Zhehao Hu

Curriculum Vitae

PERSONAL INFORMATION

Last Name, First Name	Hu, Zhehao
Birth	28.12.2000 in Tokyo, Japan
Nationality	R. O. China (Taiwan)
Mobile	+49(0)152-5322-4676
E-Mail	zhehao.hu@studium.uni-hamburg.de
Location	Hamburg, Germany
Languages	Mandarin (native), German (fluent), English (fluent), Japanese (fluent)

RESEARCH INTEREST

I am a dedicated and passionate graduate student focused on evolutionary dynamics and conservation strategy. My research interest centers on the interaction between species evolution and human impacts, particularly on marine mammals, seabirds, and reptiles. I am fascinated by how these species adapt to changing world and their underlying physiological traits.

I aim to use interdisciplinary approaches, drawing from molecular ecology, immunology, developmental physiology, and biodiversity studies, to enhance our understanding of how species evolve in response to exposome changes, especailly those caused by human activity. My long-term goal is to support conservation efforts by conducting research and turning my findings into public education, encouraging greater participation from others.

EDUCATION

M.Sc. Biology

University of Hamburg — 10/2023 - 09/2025 (expected)
Faculty of Mathematics, Informatics and Natural Science — Current GPA: 3.9/4.0 (1.1)

Courses:

- Molecular Parasitology
- Cellular and Molecular Immunology
- Evolutionary Systematics
- Community Ecology
- Marine Deep-Sea Benthic Habitats and Biodiversity

B.Sc. Biology

University of Hamburg — 10/2020 - 03/2024
Faculty of Mathematics, Informatics and Natural Science — GPA: 3.0/4.0 (2.0)

Elective Courses:

- Biological Oceanography and Fisheries Science
- Methods of Open Field Ecology
- Biodiversity of Fungi
- Introduction of Geographic Information System
- Molecular Methods of Animal Physiology
- Data Analysis in Ecology with R

Course works:

- Gradient analysis of floodplain grassland: species community
- Understanding hemocyanin evolution using molecular and biochemical methods

Bachelor thesis: How's *Wolbachia* doing? Various *Wolbachia* communities in the female-biased flea beetle *Altica lythri*.

- Supervisor: Prof. Dr. Susanne Dobler, Dr. Kim Rohlfing
- Grade: 4.0/4.0

EMPLOYMENT

Research assistant | University of Hamburg 07/2024 - Present

Working Group "Neurophysiology" run by Prof. Dr. Christian Lohr

- Assisted genotyping of the experimental animals.
- Enhanced skills to optimize laboratory works.

Contact: Prof. Dr. Christian Lohr, christian.lohr@uni-hamburg.de

Student assistant | University of Hamburg 09/2023 - 03/2024

Working Group "Molecular Evolutionary Biology" run by Prof. Dr. Susanne Dobler

- Assisted essential works in laboratory research and laboratory organization.
- Developed novel DNA/RNA-extraction protocols for specific tissues and usages.
- Enhanced research skills by cooperating with other researchers.
- Attended the DZG (German Zoological Society) conference in Kassel with poster contribution.

Contact: Prof. Dr. Susanne Dobler, susanne.dobler@uni-hamburg.de

Laboratory technician | Eurofins BioTesting Service Nord GmbH 06/2023 - 07/2023

- Internship and student job in biosafety level 2 laboratory.
- Operated *in vitro* diagnostic tests (ISO 17822) for testing *Salmonella spp.*, *Listeria monocytogenes* and *Vibrio spp.*
- Developed laboratory skills to navigate a fast-paced working environment with standardized laboratory procedures.
- Demonstrated ability to follow strict protocols and ensure compliance with safety regulations.

Contact: Gerrit Fabian Bauer, GerritFabianBauer@eurofins.de

TEACHING EXPERIENCE

Animal Physiology | University of Hamburg 2022 - 2023

Teaching assistant

- 2nd year mandatory practical course for the B.Sc. Biology program.
- Supported in assessing course plan.
- Advised students on molecular biology experiments (cell counting, SDS-PAGE, ECG, enzyme acitivity measurement, basic data interpretation)
- 24 classes, 200+ students total

Evolutionary Ecology | University of Hamburg 2023

Teaching assistant

- 3rd year elective practical course for the B.Sc. Biology program.
- Supported and advised students on molecular biology experiments (PCR, gel-electrophoresis, immunocytochemistry, result interpretation)
- 1 class, 12 students

CONFERENCE ACTIVITY

Detecting *Wolbachia* infection with Real-time PCR in female-biased flea beetle *Altica lythri*
Poster | 115th Conference of the German Zoological Society | 09/2023

SKILLS

Professional Competence

- **Molecular Biological Tools**: PCR techniques, SDS-PAGE, western blot, sequencing, cloning, ICC
- **Informatics**: R, Python 3, GIS, phylogenetic reconstruction, Bayesian statistics, multivariate analysis, genome assembly, sequence alignment, motif finding, peptide sequencing, BLAST, image and video analysis, CLI
- **Technical**: Rreproducible research, technical writing (Markdown, LaTeX, Quarto),
- **Software**: SnapGene, Q-GIS, Adobe Creative Software (PS, AE, PR, AI, ID), DaVinci Resolve

Research Skills

- **Analysis & Problem-Solving**: comprehend large amounts of information, identify problems through experiment design, form and defend independent conclusions
- **Interpersonal**: teach skills and concepts to others, collaborate on projects

- **Management**: effectively organize and evaluate large quantities of data, identify sources of information, plan projects realistically to meet deadlines, maintain flexibility in a changing environment
- **Communication**: prepare logically-written materials, deliver comprehensive oral presentations, explain complex concepts in basic terms

CERTIFICATE AND COMPETENCE

Coursera Courses

- Bioinformatics Specialization (by UC San Diego)

SCUBA Diving

- PADI Open Water, PADI Advanced Open Water, PADI Rescue Diver

REFERENCES

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LINKS

Personal website: zzzhehao.github.io
GitHub: github.com/zzzhehao
LinkedIn: linkedin.com/in/zhehaohu