



ASSESSMENT PROCEDURES

Irish Research Council for Science, Engineering and Technology

IRCSET EMPOWER: Government of Ireland Postdoctoral Fellowships in Science, Engineering and Technology

Application Form

Applicants will complete an Application Form via the online application system (accessible from the IRCSET website at www.ircset.ie on the date the Call opens).

The Application Form will contain information about the applicant's:

- educational background and research career to date
- research outputs (e.g. publications, patents, conference presentations etc.)
- information about the proposed host institutions, laboratories and research mentors
- a short description of the proposed research project
- a short training and career development plan
- the name and details (including email address) of two Referees (persons familiar with the applicant's educational background and research career. *Note that a person who is named as a mentor in the application cannot also be a Referee*).

After you have submitted your Application form, the Host Laboratory mentor will be requested to provide a statement that they will provide all necessary support to the applicant if a Fellowship is awarded. This request will come via an automatically generated email from the online application system after you have selected them as your proposed mentor on your application form. They will also be asked to provide the following information about their laboratory:

- size of current research team
 - number each of Investigators, Experienced Researchers¹ (post-PhD or equivalent), Early Stage Researchers² (research students), and other staff (technicians etc.)

¹ Experienced Researchers are those individuals who, at the deadline for application (i) be in possession of a doctoral degree, independently of the time taken to acquire it; or (ii) have at least four years of full-time equivalent research experience (including the period of research training) after the degree which formally

- a statement pertaining to the research attainments of the laboratory
- a list of research outputs from the laboratory over the past two years (up to the deadline for application).

You will not see the Host Laboratory's comments.

The Referee(s) will be requested to provide a reference. This request will come via an automatically generated email from the online application system to them using the email address provided by you in your Application Form. This reference will consist of:

- a statement of the referee's professional relationship to the applicant
- a percentage ranking for the applicant in comparison with other researchers at this academic level that the Referee have worked with or mentored over the past 5 years
- observations on the characteristics and achievements of the candidate in support of the recommendation

You will not see the Referee's comments.

The Host Institution's research office will be requested to provide a statement that they will provide all necessary support to the applicant if a Fellowship is awarded. This request will come via an automatically generated email from the online application system, to a person nominated by the Host Institution. You will not see the Host Institution's comments.

All of the information described above will be automatically collated by the online application system into one final Application Form, which will be used in the assessment procedure to evaluate the proposed Fellowship.

As part of the Application Form, applicants have designated their research proposal as belonging to one of the subject areas biological sciences (divided into Panel A and B), chemistry, computer science, earth/environmental science, engineering, mathematics and physics. Applications will be assessed and ranked within their designated subject area. This is to ensure that all applications are treated equally. In the case of interdisciplinary research proposals, applications may be assessed within a secondary subject area where deemed necessary by those assessing in the primary subject area, for example, if they do not possess sufficient expertise to assess all aspects of the application.

allowed them to embark on a doctorate in the country in which the degree/diploma was obtained or in the country where the fellowship is taking place.

² Early-stage researchers are defined as those who are, at the time of selection by the host institution, in the first four years (full-time equivalent) of their research careers. This is measured from the date when they obtained the degree which would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in the country in which the research training is provided, irrespective of whether or not a doctorate is envisaged.

Assessment Stage 1

In the first stage of the assessment process, each eligible application received by the application deadline will be sent to at least two international (not based in Ireland) peers (hereafter referred to as “Assessors”) for review. IRCSET will use all available resources (including the keywords provided by the applicant) to ensure an excellent match between application and Assessor. The distribution of applications to Assessors is carried out via the online application system (Assessors are issued with details to login, where they will be provided with their assigned applications). Assessors will complete an online assessment form and provide a score for each application, as described later under “Assessment Criteria”.

Assessment Stage 2

The second stage of the assessment process involves convening an assessment committee meeting for each of the 8 subject areas. This will provide an opportunity for all applications to be reviewed and discussed in further detail. The 5 to 10 members of the committee will be selected on the basis of their disciplinary expertise with due regard to gender balance, nationality, and private sector experience. Some of these will be from the Assessors who have assessed applications in the first stage and will be representative of the research areas detailed in the applications received. At the assessment committee meeting, the Assessors will discuss and debate the initial scoring and propose a ranking list of applicants using the assessment criteria (see below). In the case of interdisciplinary proposals, applications may be passed to a second committee for further assessment where deemed necessary by the primary assessment committee, for example if they do not possess sufficient expertise to assess all aspects of the application.

The budget is distributed to the different subject areas according to the number of eligible proposals received in each area, i.e., the percentage success rate is the same for each area, but the absolute number of successful proposals will be higher in panels which receive more eligible applications. For example, if the overall success rate for the Scheme is 20%, and 100 applications in Chemistry and 50 applications in Physics are received, a normal result would be to fund 20 in Chemistry and 10 in Physics.

Whilst each Committee will thus have a base-line for the probable success by subject area, it will be open to each committee chairperson to provide evidence for a proportionally greater or lesser success rate.

Assessment Criteria

Assessors are asked to provide a score for the application, broken down into the following criteria.

Track record / research potential of the applicant	max 30 marks
Scientific and Technological Quality	max 22 marks
Impact of the proposed Fellowship	max 20 marks
Training and Career Development Aspects of the Fellowship	max 15 marks
Implementation of the proposed Fellowship	max 13 marks
Total	100 marks

Track Record/Research Potential of the Applicant

In line with IRCSET's mission to develop the careers of the best early-stage researchers, the research potential of the applicant is the most important criterion to be assessed. This potential must be demonstrated by the significant achievements to date such as publications record (peer-reviewed journal articles, patents, books etc.), invited contributions, conference presentations, and participation in other relevant actions within the research area such as research management, teaching, supervision, outreach activities, journal refereeing etc. The applicants must demonstrate independent thinking and leadership qualities and the potential to acquire new knowledge. In addition, there must be a satisfactory match between the researcher's track record and research potential and the proposed research project. Applicants should be rewarded for any independent steps they have undertaken to advance their research career, e.g. attendance at non-mandatory training and development courses. Any breaks in the applicant's research career path, eg. parental leave, periods working in industry, delays in research progress/output due to periods of transnational or trans-sectoral mobility etc. are automatically taken into account and the applicant's score will not be adversely affected by such breaks.

Scientific and Technological Quality

The assessors will examine the proposed research project to be undertaken during the Fellowship bearing the following factors in mind:

- Originality and innovative nature of the project
- Relationship to "state of the art" in its scientific field
- Suitability of the proposed methodology
- Clarity of long and short term objectives based on the detailed workplan
- Feasibility

The quality of the host laboratory as the proposed research environment must be fully documented. Considerations may include the research reputation of the chosen mentor, as evidenced by publication record, conference participation or other evidence of

impact in the research area, the equipment and facilities available, linkages with appropriate national and international partners, experience and expertise in training researchers, capacity to provide high-quality mentoring to the Fellow etc. If the chosen mentor is not the overall leader (Principal Investigator or P.I.) of the host laboratory, the research achievements of the P.I. will also be taken into account.

Impact of the proposed Fellowship

In terms of evaluating the impact of the research project proposed for the Fellowship, consideration will be given to the importance in the international context, the possibility that the project will lead to advances in the area, the potential for technological impact and the degree to which the proposal addresses present or future socio-economic needs. For proposals in basic research, particular emphasis will be on the first two criteria, whilst for proposals in engineering or applied sciences, particular emphasis will be on the latter two criteria.

In terms of evaluating the impact of the proposed Fellowship on the applicant's career path, Assessors will be asked to consider whether the proposed research project and the fellow's plan for training and career development will have a significant impact on their career development as a researcher and will open them up to future career opportunities both in academia, enterprise (industry) or in other areas such as RTDI Policy. The applicant's chosen host institution/laboratory will also be evaluated in this section, in terms of whether it provides a good environment for the development of the applicant's career. If an applicant is not proposing to move to a new host institution and laboratory, the justification for this will be evaluated.

Training and Career Development Aspects of the Fellowship

Assessors are asked to carefully evaluate the training and career development plan proposed by the applicant, and investigate the proposed research project for training and career development aspects. In particular, all proposed Fellowships will be evaluated on the potential to (a) allow the Fellow to acquire new scientific and complementary skills and (b) help the Fellow to reach professional maturity, and demonstrate diversity and independence. In line with a recent report,³ which emphasised that in the coming years, a majority of Irish-trained and Irish-based Experienced Researchers will be expected to take up employment outside traditional academic positions, particular attention will be paid to aspects of the proposed Fellowship which allow the Fellow to gain skills relevant to employment in areas outside of academia, for example, working in teams, intellectual property protection and commercialisation, communications etc. The career development aspect of the proposed host institution/laboratory will also be evaluated.

³ "Building Ireland's Knowledge Economy: The Irish Action Plan for Promoting Investment in R&D to 2010". July 2004. <http://www.entemp.ie/publications/enterprise/2004/knowledgeeconomy.pdf>

Implementation

The proposed host laboratory and host institution will be evaluated on their ability to allow the full implementation of all aspects of the proposed Fellowship. This will include the provision of all necessary facilities for the Fellow to fully carry out their proposed research project e.g. laboratory equipment, office space, laboratory space, IT equipment, and auxiliary facilities e.g. library, online access to research journals etc. Consideration will also be given to the host laboratory's and host institution's ability to facilitate the activities specified in the applicant's career development and training plan. For example, all ERs working at Irish Higher Education Institutions have access to guidance in the preparation of an Individual Development Plan and in arranging the necessary skills training to deliver that plan.

In addition, consideration will be given to the ability of the host institutions to assist the Fellow in integrating into their new environment. This assistance could be in the form of providing access to language courses, help with immigration issues, setting up the Fellow's tax and social security arrangements.

Assessment Categories

The assessment committees will have the task of allocating each application to one of the following categories:

Category A: top priority for funds.

These are the truly exceptional applicants who are clearly making substantial progress in their chosen area of research. Usually they will have a publications record and will have other evidence of having achieved some recognition in the research area. The proposed Fellowship programme is of both excellent scientific impact and contains high quality training and career development aspects. All applications rated in this category should be funded.

Category B: should be funded.

These applicants display evidence of good research achievements. The proposed project is of above-average scientific impact and contains very good training and career development aspects. Taking all the evidence available into account, these applicants could have an excellent research career. While not in the top priority for funds, these applicants should be short-listed and funded if financial resources allow.

Category C: many suitable characteristics.

The assessors are less confident of the success of these applicants. They appear prepared for a research career, yet are not so clearly in the top cohort of those applying for support. Either or both (a) the scientific impact or (b) the training and career development aspects of the proposed project are not as well developed as preferred. The applicants in this category could be funded if financial resources allow.

Category D: less likely to excel in research career.

The applicants in this category have not clearly demonstrated why they should be ranked in a higher Category. Taking the application information and the data on all other applicants in this round, these applicants should be considered to be a low priority for funding.