



During the establishment phase, we are able to offer a position as a

Junior Research Group Leader Junior Research Group on Marine Molecular Ecology

to establish new research interactions between ICBM and AWI.

Background and tasks:

Assessing and better understanding spatial and temporal patterns of marine biodiversity including all organisms from the smallest to largest, is a key research goal of the HIFMB. In the startup phase of the institute, we want to establish an independent junior research group on Marine Molecular Ecology, helping us to assess marine biodiversity change by molecular tools. The successful candidate will develop his or her own research projects by establishing molecular tools and work flows for analyses of environmental DNA (eDNA), e.g. for surveillance of metazoan biodiversity in complex marine communities. Tools and workflows to support general NGS based meta-barcoding projects are to be developed. In order to increase collaboration potential with similar research on unicellular organisms, we expect a focus on metazoan/multicellular taxa. The junior research group will strengthen the interactions among working groups from the fields of Evolution and Ecology by establishing multispecies detection methods. The group will be equipped with two additional PhD students and will collaborate on integrative and interdisciplinary research projects with scientists at the HIFMB, the University of Oldenburg and the Alfred Wegener Institute/ Bremerhaven. The candidate is further expected to apply for external funding. The group will be situated at the Oldenburg campus. The candidate will supervise two PhD candidates, the teaching obligation is 2 SWS.

Requirements:

Applicants need an academic university degree (Master or equivalent) and an outstanding PhD in evolutionary genetics including genomic analysis and molecular tools. The capacity for independent research conduction is required, preferentially shown by successful postdoc research associated with scientific publications in international journals. We expect excellent skills in basic and advanced molecular techniques used to investigate taxonomic composition of marine communities. The applicant needs very good English language skills and experience in supervising students.

If you are interested or if you have any further questions, please contact: **Helmut Hillebrand**, helmut.hillebrand@uni-oldenburg.de.

The position is limited to five years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 14. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your application with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **40/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Spatial and temporal resilience of ecosystem functions and services

Background and tasks:

In the context of the diversity-stability hypothesis (DSH), diversity is suggested to reduce the temporal fluctuation in aggregate ecosystem processes by compensatory dynamics or by decreasing the synchrony of population dynamics. However, recent evidence suggests that i) functional stability requires compositional flexibility, ii) this relationships varies for different components of stability (invariance, resistance, resilience, recovery), and iii) this relationships depends on spatial and temporal scales assessed. Here, we take advantage in massive datasets on spatial and temporal assessment of pelagic and benthic marine organisms and their associated ecosystem functions to assess the diversity stability relationship as a multidimensional construct. We specifically ask: How do ecosystems react to multiple simultaneous pressures in the form of pulse and press disturbances and environmental fluctuations? Which aspects of stability need to be assessed to allow the prediction of ecosystem responses? How does biodiversity affect these multiple dimensions of stability and which traits are involved in these biodiversity effects? To address these questions, PD1 is expected to employ different methods of statistical ecology (time series analyses, structural equation models, etc.) and modelling.

You will use spatially and temporally resolved data sets on plankton and benthos communities to address the compositional and functional aspects of stability in marine ecosystems.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. Using recent advances in multidimensional concepts of stability and based on ecology theory, we expect the candidate to provide statistical tools to analyse stability components in observational and experimental data. We require expertise in statistical modelling in R (e.g., structural equation models, time-series analyses) and handling of large data sets including information on biodiversity and ecosystem processes. The candidate should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Helmut Hillebrand**, helmut.hillebrand@uni-oldenburg.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **41/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

PhD student

Role of sponges in benthic pelagic coupling: the role of sponge metabolism for plankton, microbial and chemical diversity of the water column

Background and tasks:

The PhD candidate will use environmental systems biology tools to investigate the effects of benthic filter feeding communities on phyto- and bacterioplankton communities. The PhD candidate will investigate the effect of the "sponge loop" on plankton and bacterial communities and DOM diversity. The succession of phyto- and bacterioplankton communities, as well as DOM composition will be monitored in these experiments at a molecular level at maximum analytical resolution. The main aim of the PhD candidate will be the identification of functional relationships that arise from time series experiments in mesocosms.

Requirements:

Formal requirement for application is an outstanding academic university degree in Marine Environmental Science, Ecology or a related subject. The candidate should have a reasonable background in ecological theory and expertise in statistical data analysis and should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Thorsten Dittmar**, thorsten.dittmar@uni-oldenburg.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13 (66%). The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

As Ph.D. student at AWI you will be member of the Helmholtz Graduate School for Polar and Marine Research 'POLMAR' (http://polmar.awi.de) or another graduate school.

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30**th, **2017** referencing code **49/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Functional consequences of endogenous clocks in key species

Background:

Functional consequences of endogenous clocks in key species Antarctic krill, is arguably the most abundant animal on earth in terms of biomass, and shapes the structure and functional biodiversity of the marine Antarctic ecosystem due to its central position within the Southern Ocean food web.

Recent research indicates that synchronization between krill and its environment depend upon an endogenous timing system. The seasonal course of photoperiod in the environment seems to act as an essential *Zeitgeber* that links the endogenous clock with the outside world. This knowledge is crucial because whereas the phenology of environmental conditions to which the life cycle of krill is synchronized may change, the dominant stimulus (photoperiod) of endogenous driven cycles will not. The ongoing environmental alterations might desynchronize previously matched interactions between the endogenous seasonal rhythms of krill and its environment, which have evolved over millions of years. However, it is not clear yet which important life cycle events are controlled by an endogenous clock. Therefore, to gain a comprehensive understanding of the regulatory network of important life cycle events in krill such as maturation, lipid accumulation and utilization, growth a two year experiment in which krill were reared under natural Antarctic light regimes from three different Antarctic realms but constant food was performed. The samples will be analysed on a transcriptomic (already in progress) and proteomic level to better understand the degree of congruency between mRNA and protein expression.

Tasks:

The focus of the research project is to gain a comprehensive understanding of the regulatory network of important life cycle events of the Southern Ocean key species Antarctic krill, *Euphausia superba*. The ideal candidate should be experienced in the following techniques: The full-cycle differential proteomics of krill will involve subcellular fractionation, gel-based (incl. 2D DIGE) and gel-free (nanoLC) separation of intact proteins and tryptic peptides, respectively, followed by mass spectrometric analyses of the latter (MALDI-TOF-MS/MS and ESI-MS/MS). MS data will be bioinformatically analysed against an available genomic database of krill. The comprehensive time-resolved proteomics data has to be expert analysed and interpreted to reconstruct regulatory circuits with emphasis on the relation

between clock proteins and metabolic networks. A theoretical modelling of the regulatory cross links is envisioned.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. The candidate should have a reasonable background in ecological theory and expertise in statistical data analysis and should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Bettina Meyer**, bettina.meyer@awi.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **48/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc Phenotypic plasticity

Background and tasks:

We expect the candidate to provide state of the art physiological tools to examine and calculate energy demands, metabolic challenges and costs of different reaction norms. The candidate should develop own projects combining field data on adaptation with laboratory based measurements of life history traits under different conditions. We expect the candidate to be interested in bridging the gap between physiology and transcriptomic to understand the role of genetic as well as phenotypic variance in processes of adaptation; therefore, transgenerational experiments are favoured.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. The candidate should have a reasonable background in ecological theory and expertise in statistical data analysis and should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Gabriele Gerlach**, gabriele.gerlach@uni-oldenburg.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30**th, **2017** referencing code **47/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Linking plankton diversity to molecular substrate diversity

Background and tasks:

The candidate will use environmental systems biology tools to disentangle functional substrate-organism relationships in complex plankton communities. The PD will accompany mesocosm experiments in which phytoplankton blooms will be initiated. The succession of phyto- and bacterioplankton communities, as well as substrate and exometabolome composition will be monitored in these experiments at a molecular level at maximum analytical resolution. Main aim of the PD will be the identification of functional relationships that arise from the time series of metagenomes and metabolomes obtained in the mesocosms.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. The candidate should have a reasonable background in ecological theory and expertise in statistical data analysis and should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Thorsten Dittmar**, thorsten.dittmar@uni-oldenburg.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30**th, **2017** referencing code **46/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Anthropogenic drivers of spatial dynamics in functional biodiversity

Background and tasks:

Shallow offshore ecosystems such as the southern North Sea experience a dramatic switch in human impact and demand for goods and services that adds to the climate driven long-term environmental change. The installation of literally thousands of offshore wind turbines and the simultaneous cessation of fisheries in these areas will alter habitat structure and stress levels and thus will initiate a development towards taxonomically, functionally and trophically different communities. The sustainable management of this transition requires a thorough understanding of the underlying mechanisms. The Postdoc will explore these processes and their significance for ecosystem functions and services at different spatial scales, i.e. turbine — wind farm — regional scale. The focus will be on the benthic compartment of the ecosystem. The candidate will develop and test appropriate hypotheses and models based on own observations and experiments combined with available high-resolution and large-scale data sets from wind farms and oil & gas rigs.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. The candidate requires expertise in handling of large data sets, thorough background in theoretical ecology, benthic ecology and population dynamics as well as statistical modelling in R (e.g., structural equation models, interaction models and habitat suitability modelling). The candidate should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Thomas Brey**, thomas.brey@awi.de

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30**th, **2017** referencing code **45/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Coexistence, function and resource metabolism

Background and tasks:

The candidate will work on the understanding of different coexistence mechanisms in marine eukaryotic autotrophs and therefore amending classical ecological theory by addressing resource metabolism. Resolving the ecological niches of coexisting marine phytoplankton species is challenging due to the high species diversity and fast turnover rates. Differential niche partitioning of resources is one key to explain this "paradox of the plankton," but resolving patterns of species-specific resource metabolism in the field remains a challenge. Within this project the candidate will take field samples for biodiversity and metatranscriptomic analysis and use modelling for exploring multiple dimensions of spatial coexistence.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. The candidate should have a reasonable background in ecological theory and expertise in statistical data analysis and should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Uwe John**, uwe.john@awi.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family

through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **44/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc Optimal Control Theory for spatial planning

Background and tasks:

The candidate will develop a novel theoretic framework for spatial planning in marine and coastal areas. Using recent advances in the extension of optimal control theory to spatial distributed systems, the candidate will i) transfer such approaches (e.g. the Pontryagin's Maximum Principle) to complex networks and ii) explore its suitability for spatial planning. The goal will be to apply this framework for determining the optimal spatial structure for a given conservation management objective, e.g. the protection of a particular species with known dynamics in time (population dynamics) and space (migration, recruitment) and the relevant trade-offs in management. The suitability of this approach shall be tested with real world examples.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. We require a firm background in mathematical modelling or theoretical physics. The candidate should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Bernd Blasius**, bernd.blasius@uni-oldenburg.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family

through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **43/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.





During the establishment phase, we are able to offer a position as a

Postdoc

Acoustic parameters for underwater marine habitat quality

Background and tasks:

The candidate will use passive acoustic data from a network of recorders in the Southern Ocean to develop maps resolving the temporal, spectral and spatial characteristics of the abiotic and biotic underwater acoustic environment and design criteria and metrics for underwater acoustic habitat quality assessment. The candidate is expected to employ state-of-the-art statistical methods from the field of landscape ecology/eco-acoustics (e.g., Acoustic Complexity Index) to describe and develop indices and metrics for the quality of the underwater acoustic environment.

Requirements:

Formal requirement for application is an outstanding academic university degree (PhD, promotion) in Marine Environmental Science, Ecology or a related subject. We expect the candidate to have experience with statistical description of acoustic landscapes, acoustic indices, acoustic propagation (ideally underwater), signal processing and data mining. The candidate should be ready to work and communicate in an international research environment.

If you are interested or if you have any further questions, please contact: **Ilse Van Opzeeland**, ilse.van.opzeeland@awi.de.

The position is limited to three years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund) based on qualifications and transferred tasks up to salary group 13. The place of employment will be **Oldenburg**.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. The University of Oldenburg and AWI aim to increase the number of women in the scientific staff and therefore encourages women to apply. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family

through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

Please forward your applications with the standard documentation (letter of motivation, CV, certificates and a list of publications) by **April 30th**, **2017** referencing code **42/D/HIFMB** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany or by e-mail (all documents merged into one PDF file) to: personal@awi.de.