

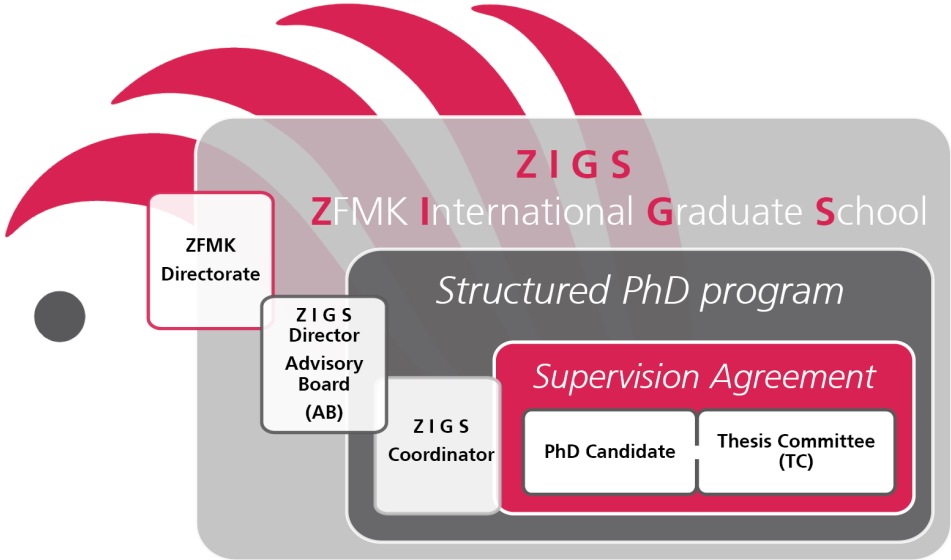
Z·I·G·S

ZFMK

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The ZFMK International Graduate School (ZIGS)

The Zoological Research Museum Alexander Koenig is internationally recognized by its strong collection-based basic and applied biodiversity research. Aspects of research conducted at the ZFMK cover classical taxonomy, systematics, morphology, genomics, speciation research, evolution, species distribution modeling and various aspects of biodiversity assessments and monitoring. With its biodiversity assessment and monitoring research it links collection-based, species-focused research with ecosystem studies and services.

In these research fields, the ZFMK international Graduate School (ZIGS) offers structured mentoring and supervision for PhD students. The goal of this program is to support early steps in a scientific career and help to develop personally tailored options.

In order to achieve this goal, we offer an accompanying program of seminar series, lectures, practicals and soft skill workshops. These activities are organized in time block structures with obligatory and facultative courses in order to fit into the usually tight schedules of many research projects. By opening the training program to all young scientists at ZFMK, every Master and Bachelor student, as well as Post-Doctoral researchers, may also benefit from the Graduate School.

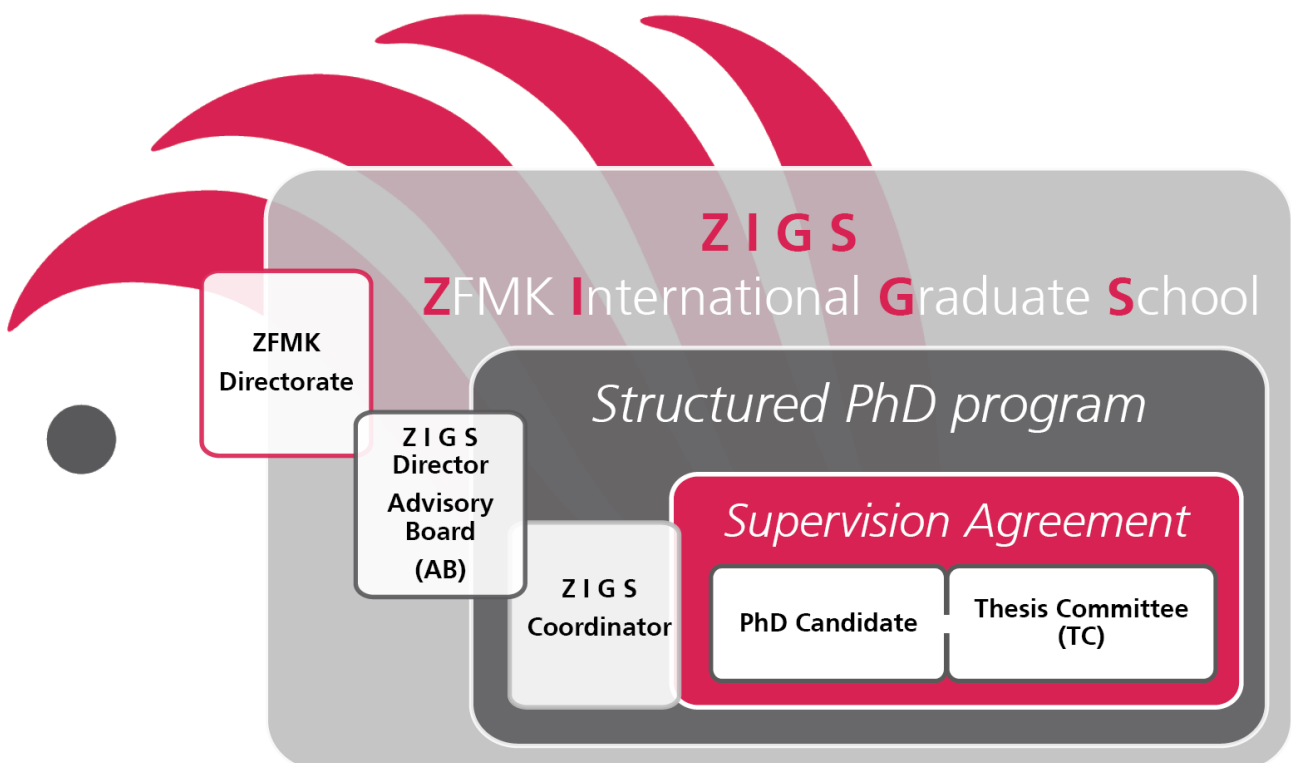
The graduate program of ZFMK helps to generate a network of communication within the museum, with the University of Bonn and the Leibniz Association, even on an international scale so important for scientists early in their career. It establishes mentoring, technical help, and advice.

Individual Thesis committees (TC) and a supervision agreement (SA) between TC and PhD student guarantees support and guidance for each student. The Advisory Board (AB) additionally supports the individual projects and provides suggestions for improving the program constantly.

A particular unique aspect of the graduate program is our aim to inform each student about the principles and importance of collection-based research and to make sure that they get familiar with the special features of our museum environment. Young scientists are invited to be involved in exhibition, public relation and curatorial work. These activities broaden the scope of the graduate program and help to develop further and broader career options for young scientists in particular in the field of collection-based research.

1.0 Organisation

Director of graduate school: The director deputy of the ZFMK is naturally the scientific director of the graduate program and member of the Advisory Board (AB). She/he represents the ZIGS formally at the Direktorium of the ZFMK and the University of Bonn, and interacts closely with the graduate program coordinator. She/he has a broad scientific knowledge relevant in the field of collection-based basic and applied research and consults/supports and supervises joint activities of the graduate program like international seminars, invitation of guest speakers, and other scientific activities.



Advisory Board (AB) – The board of advisors with the scientific director of the ZIGS recruits its members from the scientists and students of the museum. The board of advisors includes representatives of all centers of the museum (zte, zbm, zmb, zaö), as well as active supervisors, the coordinator and the independently elected representative of the ZFMK students. The AB meets twice the year to discuss relevant issues (general development of the program, curriculum).

Coordinator – The coordinator of ZIGS will be the administrative head of the graduate program supervising all coordinated activities within this program. She/he is responsible for the organization and coordination of the curriculum. The coordinator helps to integrate new PhD students, helps to organize workshops, helps to coordinate supervision, links to the dean's office of the university and the Direktorium of the ZFMK. The coordinator operates closely with the scientific director of the school. She/he has a scientific education and thus guarantees a high quality of the ZIGS.

Thesis committees (TCs) are formed individually for each PhD student. The TC is composed of three persons: the “1st”, content-wise active supervisor (i. e., not necessarily the formal supervisor [*Erstgutachter* according to the *Promotionsordnung*]), ideally the 2nd supervisor (again, not necessarily the formal 2nd supervisor [*Zweitgutachter*]) and one independent scientist from ZFMK or another institution. It is recommended that the TC members hold permanent positions at ZFMK or another, geographically close to the ZFMK institute (University of Bonn, Hochschule Rhein Sieg Kreis, University of Cologne etc.). This will facilitate physical meetings of the TC.

2.0 Details of responsibilities and structured student program

2.1 Coordinator

The coordinator works as an interface between PhD/doctoral candidates (in some cases also Postdocs and master students) and the environment in which these candidates live and work. This includes the Thesis Committee (TC), the Advisory Board (AB), and all other young scientists (Postdocs as well as Master and Bachelor students) at ZFMK. She/he also coordinates and integrates official programs offered by the University of Bonn (“Fördermaßnahmen: Offenes Trainings- und Coachingprogramm” and “Kursprogramm Promotion plus”). Additionally, the coordinator conveys information with regard to various programs of the Leibniz Association (Leibniz PhD Network, Doctoral Workshops). As a member of the Deutsche Zoologische Gesellschaft, Gesellschaft für Biologische Systematik and subscription of relevant mailing lists (e.g. EVOLDIR), the coordinator is also informed about developments and announcements in biodiversity research, including job offers.

Thus, providing information, administrative support, communication and networking, as well as organization are the major tasks.

Especially with foreign PhD students, the coordinator will help in following

- Settling in: finding accommodation, registration, understanding legislation, translation of forms, insurances, etc.
- Registration as PhD/doctoral candidate at the University Bonn
- Becoming acquainted with rules and regulations at the ZFMK, as well as the organizational structure of the ZFMK (handbook, intranet)
- Filling in ZFMK forms (vacation, travel forms, etc.)
- Being available as person in a position of trust / go-to-person

Furthermore, the coordinator will be responsible for the organization of PhD activities, which will also be of interest for Master students and postdoctoral researchers. This includes:

- Organization and scheduling of regular workshops or training units (methodologies within the curriculum)
- Organization of teaching opportunities (within the program or outside, e.g., Alexander Koenig Science Club - AKSC)
- Organization of yearly retreats (for PhD candidates only)
- Regular elections of a representative of students
- Invitation of former PhD students (Alumni program)
- Forwarding job and grant announcements (for PhD students and postdoctoral researchers)

- Forwarding information on congresses, meetings and external workshops
- Forwarding information about funding of congresses, travel grants, etc.

The coordinator updates regularly:

- List of candidates (PhD, Master, Postdoc)
- Folder on the intranet with relevant documents
- Overview of announcements (jobs, conferences, etc.), funding agencies and programs, trade union activities (e.g., offers of the Gewerkschaft für Erziehung und Wissenschaft - GEW), relevant networks and societies
- Homepage of the ZFMK graduate program
- Control of Homepage of PhD candidates
- List of former PhD candidates (Alumniprogram)

2.2 Structured supervision at ZFMK

A solid relationship between doctoral candidate and supervisor is necessary for the development and success of the candidate's work. Advisor and student are aware of the professional and social skills that are expected from one another.

Personal profile of doctoral candidate - The 1st supervisor evaluates if the doctoral candidate possesses the basic knowledge needed for the execution of the project and/or an academic career and which skills can be learned from the supervisor, other scientists or from the ZFMK graduate school program. The supervisor and the doctoral candidate agree, which skills need to be trained or updated and where the skill can be obtained (ZIGS or other institutions). The 1st supervisor also encourages the students to create and actively participate in a social net inside the work group and within academia. Regular meetings with the supervisor (we recommend at least once or twice in a semester, see "Supervision Agreement") guarantee process and quality of the doctoral thesis.

Thesis Committee (TC) - The 1st supervisor in agreement with the PhD candidate initiates the formation of the TC within the 1st 3 months (latest 6 months), which then meets for the first time and discusses about the time line of the PhD project, about which obligatory courses in the curriculum are to be taken, and which facultative courses they would recommend. The TC comprises the 1st supervisor, ideally the 2nd supervisor and one further selected scientists from ZFMK (see above) or another institution and is free to decide whether the ZIGS coordinator should participate in their meetings or not. After the 1st meeting, the supervision agreement (SA) is signed by the 1st supervisor (see above for definition) and the PhD candidate. Regular meetings should be stipulated based on the needs of the student and adapted to the work progress. If there is no need for a meeting – as agreed between the candidate, the 1st supervisor and the ZIGS coordinator - the TC will meet once in a year and the student will present a progress report. This should be done preferably in the ZFMK Monday Colloquium. Issues (positive and negative ones) will be discussed within the TC, as well as the demand for acquiring further knowledge in special courses. If the candidate wishes, a member of the Advisory Board, or from another institution, or a person of her/his trust can be invited to these meetings.

Resources and conditions - The 1st supervisor is responsible for the availability of a minimum of resources needed for the doctoral candidate to successfully work with regard to the respective topic. This includes material or funding to work in the ZFMK laboratories and/or other institutions when required. She/he also advises in fund raising for courses, conference fees, field work equipment etc. and gives support also concerning other career developing measurements.

Obligatory training – The PhD students are trained to broaden their basic knowledge in biodiversity research (scientific and methodological knowledge), as well as to develop and improve soft skills like giving scientific and non-scientific presentations, communication of research results, time management, scientific writing, fund raising and so on. PhD students participating in the ZIGS program are obliged to participate in respective obligatory courses. The ZIGS offers regular courses, which are divided in obligatory courses and facultative courses. Obligatory courses outlined in the curriculum of the ZIGS have to be fulfilled, if not already done elsewhere. Facultative courses may become obligatory, according to the agreement between TC and PhD candidate and are related directly to the project. The program language is English. The ZIGS Curriculum outlines the courses, the module book gives an overview on contents of all specific courses. The offer of facultative modules is regulated according to demands and will be updated regularly by the coordinator. The coordinator will also organize workshops or lectures necessary to pursue a career after the PhD (e.g., within NGOs, Bundesamt für Naturschutz, university careers, etc.).

Supervision assistance - The ZFMK graduate school program will provide the necessary assistance to both supervisor and doctoral candidate to pursue the aims of the doctoral research. The TC provides an effective dialog with the doctoral candidate and also with the coordinator as well as the scientific director of the program. Any complications that could disturb the relationship with the doctoral candidate and the compliance of the research and graduation should be discussed preferably within the TC, the ZIGS coordinator, or any other person named by the candidate.

2.3 Supervision Agreement (SA)

When pursuing a PhD project at ZFMK - usually together with the University of Bonn - the PhD student follows the regulations outlined in the *Promotionsordnung* of the University of Bonn. Additionally, the PhD student and the 1st supervisor sign a Supervision Agreement (SA) between the chosen supervisor working at ZFMK and the student, confirming acceptance and willingness to follow the rules outlined in this agreement (see details below). The SA does not regulate financial support for the student. The SA regulates following issues and should include information on:

- A preliminary title of the thesis. Changes might be possible and can be discussed with the TC during the 1st year of the thesis, if in accordance with the *Promotionsordnung*.
- A short summary about the major topic and preliminary time line.
- The SA contract may outline the financial support for the student (soft money not included). When external funding is provided to the PhD student, the regulations of the funding agency are superior to all other regulations.
- The SA contains a paragraph outlining that all TC members follow rules to ensure proper scientific practice (cf. DFG regulations <http://doi.org/10.1002/9783527679188.oth1>), also according to the rules outlined in the ZFMK Handbuch (cf. N:\Info-Formularcenter\Museumshandbuch) and the rules of the University of Bonn (www.uni-bonn.de/research/gute-wissenschaftliche-praxis).

- The SA regulates the legal property aspects of all materials and results obtained during the PhD thesis.
- Special life situations: These may comprise parentage, illness and others. The PhD student as well as the supervisor should inform the coordinator and AB in time about significant changes of the situation with regard to the thesis and supervision. The student/supervisor may include a person of his/her trust to the informative meeting.
- Conflict situation: Conflicts should be handled 1st within the TC. In case this is not possible, the AB, the coordinator, a person of her/his trust, or even the Ombudsperson or equal opportunity commissioner of ZFMK can be included.

3.0 ZIGS Curriculum: Courses and training

Goals of the ZFMK graduate school program include the guidance and support of PhD candidates for successfully carrying out their PhD project, but also for competitively pursuing a post-doc carrier. Thus, ZIGS will provide specialized training in the form of courses and workshops to PhD candidates at different stages of their degree. This includes the impartment of advanced skills necessary in all study fields, as well as specialized courses tailored to research areas. Another focus is put on the set of techniques for and approaches to scientific questions specific for collection-based research in natural history museums. To obtain these skills, some topics in the offered curriculum are mandatory, others facultative. Some of the facultative topics may become mandatory, which is regulated by the individual TCs based on the personal background of each student. Successful participation of the obligatory courses (within ZIGS or otherwise) and confirmed via a confirmation letter is necessary for finally submitting the thesis.

Obligatory and facultative courses are outlined in the curriculum and further details on content given in the Module Handbook. All obligatory courses are offered once a year. Some topics have to be covered in the 1st year, others should be taken latest in the year when the doctoral thesis is submitted. Facultative courses are offered on a regular base or on demand. When course seats are limited the PhD candidates needing the course - as decided by the TC - have priority over students, who do not need to take the course. Facultative courses not needed directly for the research project can be attended after consulting the supervisor seeking her/his agreement.

4.0 Alumni Program

The ZIGS coordinator will establish an Alumni program of former ZFMK PhD candidates, by maintaining a list of former PhD candidates and taking into account the privacy regulation. A yearly meeting will be organized and alumni invited to meet young PhD candidates at ZFMK. Additionally, alumni will be invited to the retreat and or to the regular colloquiums. This will additionally strengthen the network of ZFMK and former students nationally and internationally.

5.0 Research Allowance

The ZFMK carries the costs for all activities of the Graduate School, including the coordinator, invitation of speakers, retreats and other activities.

Appendices:

- Supervision Agreement;
- ZIGS Curriculum & Module Handbook with obligatory and facultative courses for PhD candidates @ N:\Allgemeines\Lehre am ZFMK\Graduate School for PhDstudents ZIGS