

Doctoral researcher (f/m/d) in Migration Ecology in the Cluster of Excellence NaviSense

Paygrade

E13 TV-L

Working hours

65%

Institution

Faculty V, Institute of Biology and Environmental Science, Working group Migration Ecology, Cluster of Excellence NaviSense

Location

Oldenburg (Oldb)

Application Deadline

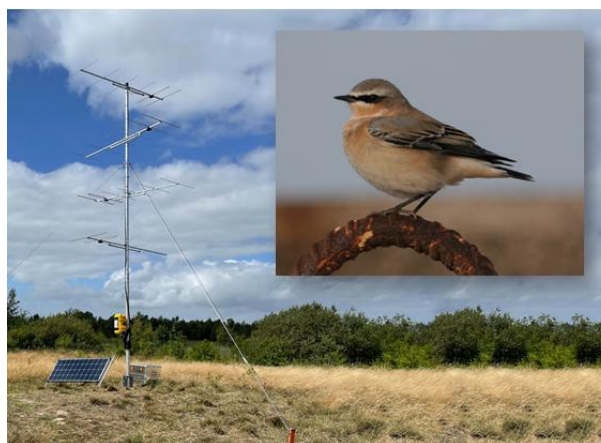
01.12.2025

First day of work

01.03.2026

Limited

To 3 years



About us

The newly funded Cluster of Excellence **NaviSense** for the Sensory Basis, Mechanisms, and Impacts of Animal Navigation is a highly collaborative, interdisciplinary research project hosted at the University of Oldenburg and involving national and international partner institutions. As a diverse and international team of scientists from biology, physics, chemistry, computer sciences and social sciences we provide a thorough, interdisciplinary understanding of the senses and mechanisms used by animals to navigate, and how these mechanisms can inspire technology and impact society, ecology, and biodiversity.

NaviSense performs research in the areas of (1) animal navigation mechanisms and their underlying senses, (2) quantum effects at ambient temperature in model systems and biology, (3) ecological and conservation related consequences of animal navigation, and (4) links biological and technical systems through models, algorithms, and devices. The acquired knowledge can help to solve major societal questions related e.g. to the biodiversity crisis, GPS independent navigation, and quantum sensing at ambient temperature. For more information see <https://navisense.org/>.

The successful candidate will work mainly within the research area “Ecological and conservation related consequences of animal navigation” and focus on two questions:

1. When and how do migratory songbirds learn where their home is?
2. Do pollutants, such as pesticides, negatively affect the orientation/navigation and with that the migration success of free-flying migratory songbirds in the wild?

The specific main research objectives are: i) Quantifying pre-migratory flight behaviour in migratory songbirds. ii) Relating pre-migratory flight characteristics to return probability to the breeding area in subsequent years. iii) Influence of pesticide on migratory decisions including orientation and navigation decisions. The combination of a large-scale array of radio receiving stations (Motus,

<https://motus.org/>) in north-western Germany and radio transmitters running for > 1 year will enable the candidate to record the spatiotemporal characteristics of the pre-migratory flights, the subsequent breeding area arrival timing and how pollutants affect orientation/navigation success.

Your tasks*

- Conducting field studies (radio-tagging migratory songbirds, non-invasively collecting body tissues) close to Oldenburg and on Helgoland for several weeks during the three years,
- Analysing complex radio-tracking data derived from a large-scale array of Motus radio receiving stations (using R, including writing complex functions to extract certain behavioural traits),
- Statistical analyses of multifaceted and large data sets using R,
- Formulating and solving scientific problems and interpreting research results,
- Writing scientific publications and presenting results at international conferences,
- Collaborating with other researchers on interdisciplinary research projects and publications
- Participation in NaviSense events like retreats and seminars to present your research, strengthen scientific discussions and team building (considering individual possibilities) and
- Mandatory participation in our qualification program hosted in the *NavNextGen Academy* (see below).

Your profile

Required qualifications:

- University degree (master's degree, diploma (university)) or equivalent in a relevant subject, e.g. biology, zoology, ecology, but also physics, mathematics, if a strong interest in ecological topics is shown,
- General interest in bird migration, movement ecology or orientation/navigation in animals,
- Motivation for fieldwork around Oldenburg and on Helgoland for several weeks each year,
- Extensive experience with the statistical software R (including modelling and programming),
- Ability to work with and statistically analyse large datasets and
- Fluency in spoken and written English.

Preferable/Desirable:

- Dedication for the research field,
- Enthusiasm for and willingness to engage in interdisciplinary and international collaborations across many different fields of expertise,
- Ability to work both independently and creatively and as part of a team,
- Showing team spirit,
- Good communication skills,
- Research experience with animals in the field,
- Experience with field studies and
- Birding ringing license.

We offer

- Being part of a unique interdisciplinary, collaborative, international and diverse research team and scientific environment,
- Access to a very wide range of expertise, modern equipment and state-of-the-art techniques,
- You and your peers will be part of our qualification program hosted in the *NavNextGen Academy* which will allow you to participate in conferences, excursions, courses, and workshops with great networking opportunities, research training, and career and mentoring programs, to further promote your personal and professional development,
- Guidance during your onboarding phase and support during your doctorate,

- Payment in accordance with collective bargaining law (special annual payment, public service pension scheme, asset-related benefits) incl. 30 days annual leave,
- A family-friendly environment with flexible working hours,
- Benefits from the university's health promotion program and possibility to participate in the university sports program,
- A friendly, cooperative and productive working group,
- The freedom to develop your own research profile within the area of the project and
- Support with strategic planning of your current and future scientific career.

Benefits at University of Oldenburg (is given automatically by UOL)

- 30 days of vacation
- Secure remuneration according to collective agreement
- Company pension scheme
- Further education opportunities
- Flexible working hours
- Health management
- Remote working
- Compatibility of career and family
- Support with childcare
- University Sports Centre

Our standards (is given automatically by UOL)

The University of Oldenburg is dedicated to increase the percentage of female employees in the field of science. Therefore, female candidates are strongly encouraged to apply. In accordance to § 21 Section 3 NHG, female candidates with equal qualifications will be preferentially considered. Applicants with disabilities will be given preference in case of equal qualification.

Further information

The first day of work will be between 01.03.2026 and 01.04.2026.

Contact

For further information, please contact Prof. Dr. Heiko Schmaljohann, heiko.schmaljohann@uol.de, +49 (0)441-7983332

Apply now

Please send your application via e-mail by 31.11.2025 to heiko.schmaljohann@uol.de.

Please send your application, including a concise statement of motivation and research interests (max. 2 pages), your CV (with academic education/degrees, professional experience, fellowships/awards, conference contributions, experience with R (!) and further relevant skills) and publication(s) (if applicable), along with the names and addresses of at least two references who are familiar with your work, and copies of your university certificates in a joint pdf document to Prof. Dr. Heiko Schmaljohann, heiko.schmaljohann@uol.de (application by email is preferred). Interviews are probably scheduled for the 51th calendar week in 2025. You are welcome to let us know which pronouns you use and how we may address you.

Regulations prohibit reimbursement of application and interview expenses.