

Welcome to the **HIRO Group** at the University of Colorado Boulder!

The goal of our research group is to develop technologies for robots to work with and around people. We work at the intersection of a variety of different fields, from algorithms to control to social and cognitive psychology. As such, to successfully achieve our goal, a concerted team effort from a diverse group of individuals is required and we look forward to having you on the team. This document outlines important values, rules and expectations of myself as a mentor and of you as a part of the lab team. Please keep in mind that this document, or any modifications of it, is confidential and it is not to be shared with a third party.

Please follow this step-by-step guide https://hiro-group.ronc.one/new_member.html upon joining the lab, as it contains a lot of useful information to smooth out onboarding of new students!!

Lab etiquette, aka THE GOLDEN RULES [aka print this out and blanket your bedroom walls with it]

I strive to create a community where professional growth and development thrive. As a team, we seek to maintain a participatory culture in which **all voices matter**. Sharing your opinions, ideas, and experiences in a respectful way is critical to moving science forward, and to improving the quality of life within the HIRO Group!!

1. You will be a team player and a good citizen of the lab

We value, support and encourage collegiality and collaboration. I hope and expect that those who join the laboratory will value both the success of their peers as much as their own, as a cohesive team within the HIRO group [and within the Intelligent Robotics Laboratory at large] is crucial to the success of our mission. Your role in this is to be an active and engaged member of the lab community.

- **Attend and actively participate in ALL group meetings.** Every semester, I will do my best to find a time that works with everyone. Consequently, I expect you will do your best to attend our weekly lab meeting and be a proactive part of it. Participation in group meetings does not mean only presenting

your own work, but providing support to others in the lab through shared insight. You should refrain from using your computer or phone during research meetings, unless you are sporadically using the device to augment the discussion. Do your part to create a climate of engagement and mutual respect.

- **Have a strong work ethic.** Maintaining a focused and dedicated commitment to your research will help you find the ideas and opportunities that will change the field. Those who work hard often find that additional, exciting opportunities come their way.
- **Be professional.** As a member of the HIRO group, you are here for professional development [regardless of your role—yes, even Dr. Roncone is here for professional development]. Then, act like you mean it!!
 - Answer to all emails within a reasonable time frame. You are expected to reply to emails within 24 hours during the week, and 48 hours during the weekend.
 - Check [our Slack channel](#) often, and especially during work hours [even better, install it on your phone so that you are sure you will not miss anything].
 - Do not miss meetings, and be on time [if an emergency comes up, notify your supervisor or the person you are going to meet with as soon as possible].
 - Keep track of your work and your files.
 - Be accountable: if you, a group of students including you, or the laboratory at large is assigned a group task or individual duty, there are only two outcomes for it: i) you perform the task within the timeframe, or ii) you let Dr. Roncone know promptly.
- **Be proactive.** If you have questions or concerns, bring them to your supervisor's attention as soon as they arise. If you don't know where to find something, or what to do next, **ask!** Any suggestion to modify existing policies, procedures and guidelines is welcome and expected. If you need additional time to meet, ask for a meeting and provide as many available times as possible. To maximize productivity, please come prepared with an agenda and specific questions to discuss.
- **Be respectful of others.** All individuals deserve respect, regardless of their race, gender, sexual orientation, religious beliefs, job title, etc. Inappropriate language or behaviors towards others are not tolerated in our lab, and in our University at large. All reports of inappropriate conduct will be investigated by Dr. Roncone and can result in the offending individual being asked to leave the lab as well as involvement on the part of the University depending on the severity of the violation.
- **Recognize individual strengths and avoid making social comparisons.** We all bring different strengths and we all will contribute differently to various projects going on in the lab. Concretely, this means that no member will likely be doing the exact same tasks or have the exact same goals; indeed, Dr. Roncone may ask different lab members to do different tasks at different points. As everyone in the group has different strengths and is on a different trajectory (in terms of both timing and specific interests), please do your best to refrain from engaging in social comparison with your peers.
- **Be ambitious.** No idea is ever too grand. It just might take a little longer to get there! Set goals that challenge you to take on impactful projects and to push yourself to become a better researcher. Those with true ambition often have the largest impact.
- **Be supportive of your peers and committed to helping them.** From time to time, you will be tasked with supervising students more junior than you. Undergrad students are ALWAYS assigned a grad student supervisor; senior PhD student might also supervise junior grad students. This is to achieve the following: i) ensure scalability in growing the lab organically; ii) allow the senior student

supervisor to offload some of the lower-priority research and engineering duties to junior students; iii) introduce junior students to the beauty and perils of doing robotics without burning them out in their first day of work; iv) ensure proper mentoring of said members. It is your responsibility to contribute to their growth as engineers and scientists, and it is important that you treat them with respect and care. Please refer to the undergraduate lab agreement for help and guidance on how to best succeed in this task.

- ***Be passionate and enthusiastic.*** Have fun!! Robotics is a lot of fun and we strive to keep it this way for everyone. Doing research that you are passionate about makes the work much more worthwhile!!

2. Accessibility and Communications

- As a student, demands on your time are high. You need to balance time with classes, research and thesis writing. Our laboratory is intended to provide a focused environment with likeminded scholars where these activities take place. Dr. Roncone expects the following time commitments:
 - RAs are expected to work at least 20 hours per week on research during the academic year (between the hours of 8AM and 6PM) and spend at least 10 of these hours in the lab space.
 - Independent Study students will work 3 hours per credit hour per week, at least 50% of which will be in the lab space.
 - Hourly researchers are expected to be in the lab for most of their allotted time [at least 50%], in chunks of 2 hours or more at a time—weekly lab meetings are not included in the hourly pay]. Hourly employees and students are paid for the hours that they complete and will not be compensated for time lost except in special circumstances.
 - In general, involvements of less than 10 hours/week are highly discouraged, as this is the lowest possible threshold to make something useful out of your presence in the lab.
- Please note that time for classes, classwork, and exams are not part of this time, and that working the minimum will likely result in a very long process. If you will not be able to be in the lab for the appropriate number of hours in a given week, please let Dr. Roncone know.
- Dr. Roncone does not want to micromanage your time, and trusts that you will be more than capable of doing this yourself. Does it matter if you arrive at 9am in the morning or 1pm in the afternoon? **It does not.** Do you need to work 80 hrs/week to succeed? **NO.** As long as you get your work done and you honor your commitments, you can set your own schedule.
- The only exception is that you are expected and encouraged to spend at least 50% of your research hours in the lab. This rule is enforced to foster a positive group culture within the lab and to hang out with your colleagues more than anything else: being collaborative is key to succeed in research!!
- If you are supervised by a senior student, please let them know your schedule and when you will be working in the lab. If you are working with somebody on a joint project, it is encouraged [but not enforced] to let them know your schedule to better synchronize work.
- Generally, Dr. Roncone prefers to discuss things in person. If he is not in a meeting, feel free to stop by his office or to schedule a time to meet with him. Students should plan to meet with Dr. Roncone no less than weekly and these meetings are best scheduled in advance at the same time each week. It is expected that you maximize the productivity of these meetings by being prepared, efficient and focused on the issues at hand.
- Dr. Roncone can be expected to respond to your emails, Slack messages, or phone calls within 48 hours. Slack is highly preferred over emails, since Dr. Roncone considers emails the curse of our

society and thinks that they should be eliminated for good. However, please resort to emails when discussing important topics that need to be handled with care and that would be preferable to have a record of.

3. Publications and Authorship

- To earn authorship on a paper, you must contribute significantly to the work being submitted. This includes developing code, running experiments and user studies, and writing the paper itself. Data collection, data entry or literature reviews *alone* do not result in authorship. Please consult with Dr. Roncone about authorship before you engage in projects if this is a goal of yours. If you feel you should have authorship on a manuscript and have not yet been included in the writing process, please consult Dr. Roncone in a timely manner as most venues do not allow him to update the author list after the abstract deadline.
- Before submitting material such as thesis chapters, conference papers, rebuttals, or journal articles to publishers or committee members, you **must** seek feedback and approval from Dr. Roncone and allow sufficient time for him to comment. Academic writing is a challenging process and requires continual refinement and learning. Writing manuscripts for conferences and journals will require a significant number of cycles, including numerous edits and rewrites to frame your work in the best possible way. It is also a collaborative process: Dr. Roncone may directly help with writing pieces of the manuscript and any provided feedback is intended to help improve the chances of the manuscript's acceptance. **The provided feedback is in no way a reflection on your abilities.** Please be patient and courteous when receiving edits and provide Dr. Roncone a minimum of one week to review your material (unless otherwise specified). Dr. Roncone will let you know when documents are ready to send to others for review.
- We only submit work to top-rated conferences, as publishing work in lower-tiered conferences with a high acceptance rate is not beneficial to your professional development or the HIRO Group's success.
- In general, you will primarily apply to conferences, as they are the best way to network with peers in the field and to become a proactive part of the research community. Journal submissions are more sporadic, as they usually happen when a specific line of research is reaching a major milestone.
- In our field, the common rule is that your supervisor should be last author in any publication in which you are first author.
- When working with collaborators—either within the lab or outside of it—you will acknowledge their efforts and properly credit them of their work. This may result in adding them as co-authors in your publications, crediting them in conference presentations, or mentioning them when you are talking about your work to people. Do not hesitate to voice concerns when you have them: particularly for what concerns collaborations, authorship-related issues can create unnecessary conflict, and it is important that we communicate openly and regularly about them.
- When working with a student who is supervised by another Professor, you are expected to add their supervisor as your co-author too. The rule of thumb is that the supervisor of the first author should be last, the supervisor of the second author should be second to last, and so on.
- If you are co-advised by multiple advisors, it should be easy to identify which one had a bigger contribution to the publication. You should have this person as last author, and the other advisor as second to last. Please reach out to both of your advisors if you have questions.
- Please remember to credit the funding agency and/or company that funds the published work in both your camera-ready submission and any conference presentation about said work.

4. Money and property

- All purchases must be approved by Dr. Roncone. Please do not pay for things personally and expect to be reimbursed as we might incur in issues with the Finance Department. Any supplies currently in the lab or purchased during your time in the lab including lab notebooks, textbooks, lab supplies, and machines that you have access to during your graduate experience should remain the sole property of Dr. Roncone and the University of Colorado Boulder. Please do not remove these items from the lab without permission and assure that they are returned in a timely manner if borrowed.
- All code or other intellectual property produced during your time in the HIRO Group will become joint intellectual property of yourself, Dr. Roncone, and the University. This means you will receive proper attribution or compensation for any research publications, patents, commercial use, or other such use of your code or data according to your contribution to the end product.
- All code must be hosted the [HIRO Group GitHub account](#) [either publicly or privately] to ensure all parties have access.
- Dr. Roncone retains the right to continue work on any products produced during your tenure in the HIRO Group. Any intended commercial use of products worked on as part of your duties in the HIRO Group or using University space or equipment requires the consent of all three parties (yourself, Dr. Roncone and the University). Further information about the University's policies on intellectual property can be found at <http://www.cu.edu/technology-transfer-office>.

5. Robots

Robots are shared between students. The following guidelines apply:

- Robots should be used sparingly and mainly to run/test/deploy experiments.
- If you need to use the robot, please book it and add an event in the shared Google Calendar [title of the event should have both name of the robot and name of the person who booked it].
- Please refrain from booking the robot for many hours [e.g. a full day] unless a deadline is coming and you know that nobody else is working on that deadline. Please ask first on Slack and/or our mailing list before doing so anyways!
- No student has priority over another student as long as the usage of the robot is efficiently utilized.
- Consequently, any experimental setup should be easily adapted/swapped out/removed if somebody requests it. Exceptions can be made, but in general you should clean up after yourself to allow the next user to do their work to the best of their capabilities.
- If you can do what you plan to do without the robot, please refrain from using it. E.g. if you need to learn how to use ROS, please use the Gazebo Sim instead of the real stuff!
- From time to time, a high-priority deadline might pop up and will be handled accordingly.
- Each robot is assigned a workstation, which is shared among students. Please be considerate with using that machine, including downloading files, installing software and so forth.

6. Lab computers and workspace

- It is your responsibility to keep a well-organized workspace: this means cleaning your area, taking care that the monitor and keyboards are regularly maintained, etc. Additionally, as the lab is an open workspace, please act with respect for others in the space, including keeping conversation to an appropriate length, subject, and volume. While Dr. Roncone expects that the daily operating

expectations for lab use and behavior (aside from those enumerated here) will be determined by you and your colleagues in the space, you are expected to behave in a manner fitting a citizen of the lab.

- At times, whiteboards may contain time-sensitive or deadline-sensitive information. Please refrain from erasing the content on the whiteboard without asking the owner of that content first!
- If you need any software, do not download it illegally. Your computer is University property and only things you need for your work should be on the computer. Downloading and/or storing any illegal material or materials that are considered inappropriate for the workplace can be grounds for dismissal from the graduate program. If you need software we don't have, please contact Dr. Roncone and he will purchase it as needed. If you are not sure if you should download something, ask Dr. Roncone first.
- Computational resources and graphics cards are supposed to be shared [within reason]. Feel free to temporarily use one of the graphics cards available in the lab. If you need an additional graphics card for your work, please let Dr. Roncone know but expect to be sharing it with other students after your project is completed. If you need additional compute power, we can temporary use the supercomputing facilities available through CU. Please ask Dr. Roncone about it. If you'd like to have a server hosted

7. Software development

- Lab cohesion should not stop at professional and ethical behaviors within the laboratory. The HIRO group is committed to the highest standards of quality in terms of the code that runs our robots and is generated as a result of our research.
- Our group is and forever will be strongly supportive of **open source** and **open science**. Hiding your research and software products behind paywalls and protected access will severely limit dissemination of our research, reproducibility of our experiments, and ultimately advancement of society as a whole. As such, please respect the following rules [exceptions can be made]:
 - Any software that is not core to your research should be made public as soon as it reaches a good state. Its documentation should be in good standing to ease utilization by others, and it should be integrated with a continuous integration tool to ensure consistency of the code in the future.
 - Any core research software product should be kept private until the corresponding research work is published. Once this happens software relative to a published work needs to be freely accessible online [preferably on the [HIRO Group GitHub account](#)].
- We release code under an LGPL v2.1 license. Github has the option of automatically adding such license to any new repository [private or public].
- As a rule of thumb, please keep in mind that your code should always be in good state. Please apply the most basic principles of software engineering to reach this goal: commit everything, and commit often. Document your code in order to be able to have others in the lab use it without your expertise or presence. If you work on a codebase that you used in one of your papers, **I expect the code to work at all times**, as non-working code means that your implementation was brittle and poorly designed. Unit tests and continuous integration are particularly useful tools to achieve this goal. It is not required to know these skills in advance, but it is expected you will pick these skills up over time and you put them to good use in your own code.

8. Lab demos

- At times, we may have people touring the laboratory---from company representatives to program managers, potential funders, and high school students. These tours are core to our mission of developing groundbreaking research products and disseminating said products to the research community and the broader public. During these events, you may be asked to talk about your research and demo your work to visitors.
- ***You should consider a high priority to have your code demo-ready at all times, and I expect you will strive to not fail your demo with visitors.***
- When requesting you to run a demo, Dr. Roncone is trusting you will be able to communicate to visitors how innovative your research is, and how strong our group is in pushing the state of the art in the field. If needed, feel free to rehearse your pitch with me beforehand and refine it over time.

If you have any questions, comments, or concerns about this document, please discuss them with Dr. Roncone before signing. It is imperative that all parties involved have a clear understanding of the rules and responsibilities outlined here prior to agreeing to these terms.

Please sign and date below to confirm that you have read and understand the above-mentioned guidelines.

Student Name [print]

Student Signature

Mentor Name [print] Alessandro Roncone

Mentor Signature

Date