

## Doctoral Research in Kiel

Doctoral candidates do research in all the natural sciences, law, informatics, medicine, economics and public perception.

Research topics include

- | Marine ecosystems: adaptation, evolution and change
- | Ocean circulation: observation and modeling
- | Geoengineering: scientific, economic and legal options
- | The sea floor: resources, risks and hazards
- | Marine medicine: model organisms for human health
- | Computing sciences: algorithm optimisation
- | Sustainable fisheries: ecology, economy and law
- | Art and ocean sustainability: public perception

*“What I like about the ISOS network is that it is truly multidisciplinary, and focusses not just on a scientific theme but brings together people with similar problems.”*

*ISOS doctoral candidate*

## Marine Research in Kiel

| Vibrant | Dynamic | Interdisciplinary

Kiel is a dynamic hub for world-leading oceanographic research. The contributing institutions are:

- | GEOMAR Helmholtz Centre for Ocean Research Kiel
- | Kiel University: Faculties of Mathematics and Natural Sciences, Law, Economics, Engineering, Agriculture, Medicine
- | Kiel Institute for the World Economy
- | Muthesius University in Kiel

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## Doctoral Education in Marine Sciences in Kiel

Integrated School of Ocean Sciences (ISOS)

## Research-driven Doctoral Education

| Inform | Interact | Empower

Research excellence and doctoral training are mutually dependent. Excellent doctoral education sets standards for support, supervision, providing opportunities and ensuring institutional responsibility. Empowering the doctoral candidate unfolds talent and innovation within the research environment, while strengthening the individual in the pursuit of her or his future career.

Our doctoral programme supports

the **doctoral candidate** through a wide range of courses, events, financial incentives and all-round support,

the **advisor** through transparency in supervision of their candidates and in support of doctoral training in their research proposals,

a **network of partners** from within and outside of academia who bring in expertise and experience, and

Kiel University and GEOMAR through ensuring quality, innovation and excellence in marine doctoral education.

## Message from the Speaker

*“The ISOS programme is a must-have for doctoral candidates and their advisors. Advisors have a strong professional partner to help guide their doctoral candidates in becoming excellent scientists. Candidates train in a uniquely multidisciplinary environment and create scientific and personal networks that help them during and after the doctorate.”*

*Prof. Martin Visbeck, Physical Oceanographer and Speaker Cluster of Excellence „The Future Ocean”*





## ISOS Highlights

### BIG Questions

Learn about thought-provoking questions in research from leading scientists from diverse fields.



### Doing Science

Discuss key aspects of good scientific practice, experimental design, data management, science in society and the theory of science.



### Science Fair Mentoring

Visit a scientific fair with an experienced mentor at your side who will help you navigate through the fair and establish new contacts.



## ISOS offers

- | a mandatory system of co-advisorship and regular meetings
- | scientific and personal skill courses
- | financial support for travel to conferences and workshops
- | a multidisciplinary and international network of peers
- | a range of events with top-level marine scientists

Upon graduation, a certificate of participation is issued which is supplementary to the degree.

### Support Structure

Advisory Committee Meetings | Travel Grants | Miniproposal Grants | Mentoring at Scientific Fairs...

### Life after the Doctorate

'Meet the Prof' | PhD Retreats | Job Application Strategies | Assessment Center Training...

### Personal Competencies

Scientific Writing | Basics of University Teaching | Peer Reviewing: An Insider's View | Science Journalism | Project Management | 'Setting the Compass' for the Doctoral Project | Grant Writing | Presentation Techniques | Design Basics for Scientific Posters...

### Courses for Marine Sciences

Uni- and Multivariate Statistics | GIS | MATLAB | Data Mining | Data Visualisation | Experimental Design | Programming with Python | Data Mining | Fortran Intro | Making Sense of Earth System Science | Ocean Data View | Imperfect Models and Coarse Data | Intro to Physical Oceanography | Ocean Governance ...

## Advisory Committee

Doctoral candidates have a strong support system consisting of a primary scientific advisor and at least one co-advisor. Advisors commit to supporting the candidate in two mandatory meetings per year, where they discuss the progress of work and future goals.

- | The primary advisor must have faculty recognition for doctoral supervision.
- | The co-advisors can be anyone with a scientific background, and may come from other universities or the public or private sector.
- | Co-advisors are jointly chosen by the doctoral candidate and primary advisor.

*"I like the thesis advisory group meetings, even though they are extra work. They are really useful to keep an overview of your project. But they also get all your supervisors to talk to each other in detail about your work every six months."*

*ISOS doctoral candidate*

## To Join the Doctoral Program:

- | The doctoral candidate and primary advisor choose one or more co-advisors.
- | They fill in, sign and submit the application form on our website.

## Doctoral Representatives

The community of ISOS doctoral candidates is represented by a group of peers. They bring fresh ideas into the programme, organize informative and social events and lobby for their peers. Contact them at [phd\\_reps@isos.uni-kiel.de](mailto:phd_reps@isos.uni-kiel.de)

## ISOS Highlights

### Meet the Expert

Pick the brains of visiting scientists and experts about the challenges in their field.



### Doctoral Retreats

Look beyond the doctoral project during annual retreats. Meet peers in an informal setting to address themes of common interest.



## Life after the Doctorate

ISOS alumni, senior marine scientists and experts from industry and public life offer perspectives for life after the doctorate. Networks formed early are essential for a successful career in and outside of science.



We track our alumni as they move forward in their careers.