Criteria for evaluating, hiring, promoting CNRS researchers

Section 6 of the CNRS National Committee

December 2018

1 Presentation

In this note, we review the criteria employed by the current mandate (2016-2021) CNRS national committee's section 6 subcommittee for the evaluation of researchers. We then give, at the end of this document, some specific recommendations for hiring and promotion of researchers.

Let us recall that the section 6 subcommittee only has an advisory role, even though its advice is followed most of the time.

This document may be periodically updated.

None of the criteria listed below is absolutely mandatory, besides the quality of the scientific production. If a researcher solves an outstanding open question, well-known to be extremely important and difficult, this committee will support him or her for recruitment or promotion.

The keywords concerning the scientific activity of section 6 can be consulted at `http://www.cnrs.fr/comitenational/sections/section.php?sec=06`

2 Scientific production

The first criterion considered for all types of evaluations is the applicant's scientific production.

2.1 Publications in scientific journals and conference proceedings

Our evaluation is qualitative. We take into account all aspects: originality, importance, difficulty, quality of the journals and conferences, personal contribution in case of co-authors, and more.

For promotions, the publications since the last promotion or recruitment are more important than the rest.

2.2 Software production and computational experiments

Some software packages and experimental evaluations are scientific contributions, and are fully considered in the evaluation performed by this committee. The evaluation is based on criteria similar to those put in place by Inria.

In order to evaluate software we need to be able to obtain it, run it, and test it: the applicant should therefore make it easy to find, download, install, compile and run. Should this not be possible, the software must have been transferred to industry, other institutions or to the public domain, so that we we can evaluate its importance, originality and impact.

We also consider its complexity, interest, number of downloaded copies, evidence of usage and exploitation for experimental tests.

Consult the INS2I's scientific council document `https://csins2i.irisa.fr/files/2016/09/FicheLogicielsCliquableCSI-INS2I.pdf` for more information about presenting a software production.

2.3 Patents

Exploited patents must appear in an "intellectual property transfer" section of the application material. Non-exploited patents are considered as minor publications.

3 Scientific outreach

The scientific outreach criterion becomes ever more important for higher position rank levels. It includes:

- invitations as a speaker to conferences, international schools and prestigious seminars;
- membership to program committees of conferences and editorial boards of scientific journals;
- membership to PhD or Habilitation committees, especially abroad;
- awards and distinctions;
- prestigious grants (e.g., individual ERC grants from the European Union).

4 Collaborations

Several kinds of collaborations are considered:

- scientific collaborations;
- collaborative funded projects;
- participation to local, national, or international collaborative projects;
- participation to pluri-, inter-, or trans-disciplinary projects.

The role inside the project must be specified: PI, co-PI, workpackage PI, member, or other.

5 Research management

Scientific community service duties, especially research management/administration, constitute a criterion which becomes ever more important as the position rank level increases. The section considers such responsibilities with different degrees of importance. We give some examples below.

Major responsabilities (often necessary for a promotion to DR1 or DRCE):

- membership to national evaluation committees (e.g., CNU, CoNRS, Inria);

- direction of a laboratory;
- direction of a GdR ("groupement de recherche" — research community around a given discipline), presidency of a national or international scientific society or association;
- direction of a "Labex" (laboratory of excellence);
- responsibility of a multi-partner European project;
- presidency or vice-presidency of a university.

Other important responsabilities (often necessary for a DR2 recruitement):

- research team direction;
- responsibility of an ANR project (or another coordinated action);
- responsibility of other institutional projects;
- responsibility of industrial contracts;
- membership to university councils and/or committee;
- membership to hiring committees.

The two lists above only provide examples. The value of each responsibility is adjusted according to the size of the concerned entity.

6 Student supervision, teaching

The supervision criterion only becomes really important at the DR2 level, but may also be considered for the CR level. For DR2 positions, a "Habilitation à Diriger des Recherches" (HDR), or an equivalent foreign qualification, is strongly recommended. For the many countries that have no HDR equivalent, we shall consider the global supervision activity.

The evaluation of supervision work is qualitative. For instance: what happened to the supervised PhD students (or postdocs)? How was their work received by the scientific community? Did they achieve their titles in the allotted time?

The teaching criterion mostly concerns Master-level courses on advanced topics, lectures in international schools open to researchers, and similar events.

7 Technological and industrial transfer, dissemination, popularization, industrial contracts, partnerships

We attempt to evaluate the efforts made by the applicants to showcase the interest and relevance of their research results to society at large.

Depending on the research area, the industrial transfer effort can be an important evaluation criterion. In other areas (for instance quantum computing), a popularization effort will be more relevant: publications in magazines or general public newspapers, talks in the media, general public conferences etc.

Evaluating an industrial contract of the applicant on behalf of his/her institution requires some information: the type of contract, who signed it, who is involved in the research work, what is the goal and the duration, what has been completed (together with pointers to reports, if possible), as well as the amount of the financial transactions involved (again, if possible).

For instance, industrially funded Ph.D. contracts (such as e.g. "CIFRE" in France) are positively considered. On the other hand, personal consulting activities not involving the applicant's affiliating institution do not matter much for evaluation purposes.

8 Mobility

This committee evaluates geographical mobility favorably, specially for a DR2 recruitment or promotion, at least at some stage in the applicant's career. Thematic mobility (interdisciplinary actions, or a change of main topic of interest) may also be evaluated favorably, though it is of course not required.

9 Research project

A research project in the application document is mandatory for a recruitment or a promotion. It is also very useful for periodic evaluations.

The criteria we consider are its relevance, importance, originality, feasibility, as well as its local, national, and international contexts.

10 Recommendations on the application document format

The application document should start by describing the applicant's research activity (limited to the relevant time frame in case of a periodic evaluation). The applicant is advised that his application will be read by members of this committee, i.e., researchers in computer science, but not necessarily working in the very same research area. A fairly general and readable introduction, as well as a summary description of the context and state of the art, are therefore necessary.

Applicants should emphasize publications which they consider most important and representative of their research work (during the relevant time frame in case of a periodic evaluation). These publications will be downloaded by the reviewers: applicants should therefore make them easily accessible online.

We advise that the research statement of the application document should consist of two parts: an account of past research (presentation of past work), and a plan for future research (research plan). The first part should take 6–7 pages, one of which should be an easily readable state of the art and description of the context. The second part should take around 4 pages. The integration project(s) (see Sec. 11.3) and bibliography should follow; their pages are not included in the approximate page limits given above.

11 Specific recommendations for CR applications

An information notice is available on the CNRS site for the competition. We give below some additional information, specific to section 6.

11.1 Age

There is no age limit for CRCN candidates.

However, this committee considers that a CRCN candidate should typically have completed at most 7 years of research activity, including PhD and post-doc(s). Work interruptions due to maternity/paternity leave or other institutionally accepted reasons should be made clear in the application material, and will be discounted from the 7 years.

Because of the recent decision by CNRS of eliminating the distinction between CR2 and CR1 ranked positions, this committee might also consider older candidates, typically with at most 10 years of research activity (more or less equivalent to the previous CR1 rank).

On the other hand, there is no age lower bound for CR. It is better to have completed a post-doc, but this is not mandatory.

11.2 Presentation of past works

As explained in Sec. 10, past works must be presented clearly and in a way that anyone in computer science should understand. This presentation should also be concise (typically 6–7 pages, as already mentioned). We encourage applicants to emphasize some publications (CNRS recommends 3), which will be downloaded by the in-depth reviewers. For software and experimental works, refer to Sec. 2.2.

11.3 Integration project

As part of their research statement, CR applicants *must* list several possible laboratory choices for affiliation purposes: at least two, ideally three.[1]

The integration project should of course depend on the laboratory of choice. It may thus be necessary to propose several integration projects, explaining both how they relate with the applicant's previous work and how they relate with research interests of the host team.

11.4 Factual data

The application document must start with a short notice of positions held in the past, and provide a list of publications and software. Other relevant sections (scientific outreach, management, transfer and popularization, teaching, ...) should follow. Prizes and awards should be listed in a corresponding section; each item should be described so that this committee may evaluate its importance.

Ph.D. thesis committee reports (if available to the applicant) may be attached. If absent, applicants should indicate whether the country which awarded their Ph.D. makes such reports available or not.

11.5 Reference letters

For CR, the candidates may request reference letters to scientific personalities of their choice, although this is not required.

Such letters will be preferably sent directly to the president of the committee (`comon-cnrs@lsv.fr`) by the referee, preferably before January 23rd 2019. Alternatively, they can be uploaded at `http://www.cnrs-bellevue.fr/formulaires/scc-recommandation.php` before January 8th 2019, as proposed in the CNRS notice.

[1] We recall that, independently of these choices, CNRS retains the right to choose researchers' affiliations.

We will consider at most three supporting letters for each application. Beyond these three, we do welcome letters from the directors of those research teams and laboratories where the applicant is applying to (specifically, those corresponding to the affiliations of choice).

12 Applications to CRHC ranks

In 2017, CNRS created the new rank of "chargé de recherche hors classe" (CRHC). It has also decreed that, at least for the first few years of its existence, only CRCN CNRS personnel can apply for these positions.

For at least 3 years, the duration during which a researcher has held a CR1/CRCN position will be an important criterion in view of a promotion to CRHC. The other criteria are the same as for normal researchers' evaluation procedures.

It is possible to apply for both CRHC and DR2 ranked positions simultaneously. It is also of course possible for a CRHC to apply to a DR2 ranked position.

13 Specific recommendations for the DR2 applications

The recommendations for CR applications also apply here, except that there is no maximal recommended age. A minimal research experience is specified by the CNRS in its notice (cf. `http://www.dgdr.cnrs.fr/drhchercheurs/concoursch/pdf/n-dr2.pdf`).

The research project is typically broader than an individual project: it includes PhD students and possibly researchers and post-docs.

We also expect that the sections "scientific outreach" (Section 3), "student supervision" (Section 6), "collaborations" (Section 4), "management" (Section 5) should adequately filled. Note that an HDR (Habilitation à Diriger des Recherches) or a foreign equivalent qualification is strongly recommended.

Reference letters (maximum 3) can reach the committee as described in section 11.5.

Some significant geographical mobility during the applicant's career is strongly appreciated.

14 Specific recommendations for DR1 and DRCE applications

When evaluating a promotion to DR1 and DRCE ranked positions, the applicant's whole scientific career is considered: it is therefore necessary to give a full and convincing account. On the other hand, the scientific activities since the last promotion (or the recruitement) are more important.

While the quality of the scientific results plays an important role, the contributions to society at large (this includes administrative charges, student supervision, scientific popularisation, intellectual property transfer and more, as described in Sections 2–8) acquires more weight as the position's rank rises.

Another criterion is given by the amount of time spent in the applicant's current rank.

We wish to make it absolutely clear that *we do not wish to receive reference letters for DRC1 and DRCE promotions.*