field and that is suitable for public release. The short citation should clearly illustrate why the candidate is eminent in their field, their key discoveries and achievements, and how they have advanced the field. (Up to 100 words).

## EXTENDED CITATION | Corresponding Member

The primary selection criterion is scientific excellence, based on the indicators of merit below.
EITHER a single ground-breaking contribution to science, OR a cohesive body of smaller contributions with clear impact, as indicated by but not limited to:

1. ground-breaking publications, citation of those publications, 'textbook' science, patents, improved policy or practice, or other indicators relative to the standards for each discipline; (50\%)
2. extremely high international research profile, including supportive letters of reference from eminent referees. (30\%)
3. strength of connection or strategic value to Australian science including potential to advance the work of the Academy in science education, advocacy or policy. (20\%)

Please upload a .pdf addressing each of the sections below and using the word limit as a guide:

1. Executive summary (up to 100 words)
2. Contributions to science (up to 1,500 words)
3. International research profile (up to 800 words)
4. Strength of connection or strategic value to Australian science (up to 600 words)

## SPECIAL ELECTION | ADDITIONAL INFORMATION

Each year the Academy may elect to Fellowship up to four persons, whose election would expand the diversity of the Fellowship and be of signal benefit to the Academy and to the advancement of science. It is expected that candidates for Special Election will be scientists, engineers, or inventors and have a high national and/or international profile and potential to advance the work of the Academy in science education, advocacy or policy. They may also have a strong record of science achievement, usually early in their career.

Specially elected Fellows will have:

- rendered conspicuous service to the cause of science, OR
- demonstrated outstanding innovation or entrepreneurial spirit through the translation of the results of scientific research that have led to global impact.

At the top of the nomination form, select Special Election for type of election, and then complete all the 'Sections' of the form (as per the instructions for 'Ordinary election') except for:

- Section 3: Short citation (see below)
- Section 4: Sectional Committee - select Corresponding Member and Special Election
- Section 6: Extended citation (see below)
- Section 10: Referees - proposers should identify four eminent referees who do not have any direct conflicts with the candidate. None of the referees are to have a direct conflict of interest with the candidate and at least two referees must be independent and not associated with the candidate either in a professional or personal manner.


## SHORT CITATION | Special Election

Please provide a statement on the candidate's qualifications for Special election, written in a way that can be understood by non-specialists in the field and that is suitable for public release. The short citation should clearly illustrate the candidate's contribution to science and science leadership and/or to the translation of the results of scientific research that have led to global impact. It should also indicate how their election would be of benefit to the Academy and to the advancement of science. (Up to 100 words).

## EXTENDED CITATION | Special Election

Special election candidates will be scientists, engineers, or inventors and will be assessed using the following indicators of merit:

1. Evidence of sustained service to the cause of science and science leadership, including mentorship, at the highest level and/or evidence of innovation or entrepreneurial spirit through the translation of the results of scientific research that have led to global impact.
2. Evidence of very high national and/or international profile, including supportive letters of reference from eminent referees.
3. Potential to advance the work of the Academy in areas of strategic importance to the Academy, which may include science education, advocacy, policy or international engagement.

Please upload a .pdf addressing each of the sections below and using the word limit as a guide:

1. Executive summary (up to 100 words)
2. Service to the cause of science and/or evidence of innovation or entrepreneurial spirit (up to 1,500 words)
3. National and/or international profile and leadership (up to 800 words)
4. Potential to advance the work of the Academy in science education, advocacy, policy or international engagement (up to 600 words)

## ATTACHMENT 1 | SECTIONAL COMMITTEES AND DISCIPLINE DESCRIPTORS

## A-Side: Sectional Committees, discipline descriptors, and notes

## SC1: Mathematics

1. Pure mathematics
2. Applied mathematics
3. Numerical and computational mathematics
4. Statistical science
5. Mathematical physics

## SC 1 Notes:

a) Where mathematical/statistical effort is clearly applied in a particular discipline, the candidate should be considered in that discipline.
b) Candidates who focus on developing new statistical science should be considered here, but where the focus is on applying standard statistical methods in other fields, the candidate should be assessed in the SC where their work has had most impact or in SC13 if the impact has been across several fields.
c) Candidates whose work clearly aligns with the more mathematical aspects of data science should be considered in SC1, while those with a more application focus should be in SC6. Chairs will liaise on placement of candidates.
d) Bioinformatics should be considered in SC13 if there is significant contribution to both development of the methodology and its application.
e) The Chairs of SC1 And SC6 should jointly consider candidates in the Statistical and Data Sciences to maximise the likelihood of placement in the most appropriate Sectional Committee.

## SC2: Physics and astronomy

1. Astronomical and space sciences
2. Atomic, molecular, nuclear, particle and plasma physics
3. Classical physics
4. Condensed matter physics
5. Optical physics and photonics
6. Quantum physics
7. Applied physics

SC2 Notes:
a) Nanophysics is included in SC2.
b) Nanotechnology that has user/industry impact is considered in SC5 or SC13 (forbiomedical).
c) Photonics or quantum physics where the focus is applied to (quantum) communications or information technology is considered in SC6.
d) Where the focus of condensed matter physics research is more in the applications of materials, SC5 (materials engineering) is appropriate if there is clear user/industry impact but otherwise applied condensed matter should be considered in SC2 under applied physics.

## SC3: Chemistry

1. Analytical chemistry
2. Inorganic chemistry
3. Macromolecular and materials chemistry
4. Biomolecular chemistry
5. Organic chemistry
6. Physical and structural chemistry
7. Theoretical and computational chemistry
8. Applied chemistry

SC3 Notes:
a) Nanochemistry is included in SC3.
b) Nanotechnology that has user/industry impact is considered in SC5 or SC13 (for biomedical).
c) Nanomedicine is considered in SC3 if the focus is chemistry, otherwise in the SC where the major impact occurs.
d) Biochemistry is considered in SC9.
e) If the major outcome of the work is biomedical then considered in SC9.
f) If the major outcome of the work in biomolecular chemistry is in chemistry, then considered in SC3.

## SC4: Earth and planetary sciences

1. Atmospheric sciences and meteorology
2. Geochemistry
3. Geophysics
4. Geology
5. Oceanography
6. Hydrology
7. Environmental geosciences
8. Planetary sciences

## SC4 Notes:

a) Physical aspects of climate science are considered to span descriptors 1, 5, 6 and 7 as appropriate.
b) Palaeontology is considered in SC8 with reference to SC4 if candidate overlaps these two SCs.
c) Planetary sciences includes characterisation of the properties of planetary bodies (including meteorites) and satellite remote sensing.
d) Environmental geosciences includes the physical aspects of environmental and watersciences.

# $\stackrel{\circ}{\circ}$ <br> Australian Academy of Science 

## SC5: Engineering sciences

1. Chemical engineering
2. Civil and structural engineering
3. Electrical power engineering
4. Mechanical and manufacturing engineering
5. Materials engineering
6. Resource engineering
7. Instrumentation technologies
8. Nanotechnology

SC5 Notes:
a) All the above descriptors focus on engineering science rather than engineering perse.
b) Structural engineering refers to moderate to large scale structures that are deployable and excludes small structures such as artificial body parts and nanostructures, which go under other descriptors.
c) Biomedical engineering is considered interdisciplinary and is considered inSC13.
d) Electrical power engineering excludes photonics/information/communications technology, which is considered in SC6.
e) Nanotechnology requires some non-biomedical applied user/industry impact, otherwise a focus on nanoscience should be considered in SC2 or SC3.
f) All electronic engineering belongs in SC6.

## SC6: Information and communication sciences

1. Artificial intelligence
2. Computer science and distributed computing
3. Data science
4. Systems and control engineering
5. Photonic technologies
6. Quantum information technologies
7. Information systems
8. Electronic engineering and technologies
9. Communications engineering and technology

SC6 Notes:
a) All the above descriptors focus on the scientific aspects of the discipline.
b) Candidates focusing on the generic applications of data science should be considered under SC6.
c) Photonics technologies considered in SC6 should relate to information and communications, otherwise should be considered in SC2.
d) Pure and applied quantum science not involving information and communication technologies is considered in SC2.
e) Candidates with a mathematical focus on data science should be considered inSC1.
f) Bioinformatics should be considered in SC13 if there is significant contribution to both development of the methodology and its application.

## B-Side: Sectional Committees, discipline descriptors, and notes

## SC7: Plant and animal sciences

6. Non-biomedical genetics
7. Non-biomedical physiology
8. Non-biomedical pathology
9. Non-medical microbiology
10. Non-biomedical reproduction, development and endocrinology
11. Crop and forestry sciences
12. Animal production and veterinary sciences
13. Fisheries sciences
14. Non-medical plant and animal sciences not otherwise identified

SC7 Notes:
a) Animal behaviour is included in SC7.
b) Taxonomy and ecophysiology are considered in SC8.
c) Biomedical physiology is considered in SC11.
d) Applied microbiology is considered under SC8.
e) Experts who have focused in particular species or species groups should be placed in SC7.

## SC8: Ecology, environment and evolution

1. Ecology
2. Ecophysiology
3. Biogeography
4. Conservation and biodiversity including taxonomy
5. Environmental management, ecological applications
6. Evolution, macroecology and phylogenetics
7. Palaeontology
8. Climate change biology
9. Environmental systems biology
10. Applied microbial biology and systematics

## SC 8 Notes:

a) Non-applied microbiology is considered under SC7.

## SC9: Molecular and cell biology, and human genetics

1. Biochemistry
2. Developmental biology
3. Cell development, proliferation and death
4. Cell metabolism
5. Structural biology (including macromolecular modelling)
6. Membrane biology
7. Molecular systems biology
8. Synthetic biology
9. Proteomics in biological systems
10. Molecular genetics
11. Human genetics (including human population genetics)

SC9 Notes:
a) Molecular genetics includes epigenomics, transcriptomics, biomedical metagenomics, and molecular genetics of cancer.
b) Human genetics includes genetic epidemiology, statistical genetics and complex diseasegenetics.

## SC10: Immunology, microbiology and haematology

1. Immunology
2. Immunotherapy
3. Medical and clinical microbiology
4. Veterinary microbiology
5. Bacteriology/Mycology/Virology/Parasitology/Infectious agents
6. Haematology

## SC10 Notes:

a) Immunogenetics, immune regulation and cytokine biology are included in SC10.

## SC11: Physiology and neuroscience

1. Neuroscience
2. Cognitive science
3. Psychology
4. Medical physiology and endocrinology
5. Medical (or human) reproduction and development

SC11 Notes:
a) Clinical psychology is included in SC11.
b) Non-biomedical physiology and endocrinology is considered in SC7.

## SC12: Medicine, dentistry and health sciences

1. Clinical medicine
2. Clinical dentistry
3. Pharmacology and pharmaceutical sciences
4. Precision therapies
5. Allied health
6. Epidemiology and public health

SC12 Notes:
a) Clinical medicine includes nursing.
b) Allied health includes: physiotherapy; occupational therapy; human movement and sports science; dietetics and human nutrition; optometry and audiology.

## SC13 INTERDISCIPLINARY

## Definition of Interdisciplinary:

1. The combining of two or more academic disciplines into one activity e.g., biomedical engineering, bioinformatics (if significant work had been undertaken in both the methodological aspects and their application, otherwise see SC1 or SC6), soil science (soil chemistry, physics, microbiology).
2. Significant impact (including translation) within significantly different disciplines (descriptors) across at least two SCs e.g., statistical modelling applied to and with impact in several different fields, mathematical, physical or chemical concepts applied to several fields in each of which there is clear impact, such as environmental, material science, engineering, communications and medical sciences.
3. Significant impact_in more than one SC across the physical and biological sciences e.g., chemistry and marine biology or across two very different physical or biological disciplines e.g., zoology and epidemiology.

## SC13 Notes:

a) A small impact in a discipline (descriptor), such as less than $25 \%$ of the total work, does not warrant placement in SC13 and the candidate should be placed in the SC where the major impact occurs.
b) When interdisciplinary research has impact in one discipline, the candidate should be placed in the SC where the impact occurs.
c) The placement of bioinformatics candidates will be reconsidered annually.

## ATtACHMENT 2 | EXEMPLARS TO DEMONSTRATE USE OF THE REVISED CRITERIA WEIGHTING

Proposers are not to choose weightings. This information is provided for reference only. The flexibility is for Sectional Committees to adjust the weightings as they see fit given the circumstances as described in the nomination. Normally the weighting used would be: 60:20:20.

## Exemplar 1:

Candidate X made a major breakthrough in the treatment of a disease that kills thousands of children each year in developing countries, and received several prestigious Australian and international prizes for their work including the Prime Minister's Award for Research in the Life Sciences. The candidate is in increasing demand as a speaker at international meetings, however, due to accepting a series of shortterm contracts, they have had very limited opportunity to undertake activities relevant to Criterion 3.

The Sectional Committee could apply the following weightings for the three Selection Criteria: Criterion 1: $75 \%$; Criterion 2: 20\%; Criterion 3: $5 \%$. If this were done it would need to be advised in the Chair's report to Council.

## Exemplar 2:

Candidate $Y$ made a major discovery that led to the development of a new chemical process that became transformative across academe and industry, leading to widespread impact. They have received several prestigious Australian and international prizes for their work including the Prime Minister’s Award for Research in the Physical Sciences. The candidate receives numerous invitations to speak at international meetings but can accept relatively few because their research career has been interrupted by successive appointments over the last 15 years, first as Dean, Graduate Research at the university at which they conducted their ground-breaking research and then as DVC-R at two universities, each in a different city. The candidate has demonstrably improved the research standing of each of these institutions through innovative reforms but has not had the opportunity to re-establish a laboratory. Their research continues to be highly cited.

The Sectional Committee might apply the following weightings for the three Selection Criteria: Criterion 1: 60\%; Criterion 2: 10\%; Criterion 3: 30\%. If this were done it would need to be advised in the Chair's report to Council.

## Exemplar 3:

Candidate $Z$ has made major discoveries, establishing a paradigm shift in understanding the real world, that is inspirational to the scientific community, and indeed the wider community. The candidate is neurodiverse, and dealing with social engagement is challenging having been overlooked in leadership roles and/or finding it difficult to take on such roles, and has received limited invitations to conferences. The candidate has moved university on a number of occasions to escape local social issues but has always managed to establish productive research groups. The candidate's work is highly innovative but not super highly cited because of the paradigm shift focus on the research, with very few researchers in the field.

The Sectional Committee might apply the following weightings for the three Selection Criteria: Criterion 1: $85 \%$; Criterion 2: $10 \%$; Criterion $3: 5 \%$. If this were done it would need to be advised in the Chair's report to Council.

## ATTACHMENT 3 |CHECK LIST OF DOCUMENTS TO UPLOAD INTO NOMINATION SYSTEM

Allowable file type: pdf
$\square$ Consent to Nomination Form | 2025
$\square$ Candidate Declaration of Open Disclosure Form | 2025
$\square$ Proposer Declaration of Open Disclosure Form | 2025
$\square$ Seconder signature/agreement
$\square$ Supporter 1 signature/agreement
$\square$ Support 2 signature/ agreement
$\square$ Supporter 3 (Optional) signature/agreement
$\square$ Support 4 (Optional) signature/ agreement
$\square$ Extended Citation
$\square$ Curriculum Vitae
$\square$ Most Significant Publications
$\square$ Publication List

## REFEREE | INFORMATION REQUIRED

The Following information is required to enter each referee into the online system:Title, first name and last name
$\square$ Email (check email address, or the referee will not receive the request)Institution or organisationCountry of residenceAcademy membership/s (or equivalent)


[^0]:    ${ }^{1}$ See notes (pages 9-10) for additional information on criteria (and citations) for Corresponding Membership and Special Election.

[^1]:    Please note that 'additional' independent referees (Chair referees) will be identified and contacted by Sectional Committee Chairs for all Stage 1 short-listed candidates, to ensure that each of the candidates under consideration to recommend to Council has at least three 'independent' evaluations.

    If there is anyone that the candidate does not wish to be contacted in relation to their nomination, there is an opportunity for up to two non-preferred referees to be listed for the Chair's attention (by including the full name, institution and email address in the non-preferred referee section).

