SECTION 08: evaluation criteria

Micro- and nano-technologies, micro- and nano-systems, photonics, electronics, electromagnetism, electrical energy

The profiles of researchers can be very diverse. As a result, all aspects of the research work should be taken into account in the evaluation criteria. Two points are considered particularly important by the section: (i) the quality, impact and originality of the research subjects, as well as the creativity and risk-taking of the researchers; (ii) the implication in actions to the benefit of the collective. To assess all facets of the activity, a list of criteria is proposed later in this document. These criteria must offer a reading grid allowing the section to best judge the quality of the work carried out. *You are not required to meet all the criteria listed below.* In addition, the impact of the environment on the activity of the researcher as well as the dynamics of the carrier will be taken into account.

To comprehensively and qualitatively assess the contribution of researchers, the analysis will not consist in a simple examination of quantitative/bibliometric indicators. It is advisable to highlight the strengths of a career by clearly specifying the role and involvement of the researcher in the presented work. The section encourages researchers to provide relevant scientific, material and human contextual elements valuable for the evaluation (research unit, short-term or long-term difficulty, interruption for maternity leave, opportunities, etc.).

1- Periodic evaluation of researchers

Mid-term (5 semesters) and full period (10 semesters) evaluations are based on the writing and submission of an activity report concerning the evaluation period. This report must be informative, clear and synthetic, and not simply incremental. **It must concern exclusively the evaluation period** (except for the appended list of publications in promotion and recruitment requests, see §2). Only the full period report will include the research project for the next ten semesters. The section asks to limit the mid-term report to a maximum of 15 pages, and the full report to a maximum of 30 pages (excluding the bibliography which will be provided in the appendix). The report will position the researcher's work not only within his team and his host laboratory, but also in a national and international context while underlining the highlights among all activities. It is important to explain their role and their personal contributions in the presented works and actions listed and highlighted.

1.1 Criteria common to all files (listed without hierarchy)

- Scientific objectives: relevance and context, creativity, risk-taking, positioning regarding the state of the art and the local, national and international scientific environment
- Research work over the evaluation period, quality of scientific production, interest of the results and methods developed
- Significant scientific facts, significant results. Description of the personal contribution.
- Contribution to open science (publications, experimental data, software)
- Integration of activities in the team and the host laboratory
- Quality of collaborations at internal, local, national and international levels, participation in networks
- Participation in academic or industrial contracts and activities towards industrial developments, role in the different partnerships

- Quality of the supervision and training of non-permanent staff (trainees, PhD students, post-doctoral students, etc.) and permanent staff. Participation of these personnel in scientific production, further evolution of non-permanent and permanent staff
- Training, teaching, spreading of knowledge (nature, volume, audience, etc.)
- Program and research perspectives (for full evaluation), including adequacy of perspectives to the topics of the host laboratory and positioning within the national and international state of the art
- Regularity, dynamics and diversification of scientific production.
- Diffusion of scientific culture to society (citizens, schools, decision-makers, etc.)
- Participation in PhD & HDR juries, in scientific committees and/or in the organization of conferences, proofreading of articles (type of journals and amount) …
- Investment as a research leader

1.2 Specific additional criteria according to the positions

It is not necessary to satisfy all of these criteria which remain only indicative.

CRCN researchers

- Common Criteria §1.1
- Participation in the daily life of the laboratory/site
- Consolidation of the research project that led to the recruitment
- Evolution and perspectives of the research project
- Investment in research at the laboratory scale and further at national / international level
- Assuming scientific or administrative responsibility
- Participation or PI in funded academic projects (ANR, Europe, etc.) and involvement in the writing of unfunded submitted projects: nature of contributions, level of involvement, budget, etc.
- Success in other calls for projects (local authorities, Labex, Carnot, foundations, etc.)
- Promotion actions with the industrial world: industrial contracts in support of scientific activity (specify the nature, involvement, budget), patents, licenses, start-ups, technological maturation program resulting from patent filing....

CRHC researchers

- Common criteria (§1.1) and CRCN criteria
- Recognized expertise in a field
- Investment in the transmission of knowledge and for the collective

DR2 researchers

- Common criteria (§1.1) and CRCN criteria
- National and international outreach
- Evolution of research topics, risk taking, new topics
- Ability to direct research and federate a scientific project
- Training of colleagues, ability to help the scientific career of young colleagues
- Responsibility/management of scientific teams (with daily scientific management)
- Team/group responsibility/management (with “notable” administrative aspect), laboratory/department management.
- Responsibility or implementation of platform (technological or software).
- Administration of Research (in the laboratory and on the national/international scene)

It is recommended to define the entity in which responsibilities are managed (project, team, department, platform, etc.), its contours and environment (size, type of interactions, etc.), and to detail the role in this entity at the scientific and managerial level, and in promoting the enlargement of the team potential.

DR1 researchers

- Common criteria (§1.1) and DR2 criteria
- Ability to promote interactions with the environment
- Contribution to the emergence, development and structuring of research activities while maintaining a balanced sharing of responsibilities
- Development of a forward-thinking and original vision of its scientific field.

DRCE researchers

- Common criteria (§1.1) and DR1 criteria
- Range of scientific contributions
- National and international recognition
- Role in structuring local, national and international research

The activities will be presented in a synthetic way in order to allow them to be put into perspective.

2- Advancement in rank for researchers

The criteria are similar to those of the periodic evaluation, but also take into account the outcomes of previous work. The exhaustive list of scientific productions (journal articles, international conferences, patents, software, book chapters, monographs, books edition) over the entire career will be provided in the appendix.

DR1 researchers

A short CV can summarize the entire career but the evaluation will mainly focus on the period since the DR2 recruitment and on the dynamics of the last 5 years.

DRCE researchers

Career-wide highlights will be evaluated, with particular attention paid to the period since DR1 promotion. The activities will be presented in a synthetic way in order to allow them to be positioned into perspective.

3- Recruitment of researchers

It is not necessary to satisfy all of these criteria which remain indicative.

3.1 Criteria common to all candidates (listed without hierarchy)

- Scientific contributions and previous research work
- Role of host structures and collaborators in carrying out this work
- Thematic mobility, multidisciplinarity
- Quality of the research program, creativity, scientific potential in the short and medium term, positioning regarding the state of the art
- Actions towards industrial development (patents, licenses) and knowledge spreading actions (teaching, organization of conferences, symposiums, workshops, exhibitions, promotion to large audience) will also be taken into consideration.

3.2 Specific additional criteria according to the grades

Access to CR grade

- Common Criteria (§3.1)
- Quality of the scientific course
- Thematic or scientific mobility, diversity of previous experience.
- Geographic mobility
- Argumentation on the targeted laboratory expressed by the candidate
- Autonomy in the scientific evolution from the thesis towards the scientific project
- Achievability of the project and identification of the means and equipment necessary for its realization
- Quality and relevance of the scientific project
- Quality of the hearing (presentation and discussions with the jury)

Access to DR grade

- Criteria similar to those used for the DR2 grade assessment
- Quality of the scientific research project, positioning in the local, national and international environment.
- In the event of a hearing, quality of the presentation and discussions with the jury.

4- Application or renewal of emeritus

The main criteria taken into account are:

- Quality of the scientific activity
- Project for the period of emeritus and planning of deadlines
- Sustainability of the research topic within the host laboratory during and beyond the period of emeritus
- Means implemented for the transmission of expertise within the host laboratory, for the transmission of scientific contacts, national and international responsibilities (technical committees, conference steering committees, editorial responsibilities, etc.), and for the capitalization of skills (research data, writing a monograph, etc.)
- For the renewal of an emeritus period: evaluation of the last period on the previous criteria

5- Application for a delegation

The applications of candidates will be evaluated, paying particular attention to the following points:

- Quality of the research project, scientific context. Candidates are invited, if they wish, to mention events that have impacted their professional career (for example interruption for maternity leave, geographical and/or thematic mobility, etc…)
- Taking on important responsibilities in the supervision of research (for example laboratory management, coordination of European projects, etc.)