Introduction to the lab

Welcome to the GLAM and NoT CoOL lab! This lab handbook describes our labs' culture and how we work together as a team. The main aim of this handbook is to make explicit all the expectations and rules of how things work in our labs, which are often hidden, especially for newcomers.

The short version of this lab handbook is: "Don't be a jerk". For the long version, keep reading.

Mission & Values

Mission

Our mission is to advance our understanding of memory and attention processes in the human brain and to translate these findings to create real-world impact.

Values

Open Science: We are playing the 'long-game', aiming to create knowledge with long-term impact. This means doing science in a transparent and reproducible way.

People: We value the people doing the science as much as our outputs. We believe that we can achieve more if we support each other, work together, and give everyone the credit they deserve.

Diversity: We believe that everyone's perspective matters and value diversity in all aspects (disciplinary, cultural, etc.).

Respect: We share our opinions in a respectful way.

Grow: We believe that we grow as scientists most when we push the boundaries of our disciplinary comfort zones.

Roles & Expectations

Our group consists of undergraduate (UG) and Master (MSc/MSci/MRes) students; PhD students; research assistants; postdoctoral researchers; visiting researchers; and principal investigators (PIs).

Students Conducting Projects in the Lab

Who do we mean? *Any student, undergraduate or postgraduate, actively working toward a research degree. This includes Bachelors, Integrated Masters, and master's students.*

Day-to-day

Students are responsible for their own research within the lab, and their daily activities may include:

- Planning and coordinating work on their independent research project;
- Collaborative work with other members of the lab on their respective projects;
- Weekly meetings with supervisor/PI;
- Participating in weekly lab meeting with all members of the lab with the opportunity to present their work and provide feedback to others;
- One-to-one meetings and conversations with other members of the lab to exchange knowledge and insight;
- Training on new equipment from more experienced members of the lab;
- Collecting and analysing data;
- Completing degree-specific coursework;
- Learning how to apply for a PhD position and fundings.

Support

Students are trained professionals, and their ideas should be taken seriously by the entire group. Students can expect to meet with their supervisors regularly in a supportive environment. Supervisors should provide regular feedback and encourage students to develop their own ideas to progress their project.

Expectations

Students are an integral part of the wider lab and frequently play a crucial role volunteering to help with tasks the group needs to function. Supervisors can expect students to provide regular updates on their progress and participate actively in group activities. Students are expected to recognise that their research is a form of training and struggles are a part of the learning process. Students are expected to receive constructive feedback and provide this to other members of the lab.

Challenges

It is understood that conducting a first major research project is a challenging task. The common challenges faced by students are:

- developing "soft skills" including effective communication to collaborate with other members of the lab;
- Learning how to manage time and prioritise work appropriately (balancing project work, meetings, coursework etc.);
- Building resilience when faced with unexpected setbacks;
- Learning how to use new and unfamiliar software for data analysis, such as MATLAB, Python, and RStudio;
- Becoming familiar with lab equipment and best practices.

Postgraduate Researchers (PGRs)

Who do we mean? PhD students undertaking lab work as part of their preparation of a postgraduate thesis.

Day-to-day

PGRs are responsible for their own research project, but they also do other "research adjacent" work. Daily activities may include:

- **Weekly Meetings:** Participation in regular PI and lab meetings, and project team meetings where appropriate. As an international student, you should submit an engagement form after your meeting with PI for your visa.
- **Data Collection and Analysis:** Setting-up and conducting experiments, gathering data, and analysing results.
- **Supervision:** Providing occasional supervision to undergraduate or postgraduate students.
- **Academic Development:** Completing coursework related to the college program or any other PGR requirements necessary to obtain the degree.
- Attending **SPN seminars** (see Life in the Lab section)
- Attending **Project presentations/reviews** and **Journal Clubs** organised by the Cognitive Neuroscience UMG (see Life in the Lab section)
- **Training**: All PhD students must receive appropriate training before conducting research or using any specialised equipment (e.g., EEG, MEG, MRI, Neurostimulation devices, or other tools relevant to their project), as well as inductions on how to access and properly use labs or research facilities. Students

should first contact the admin team, who will then direct them to the appropriate staff members or training providers. Training must be completed and documented before independent use of the equipment.

Support for PGRs

PGRs can expect to receive regular guidance and support from their supervisors throughout their research journey. Supervision is a key part of the PhD experience, and students should feel empowered to ask questions whenever something is unclear or when they encounter challenges in their project. Open communication with supervisors can help resolve problems and refine research goals.

Beyond one-to-one supervision, lab meetings provide an excellent opportunity to discuss ongoing work, troubleshoot issues, and receive constructive feedback from fellow lab members.

Support extends beyond the lab as well. The School of Psychology and Neuroscience offers a collaborating environment where PGRs can seek specialised knowledge and expertise from faculty members and peers.

The PGR annual reviewers and convenors are further sources of guidance, ensuring students stay on track with their research and professional/personal development.

PhD funding. The School of Psychology & Neuroscience (SPN) provides funding support to PhD students whose primary supervisor is a member of SPN staff. This support is intended to cover project-related costs or career development activities, such as experiments or conference attendance, for students who do not have other sources of funding. Each student can apply for up to £1k per year. To apply, simply contact SPN OPS to get the application form — all eligibility criteria and requirements are detailed on the form.

Expectations of PGRs

PGRs are expected to be responsible for and actively work on their PhD project. While supervisors and colleagues are available for guidance and support, the primary responsibility for shaping the project and addressing challenges lies with the PGR.

In addition to their research, they are expected to independently familiarize themselves with the requirements of their doctoral training programs (DTP) and ensure they complete them.

Active engagement in lab activities is also an essential part of the PhD experience. PGRs are expected to participate regularly in lab meetings, where they can present their work, and provide constructive feedback to peers. Beyond meetings, involvement in the lab may include assisting with shared responsibilities, contributing to collaborative projects, or supporting fellow researchers by sharing expertise and skills.

PGRs are encouraged to manage their workload effectively, communicate openly about any difficulties they encounter, and seek support when needed.

Challenges

Being a PGR is a rewarding but demanding experience. The process of developing independent research skills, navigating academic expectations, and managing long-term projects often comes with challenges. Recognising these early and discussing them openly within the lab community can make a significant difference to your wellbeing and finishing your PhD successfully.

- **Academic challenges**:
    - ***Project management***: PhD projects are complex (you are pushing the boundaries of knowledge) and often evolve or completely change over time. It's normal for directions to shift as results emerge or conditions change. Don't panic. Review your goals and timelines regularly with your PI, break large tasks into smaller achievable ones, and track your progress daily. Tools such as GitHub Projects, Notion, or whatever works best for you, can help you stay organised and maintain the focus. Keep your work, data, and code well organised from the start. Using version control tools like GitHub to regularly back up your code after every change will save you time, prevent data loss, and make it easier to collaborate or revisit your work later.
    - ***Learning curve***: At the start of your PhD, the steep learning curve can feel overwhelming and often comes hand in hand with impostor syndrome. Most researchers experience self-doubt at some point. Remember that progress, not perfection, defines a successful PhD. The College of MVLS regularly organises seminars about how to face the PhD experience; attending them can help you to express and manage these common feelings. More details on individual session can be found on the University of Glasgow Inkpath platform.
    - ***Time pressure***: although a PhD spans several years, time passes quickly. You'll face multiple deadlines, from reports and conferences to paper

submissions. Managing your time and expectations early will help reduce stress later on. Gantt charts and daily/weekly goals can help you with that.

- **Wellbeing challenges**: The PhD journey often overlaps with major personal and professional transitions.
    - ***Work-life balance***: ending up working long hours is common but not sustainable for your productivity in the long run. Remember to take care of yourself and take some time off. Like they say, "PhD is a marathon, not a sprint" (if you have never run a marathon and you are uncertain about the meaning of this quote, ask Simon). Regular breaks, hobbies, and self-care are essential, not optional.
    - ***Isolation***: the PhD path can sometimes feel solitary. Engage with your PGR peers, attend lab meetings, and make time for social connections. It genuinely helps. The university offers plenty of opportunities to socialise. For instance, the PGR Club and the PGR Society are great places to meet other students and share experiences.
    - ***Expectations***: Clarify expectations early, both your own and your supervisor's. Sometimes the assumptions we hold about what "good progress" or "effective supervision" look like are not shared or may not even be realistic. Open conversations about goals, feedback, and communication preferences with your PI can prevent misunderstandings later on. It's also worth remembering that we all come from different cultural and educational backgrounds, which can shape how we communicate, give feedback, or express disagreement. What feels direct to one person might seem rude or distant to another. These differences are normal, and talking about them openly can help build mutual understanding and trust, without useless overthinking. Don't hesitate to ask for clarification if something feels unclear or uncomfortable. Often, what seems personal is simply a difference in style or expectation. Finally, try not to compare yourself to other peers in the lab; everyone's journey, background, pace, and challenges are different. Instead, compare yourself to your previous version: you are here to grow, learn, and become better than when you started. This is the only thing that matters.
    - ***Open communication***: Be honest with your PI about your progress and any difficulties. Most issues are easier to solve than you think, and you are not expected to handle everything on your own. Remember that your PIs were once PhD students too, i.e., they've likely experienced similar challenges and can offer perspective and support.

- ***Career uncertainty***: It's okay not to know what your next step is and to be stressed about it. Use university career resources early and explore options within and beyond academia.

Research Assistants

Who do we mean? *Mostly, pre-doctoral graduates or current (MSc or BSc) students working towards gaining experience in a research setting or supporting a specific project.*

Day-to-day

Research Assistants have varying roles from being responsible for providing support to different projects across the lab or to providing independent project management and coordination to one specific study. This will usually be dependent on individual experience, but it is important in all situations to be flexible and open to new learning opportunities, as well as being an active contributor to other aspects of lab life. Daily activities may include:

- **Weekly Meetings:** Participation in regular supervisor and lab meetings, and project team meetings where appropriate.
- **Data Collection and Analysis:** Help setting up and conducting experiments, gathering data, maintaining databases, help with preprocessing and analysing data.
- **Supervision:** Providing supervision to undergraduate or postgraduate students with project data collection and general training with lab equipment and protocols.
- **Communication:** Providing regular updates to PI's and collaborators about study progress and setbacks. Communicating with participants and students and being ready and able to deal with conflict resolution if the need arises.
- **Managing and maintaining:** Providing help to manage the lab and associated equipment *(e.g. getting quotes for equipment, order supplies, etc.)*
- Attending **SPN seminars** (see Life in the Lab section)
- Can choose to attend **Project presentations/reviews** and **Journal Clubs** organised by the Cognitive Neuroscience UMG (see Life in the Lab section)
- **Training**: All Research Assistants must receive appropriate training before conducting research or using any specialised equipment (e.g. EEG, MRI, MEG, Neurostimulation devices, or other tools relevant to the project they are supporting), as well as inductions on how to access and properly use labs or

research facilities. After discussing your training needs with your line manager/PI, Research Assistants should contact the admin team, who will then direct them to the appropriate staff members or training providers. Training must be completed and documented before independent use of the equipment.

Support for RAs

RAs can expect:

- Support from their supervisors in regular meeting.
- To feel empowered to ask for guidance and support especially with new tasks and challenges. This might be in the form of training or mentoring from more experienced team members or from other members of SPN with specialist knowledge and technical skills.
- As a university staff member, RAs are entitled to ten days training per year through the research and development initiative and should be encouraged to make use of this time.

Expectations of RAs

RAs are responsible for:

- Their time management with achieving project goals. They should actively participate in regular project meetings to give supervisors an updated account of the study progress and discuss next steps.
- Recognising where they can independently make decisions on project progression and where they should seek guidance from the PIs.
- Recognising their own abilities and seeking training in areas they lack knowledge.
- Being supportive and encouraging to other lab members by participating in lab meeting presentations, giving feedback and asking questions.

Challenges

- Balancing the demands of the research project(s) they are involved with.
- Finding the time to participate in training days.

Visiting Researchers (VRs)

Who do we mean? *Researchers at various career stages, whose main affiliation is at a different institution, and who are temporarily staying at the lab to engage in academic exchange, learn from the lab's expertise and conduct specific collaborative research projects.*

Day-to-day

VRs' daily activities may include:

- **Weekly Meetings:** Participation in regular PI and lab meetings, and project team meetings where appropriate.
- **Data Collection and Analysis:** Setting-up and conducting experiments, gathering data, and analysing results, often in collaboration with other lab members.
- **Supervision:** Providing occasional supervision to undergraduate or postgraduate students.
- **Parallel obligations** related to the main institution they are affiliated with (e.g., other projects, PhD qualifications, supervision, grant applications...).

Support

VRs can expect to receive support from the lab in the following ways:

- Workspace arrangements, access to research equipment, and information about the lab's standard practices;
- Discussion time dedicated by PIs and collaborating colleagues, to ensure swift progress of the project;
- All people involved in the project agreeing on milestones that are reasonable based on the duration the visiting researcher's staying at the lab.

Expectations

VRs may be expected to:

- Share skills and insights to complement and enhance the lab's portfolio;
- Dedicate substantial time to the collaborative research project at the lab;
- Proactively seek help from the PIs and colleagues to achieve the agreed-upon milestones;
- Build foundations for long-term collaboration and foster continued academic exchange and joint research efforts.

Challenges

VRs are likely to face the following challenges:

- Balancing the demands of the research project at the lab and obligations at their main institution;
- Dealing with the time pressure caused by the temporary nature of their stay;

- Maintaining work-life balance despite time constraints, other personal commitments (e.g., family), and being away from home.

Principal Investigators (PIs)

Who do we mean? *The faculty members leading the GLAM (Prof Maria Wimber) and NoT CoOL (Prof Simon Hanslmayr) labs.*

Day-to-day: Simon and Maria love being PIs. Research is their happy place, and they try to dedicate as much time as possible to their science. This includes generating new ideas, writing papers and grants, supervising your individual projects, collaborating with others, and generally steering the direction of the lab. We believe that empowering you means striking the right balance between giving you guidance and giving you space to develop your own ideas. In addition, PIs shoulder numerous responsibilities that are not directly research related, including committees, group logistics, leadership in large-scale initiatives, and teaching. PIs must often switch their work context from hour to hour and regularly spend entire workdays in meetings on disparate topics.

Support for PIs: Lab members should understand that a big challenge for most PIs is time management. They can help their PI by showing up for meetings on time, preparing and uploading slides (e.g. on Github) before the meeting, keeping notes, and allowing PIs sufficient time to give meaningful feedback on their work. This means, for example, to send over conference abstracts or poster drafts at least 1 week ahead of the deadline. It is helpful to learn to distinguish which decisions need PI input, and which can be acted on independently. For our individual, face-to-face meetings, it is a great help if lab members come prepared with a structured overview of the points they want to discuss, wherever useful supported by visual content on Github project/repository (preferred option), or slides and graphs. Teamwork, where lab members help each other out on various technical or conceptual problems can be a great support as well.

Expectations of PIs: Lab members can expect PIs to provide scientific leadership and support for all projects conducted in the lab. You can expect us to clearly communicate our expectations of you. Simon and Maria take mentorship seriously and are eager to support lab members in their academic development. PIs will have at least a weekly face-to-face meeting with lab members, plus a weekly group meeting, as well as regular meetings with project specific teams. Outside these regular meetings, we operate an open-door policy: if you are dealing with issues that would benefit from immediate input, do not hesitate to knock on our door, drop a message on Github, Slack, Teams, or email.

Challenges:

- Time and flood of emails: Busy PIs will regularly receive >100 emails per day and send nearly as many. Sometimes we may be slow to respond, or respond with short answers, which doesn't reflect carelessness or German/Austrian rudeness but is simply a reflection of our busy schedules.
- Managing conflicts within and outside the team and handling delicate situations.
- A PI's career comes with ups and downs including grants/papers getting accepted or rejected. PIs are also just human beings responding to these things emotionally, and they may need your support at times.

Authorship and intellectual ownership

Every project has a scientific lead, which is usually the person who designs and conducts the project as agreed with the PI and will be the first author of the resulting paper. Some projects can have two or more leads, in which authorship position on any resulting papers will be discussed early on. It often happens that persons leading the project leave the lab before the project is finished. In this case, arrangements are made with the PI on whether the lead person continues to work on the project remotely, or whether the project will be handed over to a different lead. If the original lead becomes unresponsive the PI will initiate a discussion about the possibility of handing the project lead to a different person. If the original lead remains unresponsive for an extended period the PI reserves the right to hand the project lead to a different without further consultation.

It is our philosophy that everyone who contributes substantially to the project should be on the paper resulting from it. There are many different ways in which people can make substantial contributions which makes it difficult to have a one-size-fits-all definition of what 'substantial' means. However, in general we will follow external guidelines such as the CRediT System to fairly and transparently acknowledge everyone's contribution to a paper.

Conferences, workshops & summer schools

Conferences provide a fantastic opportunity to present your work and engage with external colleagues. They typically include scientific talks, posters and educational sessions. If you find a conference you want to attend or are looking for one, talk to your PI. Considerations include: match to your research topic, readiness of your research, opportunities to learn, timing, and logistics.

Planning & what to expect: The core purposes of attending conferences or workshops are present your research (mainly for conferences), represent the group, and to learn about your field. For conferences, participation usually involves delivering a talk or presenting a poster. Practice your presentation in lab meetings or with your PI and allow at least one week for your PI to review draft materials before deadlines.

Use your time strategically. Plan ahead, coordinate with your PI, ask questions, and actively engage with other attendees—informal discussions often lead to new insights, collaborations, and long-term professional relationships.

Looking out for labmates: Although rare, vulnerable situations can arise during work travel. Establish a communication channel with labmates attending the meeting and remain attentive to one another's wellbeing.

Logistics: Travel planning should begin early to accommodate requirements such as visas or childcare arrangements.

Depending on your situation, finance options include support from your funding body, internal funding (up to £1,000), and schemes such as Pickford (staff) and Guarantors of the Brain.

If your funding body provides support for travel, make sure to acquaint yourself with the process early. If you do not have that option or it is not enough, internal funding is available for up to £1000

EDI

We believe that the current scientific challenges are best addressed by a diverse group of scientists who come together as a team. Our labs are an inclusive and safe place that welcomes members with diverse backgrounds, perspectives and disciplines. We believe that everyone should have an equal chance in succeeding in science, regardless where they come from and what their background is.

Career Development

We want to support you with developing your academic career as much as we can. Career development in the group takes many forms, from general mentoring to coaching you in your writing and oral presentation skills, supporting you with future plans including your own grant and fellowship applications, involving you in collaborations, and sending you to relevant workshops and conferences. If there are any opportunities you see to develop your skills and network, be proactive and talk your PI.

The University of Glasgow has many excellent career development opportunities. UofG is a signatory to the Concordat for the Development of Researchers (aka the Researcher Concordat), ensuring that every researcher is supported to be at their best. This includes an entitlement for research staff to spend a minimum of 10 days per year on career development. You can find a wealth of information and links to events, training sessions, mentoring opportunities, early-career networks and research culture on the Researcher Development pages. The MVLS College also has a very active Network for Early Career Development (NERD) open to anyone from PGRs to PIs.

Internally, the School of Psychology & Neuroscience also has an Early Career Network, organising early-career forums and other events. Email to subscribe to their mailing list.

References

- PIs write references for their students, PGRs, RAs, etc.
- Students, PGRs, RAs, etc. also provide references for their PIs to prospective job applicants