Lab Handbook

Body, Brain and Behaviour Lab
Institute for Biomagnetism and Biosignal Analysis
University of Münster

Last updated: March 2024

Welcome to the Body, Brain and Behaviour lab! We are a group of researchers from the University of Münster who aim to understand how the brain interacts with the rest of the body to navigate everyday life. We wrote this lab handbook to make it easy for people to get a first impression of who we are as a group and how we work together. In this handbook, you will find information on different roles within the team and the expectations they come with, our research culture, and the ways in which we all try to develop, both individually and as a group. Naturally, this document will change over time so that it may always reflect the most recent and most comprehensive 'portrait' of the group. If you feel that something is missing from the handbook or you have additional questions, please feel free to get in touch with any of the contributors listed at the end of the document.

If you are a new group member, we expect you to read the lab handbook within the first week - ideally, this will facilitate your first steps and quickly introduce you to our ideas of how we imagine our working environment.
If you are a visiting researcher, a remote collaborator, or a candidate thinking about joining the group, we hope that the handbook will give you an impression of what it will be like to interact and work with us. Therefore, we have decided to make the lab handbook publicly available. In case important questions still remain unanswered, please get in contact with us.

I. Roles and Expectations

Our group consists of students (BSc and MSc), PhD candidates, and a Junior Principal Investigator (PI). We are part of the Institute for Biomagnetism and Biosignal Analysis (IBB) which includes other groups with their own students, PhD students, ECRs, and PIs. The IBB as an institute is part of the University Hospital Münster (UKM).

Here, we describe the responsibilities of group members with different roles, challenges they may face, what you can expect from them, and what is in turn expected from you.

Students

Student members are those who are working toward a university degree (BSc or MSc) either in our group or any other, including visiting students and research assistants.

Day-to-day: Students help contribute to the lab's research by conducting their own research project or collaborating on a project led by a more senior researcher. Since conducting one's first research project is associated with learning many new things, the day-to-day activities of students include a lot of educational activities like reading literature and completing tutorials. They are supported in this endeavour by PhD students in the group as well as by their supervisor, with whom they regularly meet one-on-one. Additionally, students are active members of the lab - they take on tasks required for lab organisation & functioning and join general lab meetings, journal clubs, and talks hosted by the lab.

Challenges: Research projects - especially one's first research project - are always associated with unexpected problems. This often requires patience and endurance, but also provides students with a valuable opportunity to gain experience and learn how to handle setbacks. Working in research also necessitates the development of effective communication skills and time management. Students face the challenge to learn when and how to ask for help as well as communicating their progress and problems in an effective manner - skills that are valued in any workplace. Lastly, a first research project can also lead one to doubt their skills and ideas. Supported by all lab members, students should use this occasion to learn to trust their judgement and build confidence in their skills.

Support for students: A student's primary resource of support is their supervisor. In regular one-on-one meetings, the student reports on their progress and receives constructive feedback. New ideas are encouraged and the supervisor makes sure the progress is aligned with the timeline of the project. All the student's questions are answered, the supervisor helps solve problems and provides resources as well as further learning opportunities. Outside of the meetings, the supervisor is present and communicates in a reasonable time frame.
Additionally, the lab also provides a supportive environment for students. Their input is taken seriously and there is no judgement towards the questions they ask. All lab

members provide an open, welcoming, and inclusive atmosphere and are willing to support students in learning new things.

Students should feel comfortable asking questions, be able to request help at any time and receive it in a reasonable time frame as well as being provided with opportunities and resources to further their education.

Expectations of students: Students provide critical help in the preparation and pilot testing of new studies. As setbacks and struggles are inevitably part of students' training, students are expected to acknowledge these difficulties and seek timely support from PhD candidates, postdocs, and the PI. Finally, project leaders (e.g. PhD students or the PI) can expect students to actively participate in group and institute activities and to provide regular updates on their progress.

PhD candidates

Yes, PhD candidates (i.e. those working toward a PhD degree) are technically students, but their role comes with slightly different responsibilities and expectations.

Day-to-day: PhD candidates navigate a dynamic routine that involves independent research, literature reviews, and academic writing. Their daily tasks may include data collection, analysis, and collaboration with lab members (students and postdocs). While the primary focus is on their own research project, they also contribute to additional "side-projects", broadening their research scope. Supported by fellow lab members and their PI through regular one-on-one meetings, these candidates actively contribute to the lab's overall functioning and participate in meetings, journal clubs, and talks, fostering a collaborative and enriching academic environment.

Challenges: PhD candidates face multifaceted challenges as they navigate the ever-evolving academic landscape. This demands a flexible approach to address unexpected issues and complexities that may emerge during the research process. In the face of uncertainties, the ability to adjust methodologies, rethink strategies, and persevere through setbacks becomes paramount. Moreover, maintaining a healthy work-life balance is a continuous challenge, emphasising the need for effective time management. Amidst these challenges, the expectations to produce high-quality, original research and contribute productively by writing scientific papers heighten the academic rigour, underscoring the importance of resilience, adaptability, and a supportive lab environment.

Support for PhD candidates: PhD candidates benefit from robust support mechanisms, including personalised guidance from supervisor and active collaboration with fellow candidates and other lab members. This collaborative environment encourages a dynamic exchange of ideas within a supportive research community, acknowledging candidates as trained professionals whose contributions are taken seriously by the entire lab. In addition to regular one-on-one meetings with the supervisor providing valuable insights and feedback, candidates engage in daily message exchanges. This

communication platform allows a more fluid expression of ideas and doubts, empowering students to voice concerns, seek clarification, and point out mistakes.

Expectations of PhD candidates: PhD candidates engagement is pivotal, as they frequently volunteer for essential tasks supporting the group's functioning. The supervisor can expect students to provide regular updates on their progress and participate in lab activities. Notably, a strong emphasis is placed on the production of research papers, dissemination through conferences and presentations, and active contributions to lab discussion. PhD candidates are also expected to autonomously drive forward their research project.

Junior PI

Leader of the research group.

Day-to-day: The PI's job is to keep the metaphorical research ball rolling. They are responsible not only for their own research programme and numerous collaborations in parallel, but also for the supervision of students, PhD candidates, and postdocs. Regular meetings with all other team members are important to keep track of everyone's progress and to identify potential pitfalls or hurdles early on. This includes one-on-one meetings (focussed on one individual project) as well as group meetings with everyone in the lab - any time except Wednesdays, which are kept meeting-free. The group's 'open door' policy means that short-term, unscheduled meetings are welcome at any point - since there is no silver bullet, 'one fits all' solution for supervision, some members will require more frequent meetings than others. This is perfectly normal, but it does require the PI to continually switch between different responsibilities and work contexts on short notice. The PI is also tasked with distributing the group's work, for example during conference presentations (talks, posters), research visits, and in scientific publications (writing, editing). Finally, group management also entails that the PI has to ensure financial plannability and reasonable growth of the research group (which typically means a lot of grant writing).

Challenges: Juggling various responsibilities as a PI is challenging and comes with a certain work load (and a lot of emails). Being a committed supervisor means to be up to date on many (if not all) the group's projects at the same time, which is never easy. Nevertheless, the PI should help all group members resolve bottlenecks or major problems as efficiently as possible. The same is true for conflicts that may arise at any time, be they scientific or personal. Arguably the most important challenge - particularly for junior PIs - is to remain open for feedback on their supervision and group management. All group members should feel welcome to initiate discussions on how the work environment can be improved for everyone's benefit.

Support for the PI: Students and PhD candidates can help the PI maintain a productive and enjoyable supervisory relationship. First and foremost, this includes clearly communicating when and how much input is needed on a particular question or project -

this way, the PI can plan ahead and assign enough time to not obstruct progress through delays. A couple of quick messages or a brief impromptu meeting is more effective than a lengthy email. When meetings are likely to take more time, it is helpful to schedule them at least the day before - chances are, today is pretty busy already. Finally, the PI can seek advice and support from other PIs at the institute.

Expectations of the PI: All lab members can expect the PI to provide guidance, mentorship, and support to the extent that best fits their current work mode. This means a high degree of flexibility for both sides, with more frequent meetings in some periods (e.g. when finishing a paper or starting a new project), but fewer in others. The PI will clearly communicate what is expected of students and PhD candidates at all times. All lab members will receive the PI's full support in advancing their career, e.g. during job transitions, when applying for research grants and awards, or research and conference visits. The PI helps create an open, inclusive and supportive lab culture by providing a good example. He plans the long-term future of the lab and makes sure the lab stays on track for that future. Finally, he is responsible for the knowledge transfer between different lab generations including helpful resources/"how things are done" in the lab.

Core staff

Core staff at the IBB comprises the secretariat, lab technicians (MTAs), the lab engineer, and technical support (IT and hardware). We expect all group members to treat core staff with great respect at all times - we simply could not (and would not want to) do our jobs without their support. Their unique technical and professional expertise is invaluable for the lab's work and should be recognised appropriately, be it with co-authorships in publications or in the acknowledgement section of our papers.

II. Research Group Culture

Workplace Conduct

Our goal as a group is to provide an inclusive, respectful work environment in which group members (including visiting researchers) can thrive in developing and following their own scientific interests.

Conduct in meetings: The Body, Brain, and Behaviour group meets regularly throughout the academic year to keep everyone updated on the different projects, plan conference travels, or to get group feedback on a specific question/project. Informal meetings can be arranged on short notice as required. In addition to these meetings, the group gets together for a regular journal club in which each member has 5 minutes and a single slide to briefly present a particularly interesting paper they recently came across. Our group also participates in the institute colloquium on Thursday afternoons with invited international speakers. We ask all group members to attend these meetings whenever possible.
During any of those meetings, we aim for a supportive, respectful atmosphere in which all team members feel equally comfortable asking questions and giving their thoughts. Feedback or criticism is to be phrased in a productive way irrespective of seniority.

Work interactions: As we are working in a big team in the institute, we always aim to be considerate when interacting with colleagues. Thus, we help provide a calm, quiet, and productive working atmosphere in shared spaces and are mindful of other people focussing on work. In random interactions during the workday, we are friendly and kind but respect other peoples' preferences regarding workflow and small talk during breaks.

When interacting with participants and/or patients in our studies, we should be aware that what we consider a daily routine may be entirely new for them. We are to be mindful that our procedures might be challenging or even cause discomfort for participants and/or patients, e.g. trying to understand a certain task or preparing some of the peripheral measures in close physical contact.

Socialising: Outside of work hours, we like to gather for group lunches, dinners, and other social outings. Everybody is always welcome to join and should feel included. Our expectations regarding respectful interactions and inclusive, open lab culture extend to these social gatherings. However, the social events are not obligatory, non-attendance does not need to be justified and will not affect your professional development or workplace interactions in any form.

Inappropriate behaviour: The BBB lab has a zero tolerance policy on bullying, harassment, discrimination, and disrespect. Please contact the PI, HR, or any other point of contact if you feel you have been subjected to any of these behaviours or witness someone else being subjected to it. Complaints will always be taken seriously, you will receive active help and resources for resolving the situation, and any details are always confidential. In case of minor issues (e.g. interactions that stop short of harassment) or situations that simply make you feel uncomfortable, it can be a good idea to speak to the

person who is behaving inappropriately. However, there is never an expectation to resolve a situation yourself, you should always feel comfortable raising the issue to the PI.

University resources: The university provides several resources on various topics, see linked below.

Equal opportunity office:
https://www.uni-muenster.de/Gleichstellung/en/index.html

University Hospital HR:
https://www.ukm.de/personalraete
https://www.medizin.uni-muenster.de/wpr-ukm/willkommen.html

Career Service:
https://www.uni-muenster.de/CareerService/en/index.html

University of Münster student association:
https://www.asta.ms/

Work and Wellbeing

One of the main goals of our group is to provide an environment in which all members can look after their long-term wellbeing.

Managing expectations: Setting and communicating clear expectations is a key aspect of working together in our group. If you agree to take on a task or enter a certain project phase - alone or with a colleague - set a timeline that is realistic. Estimating these timelines can be equally difficult for your and other group members - remain flexible and let your colleagues know in advance in case you need more time. Vice versa, be understanding of delays or changes that may occur in other people's timelines that affect you. Never should keeping internal deadlines impact your wellbeing - if you feel this could be (or become) the case, please talk to your PI.

Working hours: There is no such thing as expected working hours in the group. In fact, we do not encourage long working hours and the weekend is time off work. Everyone's life circumstances are different, so all group members should find a schedule and work routine that works best for them. Individual approaches have to be communicated clearly with the PI so that the time spent together in the lab can be fruitful for all group members. This includes group meetings, institute meetings, and project discussions, which should be attended in person if possible. You should not feel obliged to reply to any form of work-related communication outside your own working hours, and should respect the boundaries set by your colleagues.

Work-life balance: Working in academia will feel stressful at times, so having a healthy work-life balance is key for managing these demanding periods. You should structure your working hours in a way that allows you to take time for yourself and things you enjoy as well as the everyday organisation of your private life. We strongly recommend taking your six weeks of holiday per year completely away from work, including work-related mail. Leave a note of absence in an automated email reply, then do yourself a favour and keep work-related communication off your private devices. Timing your vacation is generally up to you, but in rare cases you may need to work around external deadlines or other constraints.

Mental wellbeing: Time to relax away from work is crucial for mental wellbeing. If you are feeling mentally unwell, you can take sickness absence to rest and relieve stress. Set boundaries for yourself to avoid burnout and communicate openly if you feel overwhelmed. You do not need to explain to your PI why you are taking up to three sick days; only at that point does the hospital policy require a medical certificate. In case another group member mentions that they aren't feeling okay, the most important thing is to simply listen to their concerns. In the lab, we normalise talking about mental wellbeing and do what we can - individually and as a group - to cope with stressful periods. If you are uncertain which mental health support provisions are available, speak with your PI.

Resources:

Hospital bureau for job and family:
https://www.ukm.de/beruf-familie

Hospital bureau for health and social services:
https://www.ukm.de/betriebliche-gesundheit

Equality, Diversity and Inclusion (EDI)

We are fully committed to creating an environment of inclusivity, diversity, and respect to promote equal opportunity.

The Personal and The Professional: Every group member brings with them a unique intersection of experiences and identity and everyone should feel comfortable bringing their whole selves to work. We acknowledge and nurture individual backgrounds by understanding how our differences interact with both our professional and personal lives, and influence each team member's aspirations and needs.

Support: Personal background frequently intersects with mental wellbeing, and workplace exclusion and inequality can contribute to mental ill-health. In addition to institutional resources (see below), PIs can talk through issues you face, whether or not they are your direct PI. They will treat these conversations as highly confidential, provided it doesn't ethically compromise them or pose a risk to your wellbeing.

Resources:

Equal opportunity office:
https://www.uni-muenster.de/Gleichstellung/en/index.html

UKM HR:
https://www.ukm.de/personalraete
https://www.medizin.uni-muenster.de/wpr-ukm/willkommen.html

Mutual Support

Building a supportive culture of lab members helping each other.

Lab Service: As a member of the BBB lab (and the IBB in general), you are strongly encouraged to get involved in some form of lab service. This constitutes anything that primarily benefits the lab/institute rather than you personally, e.g. teaching, advising colleagues, or volunteering for studies. By helping one another, all group members ensure the smooth day-to-day running of lab activities. We aim to acknowledge and appreciate everyone's efforts. Nevertheless, it is important to note that no group member is expected to participate in all of these activities, and there is no need to justify abstaining.

Striking the right balance: Keep in mind that lab service activities can be time-consuming - it is important that they do not negatively impact your research progress. We also recognise that not everyone has the capacity to take on additional work. Be mindful of people's personal preferences. We recommend discussing any potential activities that may take time away from your main research with your PI.

III. Developing as Researchers

Career Development

Building skills, vision, and preparing your next career move.

Developing your CV: We encourage all group members to dedicate time to developing skills which support their career progression (science-related or otherwise). Our role is to cultivate your skills and expertise for whichever path you hope to pursue, and help you find the right next position when the time is right. A key metric upon which researchers are evaluated is their publications. They demonstrate one's ability to see projects to complexion, open up, opportunities for career progression, and are valued in academia as well as in the industry.
Depending on your personal vision, there are several opportunities to get involved in a broad range of skill-building activities outside of your main research. To start with, a good resource is the Münster Centre for Emerging Researchers:
https://www.uni-muenster.de/CERes/

Career progression: When it comes to choosing your next career move, we are dedicated to supporting our group members, regardless of whether they aim to stay in Münster (e.g. to apply for own grant money), continue at another institution, or move out of academia. We are happy to provide advice and help with applications and interview preparation. Senior researchers at the institute have established relationships with academic and industry colleagues around the world and can often provide first points of contact. We are familiar with all major programmes for securing personal research fellowships and we are more than happy to help in any way we can.

Open and Responsible Science

We commit to upholding the standards of best scientific practice.

Open science: Working according to open science practices facilitates reproducible research and accountability for data and findings, help the field move forward more rapidly, and are in line with increasingly common initiatives from funders and publishers. Our institute is strongly committed to promoting best open science practice. Publishing in open science journals is further incentivised by the Open Access Publication Fund of the University of Münster:
https://www.uni-muenster.de/Publizieren/en/service/publikationsfonds/index.html

Reproducible research: Keeping your research outputs (code, data, figures, …) in a reproducible state (e.g. in an easily accessible repository) greatly facilitates you and others returning to it at a later date. Ensuring your work is reproducible (by yourself and others) is good scientific practice for documenting your approach and catching mistakes.

Handling mistakes: It may sound strange, but catching past mistakes is actually a good thing and represents a key part of your personal research process. Mistakes really do happen to everyone, just ask your PI for their favourite slip-ups. As listed above, having reproducible code and figures available goes a long way in catching and correcting inevitable errors.

Research conduct: Our group is wholly committed to ethical and responsible research conduct. Please talk to your PI if you are ever unsure of the ethical implications of any given decision or if you observe potential research misconduct around you. The institute's data protection officer is a great resource regarding how to responsibly conduct studies at our institute. If you feel like you are being asked to engage in practices that you are uncomfortable with, it is always best to respectfully voice your concerns in the first instance. If you feel your concerns are not being given serious consideration, please talk to your PI and/or the data protection officer.

Collaborations

How to connect with your peers and build fruitful collaborations

The Why: Collaborating with other researchers - from your own field or any other - allows you to expand the scope of your own work. Your collaborators will have complementary expertise, which provides a great opportunity to learn and explore, exchange ideas, and come with new joint projects. Collaborations often lead to co-authorships, can help increase your visibility in the research community, and demonstrate your openness to work as part of a larger team.

The When: Our group currently has numerous ongoing collaborations with researchers around the world, which means there are plenty of opportunities for you to get involved in joint projects if you're interested. Before you commit to an additional project you share with others, carefully consider - together with your PI and/or other senior researchers - how this will potentially influence progress you make in your 'own' project(s). Also talk to your PI any time you are involved in a collaboration that is not going the way you imagined. All that being said, taking on projects with other groups is a great experience that will most likely teach you a lot.

Managing expectations: For a collaboration to go well, consider the following questions: How much time can you realistically invest in this new avenue? What is it that you can and want to contribute, and what can you expect in return? Who will be your main contact person on the other team(s)? Talk to your PI if you could use advice on any of these questions. Also, find someone on the other team(s) - preferably senior - with whom you can talk about your expectations early on. Any collaboration will go much more smoothly once critical formalities like authorship and resources are out of the way.

Travel and Conferences

What we think about travel, research visits, and conferences.

Basics: As a group, we aim to visit conferences together in order to present our research, get feedback from peers, and engage with colleagues in the field. Usually, this means that we prepare a poster presentation or a talk to be presented at the conference. We do have a 'conference radar' to keep track of the most important meetings and their yearly deadlines - in case you find a conference/workshop you would like to attend, talk to your PI. Together, you will decide based on the match with your research topic, career stage, audience, and logistics.

Planning and handling expectations: Conferences are a great opportunity to carry your work out into the world. As you plan ahead, consider that conferences can also be somewhere between demanding (you will most likely be very busy) to overwhelming (depending on their size). Make long-term plans with your PI and select which conference will most likely offer a good experience for you. This includes logistics like location, season, and size of the conference, but also how well the meeting fits your own work with regard to methods or research topic. For the experience to be good, be prepared to go see other people's work, talk to them about their research, and be open to get new input on your own work.

Logistics: There are a number of details that need to be arranged before travelling, so talk to your PI well in advance. They need to consider funding resources for conference fees, travelling, and housing, so you will most likely not be able to attend all the interesting meetings in any given year - choose your favourite conferences well. For international travel, consider additional time for arranging visa applications, childcare etc.

Contributors

Version 1.0 (03/2024): Teresa Berther, Martina Saltafossi, Daniel Kluger

Contact: daniel.kluger@uni-muenster.de