

Appendix 1

Applications for the establishment of an International Helmholtz Research School must be submitted to the Helmholtz Association's head office by the management board of the Helmholtz Center after an agreement has been reached with its partners.

Three documents have to be submitted:

1. Letter by the Director of the Helmholtz Center
2. Application (in English, size: max. 3 MB)
 - a. Cover sheet (cf. form Appendix 2)
 - b. Project outline (max. 20 pages)
 - c. Financial plan (cf. form Appendix 3)
 - d. Résumés of the participating scientists
 - e. Agreements between partner institutions, confirmation of the contributions indicated in the financial plan.
3. List of six independent reviewers (cf. Appendix 8)

The complete application must be submitted in PDF format on or before June 7, 2019 (exclusion period) using the Helmholtz Association's electronic application and review system EABS (<https://helmholtznet.de/antraege/default.aspx>).

In addition, the Helmholtz Association's head office (Ahrstrasse 45, 53175 Bonn) must receive a hard copy of the application.

Notes for the submission of documents

Project outline

Description of scientific program

- The program must stand out on account of its scientific excellence, innovative content, and relevance. It must link thematic or methodological focuses in such a way that it is likely to give rise to outstanding thesis topics.
- A well-founded, conclusive argument must be presented for the choice of topic; moreover, assurance must be provided that suitable key questions and methods have been chosen and that the necessary substance and expertise are available.

Description of existing interactions and the potentials of the planned cooperation

- The scientific program must establish a link between a research program of the Helmholtz Association and the key areas of focus of the Helmholtz Center, foreign partner, university partner and any other partners.
- The application should outline a strategy for the development of long term interactions between the participating institutions addressing the demands of the institutions and building up

on existing interactions if applicable. The application should outline how the institutions complement each other and where synergies can be used.

Description of professional training opportunities

- A curriculum must be provided describing the courses and training opportunities offered by the Research School's partners. The duration and nature of the events (colloquium, symposium, work placement, lecture series, etc.) must also be specified.
- The study program must foster international exchange and cooperation between doctoral candidates. The PhD candidates must spend at least six months of their doctoral studies at the partner institution abroad (spread over several research visits if necessary).
- It should be outlined how PhD candidates acquire the methodologic skills necessary for their PhD project.
- One important concern is to teach participants interdisciplinary thinking and have them use this skill to plan solutions in complex systems and translate results into practical applications. Along with the events planned, other innovative offerings must be developed and described with the aim of fostering the participants' practical competence.

Description of interdisciplinary training and advice

- Besides the professional training opportunities, interdisciplinary trainings (e.g. soft skills courses) should be set up.
- The planning must also include measures providing assistance with the transition to the post-doctoral phase or with alternative routes after the period of doctoral research has been concluded. Innovative topics and advisory formats are welcomed.

Description of supervision concept

- PhD candidates are supervised by three scientists holding a doctoral degree, who together comprise a PhD committee or a comparable body. Primary responsibility is held by one member of the committee (primary supervisor), with the other supervisors exercising an advisory and supporting role. A meeting of the PhD committee together with the PhD candidate must be held at least once a year.
- A concept must be compiled describing how the PhD candidates will be supervised at the Research School. In accordance with the Helmholtz PhD Guidelines (cf. Appendix 6), this concept must for example encompass the conclusion of a written doctoral agreement between the PhD candidate and the supervisors at the beginning of the doctoral research period. The PhD agreement serves to provide guidance and enable quality assurance. Among other things, it defines the research topic of the PhD, the time schedule, appointments of supervision meetings and the applicable PhD regulations.
- It is advisable to compile an individual skills plan that contains the PhD candidates' scientific and interdisciplinary learning goals and that logically interlinks the educational material in terms of topic and time.

Participants

- The target number of PhD candidates must be specified. The ideal target is around 25 persons by the end of the 3rd year. A critical mass should be guaranteed for all activities.
- A substantial percentage (min. 30 %) of the participants should come from the partner institution abroad. Ideally the percentage of participants from each country should be equal.
- A description of the selection procedure of the PhD candidates and relevant criteria of excellence must be provided. Emphasis is placed on the recruitment of external candidates, particularly foreign ones. Internal doctoral candidates already researching at the Helmholtz Center or its partner institutions are permitted to participate but will face the same competition. A joint selection procedure or comparable list of selection criteria must be developed if possible.

Description of planned structure

- Speakers must be appointed for the Research School (by the Helmholtz Center, foreign partner, university partner and any other partners); they will be responsible for leading the school and act as primary contacts. Women are particularly encouraged to adopt these roles.
- Moreover, at least two coordinators (in most cases at the Helmholtz Center and foreign partner) must be appointed to take charge of managing the Research School. The planned management and organizational structures must be described.
- A description must also be provided of the way in which the work is to be divided between the partners, i.e. their respective scientific, organizational, administrative, infrastructural and other tasks and the communication structures planned.
- The Research School should be integrated into the respective Helmholtz Center's doctoral education and talent management structures (e.g. Graduate Schools) so that the synergies generated can be used. The existing activities undertaken by the partners in terms of promoting PhD candidates must be described. The establishment of duplicate structures should be avoided.

Financial Plan: Information on resources needed (cf. Appendix 3)

- A financial plan covering the six-year funding period must be submitted disclosing the total resources required by the Research School. It should contain the following information, divided into monies requested from the Initiative and Networking Fund and monies to be provided by the respective partners: Direct project-related costs/expenditure with information on personnel expenses, material expenses, investments (Helmholtz Center) and personnel expenses, material expenses, investments (partners). Travel expenses can be classified as material costs or expenses.
- The funds awarded cannot be used to cover overheads. It must be ensured that there is no total net cash flow abroad during the period covered by the funding. Note: Study fees charged by the foreign institutions must also be taken into account when compiling the financial plan.

Résumés of the participating scientists

Standardized Résumés of the participating scientist must be attached. Following aspects should be taken into account:

- Evidence of the professional competence of the scientists involved in the program must be provided in the form of maximum five publications within the last five years. A comprehensive publication list is not needed.
- The supervision experience of the scientists should be described. Please indicate if scientists have participated in formal supervision trainings.

Agreements with partners

Following additional aspects should be taken into account:

- Every Research School is given a specific designation/name; this name is agreed between the Helmholtz Center and the partner institutions. The designation “International Helmholtz Research School for/on...” or “International Helmholtz-*Name of Foreign Partner* Research School for/on...” must be used when naming the Research School. It must also be ensured that the Helmholtz Association’s corporate design is used (www.helmholtz.de/marke), if applicable in combination with the partner’s corporate design.
- The Research School's official language is English. The partners must agree to doctoral theses being submitted and oral examinations (viva voce, oral defense) being held in English. The possibility of awarding a joint doctorate (cotutelle agreement) must be considered.
- When drawing up the agreements, the partners must ensure that the program can be integrated into existing educational and examination ordinances, statutory frameworks and the respective schedules (e.g. study duration, time of selection/admission, times at which PhD candidates are obliged to attend compulsory events etc.).
- The partners must also clarify whether and how candidates with a Bachelor’s degree (or similar qualification) can be assisted in gaining admission to doctoral studies.
- They must also agree under whose name (responsibility) the research results will be published.
- Agreements concluded with partners (e.g. partnership agreements, declarations of intent etc.) must be attached to the application as appendices.
- The concept for the Helmholtz International Research School must be developed with special consideration of the “Guidelines for the Completion of PhD Projects within the Helmholtz Association” (“Helmholtz PhD Guidelines”). The standards defined in these guidelines are binding on the programs to be established. The Helmholtz guidelines for doctoral candidates are provided in Appendix 6 of this Call for Applications and can also be consulted at www.helmholtz.de/phd.
- PhD candidates (employed by the Helmholtz Center) are funded by working in posts liable for social security contributions. Payments should amount to at least 65% of an E13 post. The monies awarded cannot be used to fund fellowships.

- For purposes of reliable career planning, the term of the agreement should cover the proposed duration of the doctoral project (cf. Appendix 6). Additional funds for possible extensions must be reserved as appropriate (cf. Helmholtz PhD Guidelines”, Appendix 6). In the event of any PhD candidate taking parental leave, it must be possible to extend the duration of the funding to cover his/her absence.
- The doctoral project and doctoral conditions are structured in such a way that it should be possible for PhD candidates to obtain their degrees in three to four years. Possible extensions must be anticipated in plenty of time and agreed with the supervisors so that all parties can work together to develop a final plan. It should be possible to provide funding until the thesis is submitted in accordance with this plan.
- Please note: On accepting the funding from the Initiative and Networking Fund, the scientists undertake to make any scientific publications based partly or fully on the results of the funded project generally available in a freely accessible archive (repository) within six months of initial publication (cf. Appendix 4 FAQ). Open Access publication can be waived if important grounds exist. The Helmholtz Association must be notified of these as soon as the scientists become aware of them.

It is not yet clear whether similar calls will be published within the next years.