



CEN School of Integrated Climate and Earth System Sciences (SICSS)

Doctoral Program Guidelines

SICSS is the graduate school of the Centre of Earth System Research and Sustainability (CEN) at the Universität Hamburg and offers a structured doctoral program. The SICSS doctoral program is focused on an integrated, innovative education and training in Earth and Climate System Sciences and ensures high quality research and qualification for early career scientists. SICSS is committed to early independent and autonomous work under a responsible and transparent framework of supervision. The SICSS structured international and interdisciplinary career program brings together doctoral candidates from different scientific backgrounds and with varying levels of expertise. SICSS closely cooperates with renown external research institutions such as Helmholtz Center hereon, International Max Planck Research School on Earth System Modelling, and through the Cluster of Excellence CLICCS also with other universities in Hamburg. Additionally, SICSS doctoral candidates receive assistance through the Universität Hamburg's career support institutions, namely the Hamburg Research Academy (HRA), the Human Resources Department, and the graduate facilities of MIN and WiSo Faculty. SICSS places great emphasis on equal opportunity and diversity, creating an open environment that welcomes all people regardless of denomination, religion, or gender. SICSS ensures that all support instruments and measures, from qualification workshops to networking aspects and consultations, are designed in a gender-responsive manner.

As a structured program the **SICSS doctoral program** is based on three main pillars that complement each other: the **advisory panel system**, the **SICSS supervision agreement**, and the **comprehensive curriculum**. The **advisory panel system** forms the core element of the structured doctoral program and is a mentoring and guidance tool that aims for high quality, successful doctoral theses that are completed within the agreed-on time (usually three years). The **SICSS supervision agreement** regulates supervision and cooperation between the doctoral candidate, the advisory panel members, and the SICSS Office. The **comprehensive curriculum** is designed to promote and develop academic, scientific, and transfer skills. Well selected compulsory elements and various elective, tailor-made courses and workshops are geared to individual doctoral candidate's needs and thus contribute to ensure their optimal career development and successful completion of their doctorate.

SICSS was founded in 2008 as a part of the first Cluster of Excellence CliSAP. Having guided and supported many generations of doctoral candidates, SICSS has built profound competencies in advising and supporting doctoral candidates during their early and forming development as career scientists. Doctoral candidates can also benefit from a broad network of SICSS alumni and its international, active peer platform to further grow their expertise.

Membership in SICSS is open to doctoral candidates from all fields related to earth and climate system sciences. The research position they hold must have been advertised, they must have gone through a competitive application process, and they must exhibit their willingness to complete a structured doctorate. Interested applicants need to send their membership application to the SICSS Office within



the first six months after beginning their doctorate but before beginning the doctoral admission procedure at the respective faculty.

To ensure that the high standards of a structured doctoral education are met, doctoral candidates need to comply with the following rules.

SICSS Regulations:

- 1) All members of the advisory panel agree to comply with **good scientific practice**, as stated in the “Bylaws for Safeguarding Good Scientific Practice and Avoiding Scientific Misconduct at Universität Hamburg” and in DFG’s “Guidelines for Safeguarding Good Research Practice”.
- 2) Doctoral candidates pursuing a doctorate at Universität Hamburg and/or are a member of the Cluster of Excellence CLICCS can **become a SICSS member**. All SICSS members are selected by a competitive application process. Either the principal supervisor or the co-supervisor of the doctoral candidate has to be a member of CEN. The doctoral program in SICSS addresses research-oriented students with very good MSc degrees in earth system sciences and complementary disciplines dealing with climate research.
- 3) Prior to the start of the doctoral project, the doctoral candidate’s **funding needs to be secured** by the supervisors. The available funding should cover the entire envisaged period of the doctoral thesis, preferably also covering the thesis defense.
- 4) The **SICSS supervision agreement** is an important set of rules to which all involved parties of the doctoral project must adhere. This agreement lists the duties and obligations of all parties involved in each doctoral project and is signed at the beginning of the project by all members of the advisory panel as well as by the SICSS Office.
- 5) During the course of the doctorate, each SICSS doctoral candidate is accompanied by an **advisory panel (AP)** comprised of three scientists (optionally four): the principal supervisor, one (optionally two) co-supervisor and the panel chair. The supervisors assume key responsibility for scientific supervision and quality control of the doctoral candidate’s research and academic training. For interdisciplinary doctoral projects, the principal supervisor and the co-supervisor should cover the two most relevant research fields, ensuring access to scientific and technical support in more than just one scientific area. The panel chair acts as a trusted third party on the doctorate’s overall progress. While the panel chair should not have any scientific self-interests in the doctoral project, they should have experience in supervising doctorates. The panel chair should be independent of the other panel members in terms of their position at the university or research institution. Prior to their final appointment, AP members are confirmed by the SICSS Office. AP members’ specific roles and how-to setup the advisory panel are defined in the guidelines of the advisory panel meeting and the supervision agreement.
- 6) All supervisors must fulfill the requirements of the **doctoral degree regulations** of the faculty the doctoral candidate is enrolled in.



- 7) The AP meets regularly every six months, and the doctoral candidate is responsible for scheduling the **advisory panel meeting (APM)** in due time. The APM ensures the dissertation project's scientific quality, its scientific development, and its successful completion. During the APM, the doctoral candidate reports on their ongoing research, and they discuss the further progress including the time schedule and needed adjustments with the advisory panel. Potentially arising problems are addressed. The discussion is documented in the APM report and uploaded via the Geventis management system (or send to the SICSS Office via email) after the meeting by the doctoral candidate. The SICSS Office gives feedback on the report as well as on the number of collected credit points to the AP members. SICSS's school management reserves the right to intervene if regular meetings are not held.
- 8) Supervisors and SICSS encourage the doctoral candidates **to publish** their research results in an early stage of the doctorate. Active participation in conferences and workshops is recommended to present results of their own research and to establish their own scientific network.
- 9) The **structured curriculum** serves to ensure doctoral candidate's scientific research quality and career development. It comprises compulsory elements such as the introductory course, intercultural training, and annual SICSS retreats. Elective workshops and courses on scientific and transferable skills are tailor-made for the doctorate in climate and earth system research. SICSS doctoral candidates are expected to earn at least 12 credit points during their doctorate. Credits are granted for all courses offered within the SICSS curriculum as well as from externally offered courses (except language courses), or active participation at conferences and summer schools.
- 10) In case of **arising conflicts** the panel chair and the staff of the SICSS Office are the first persons of trust to be contacted by the doctoral candidate or the supervisors. If needed, SICSS will help to establish contact to the conflict prevention and resolution team or the university's ombudsperson as further independent parties.
- 11) After completion of the doctorate, the candidate receives a **transcript of records (ToR)** that lists all career achievements, such as courses, workshops, conference participations, co-supervisions of MSc or BSc studies as well as teaching experiences and other achievements.
- 12) The official honoring of graduates takes place at the annual, festive **CEN Graduation Ceremony**, which is typically held at the end of each winter semester.
- 13) Since its establishment in 2008, SICSS has built a large international alumni network. All graduates are invited to actively participate in the **SICSS alumni network** and to expand it for the benefit of their own career and the career of the currently active doctoral candidates.

Hamburg, March 1st 2023