Terrestrial Ecosystem Ecology and Landscapes (TEEL) Lab

Lab Director: Dr. Melissa S. Lucash

Welcome

Thanks for joining our lab at the University of Oregon. We're really glad to have you here, and will do what we can to make your time in the lab amazing. We hope you'll learn a lot about forests and modeling, develop new skills (coding, data analysis, writing, giving talks), make new friends, and have a great deal of fun throughout the whole process.

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Expectations and Responsibilities

Overall

We want to make sure that everyone experiences a positive, engaging, hostility-free, challenging, and rewarding lab environment. To maintain that environment, we all have to do a few things:

- Work on what you're passionate about, work hard at it and be proud of it. Be so proud of it that you have to suppress bragging (but it's ok to brag sometimes).
- Scientists have to be careful. Don't rush your work. Think about it. Implement it. Double and triple-check it. It's OK to be a little obsessive (Melissa is). Ask others to look at your code or data if you need help or something that looks off. It's ok to makes mistakes, but mistakes shouldn't be because of carelessness or rushed work.
- If you do make a mistake, you should definitely tell your collaborators (if they have already seen the results, and especially if the paper is being written up, is already submitted, or already accepted). We admit our mistakes, and then we correct them and move on.
- We all want to get papers published and do great things. But we do this honestly. It is never ok to plagiarize, tamper with data, makeup data, omit data, or fudge results in any way. Science is about finding out the truth, and null results and unexpected results are still important. This can't be emphasized enough: no academic misconduct!
- Support your fellow lab-mates. Help them out if they need help (even if you aren't on the project), and let them vent when they need to. **Science is collaborative, not competitive.** Help others, and you can expect others to help you when you need it.
- Respect your fellow lab-mates. Respect their strengths and weaknesses, respect their desire for quiet if they need it, and for support and a kind ear when they need that. Respect their culture, their religion, their beliefs, their sexual orientation. We want this to be a safe, welcoming space for everyone.
- If you're struggling, tell someone (feel free to tell Melissa!). Your health and happiness come first. The lab looks out for the well-being of all its members. We are here to help. It's ok to go through hard patches (we all do), but you shouldn't feel shy about asking for help or just venting.
- If there is any tension or hostility in the lab, something has to be done about it immediately. We can't thrive in an environment we aren't comfortable in, and disrespect or rudeness will not be tolerated in the lab. If you don't feel comfortable confronting the person in question, tell Melissa. In any case, tell Melissa.
- If you have a problem with Melissa and are comfortable telling her about it, do! If you aren't comfortable, then tell another member of the geography department (for more serious issues) or visit campus counseling services.
- Stay up to date on the latest research, by using RSS feeds and/or getting a journal table of contents. Also, consider following scientists in the field on Twitter.
- I like the philosophy "Work hard, play hard". Have a life outside of the lab, take care of your mental and physical health, and don't ever feel bad for taking time off work.

Day to Day
There are a few day-to-day things to keep in mind to keep the lab running smoothly.

- If you're sick, stay home and take care of yourself. Because you need it, and also because others don't need to get sick. If you're sick, reschedule your meetings for the day (or the next couple of days) as soon as you can.
- You aren't expected to come into the lab on weekends and holidays, and you aren't expected to stay late at night. You are expected to get your work done (whatever time of day you like to do it).
- Show up to your meetings, show up to your classes, and show up to lab meetings. You do not have to be in at a certain time every day – just show up for your commitments, and work the hours you need to work to get stuff done.
- Make sure the door to the lab is locked if no one is inside. Turn off the lights if you're the last one leaving for the day.
- Keep the lab tidy. Eating in the lab is fine of course, but clean up food waste, crumbs, spills. If the lab gets messy and needs to be vacuumed, email Melissa and she will put in a work order to vacuum the lab.
- The dress code is casual unless you are presenting your work.
- Be on time. Respect that others have packed days and everyone's time is valuable.

Principal Investigator
All of the above, and I promise to:

- Support you scientifically, emotionally, and financially. If you need an advance on your paycheck because of an unforeseen expense or because of work travel, please email me. I don't mind providing short, interest-free loans!
- Be available in person and via e-mail regularly, including regular meetings to discuss your research (and anything else you'd like to discuss)
- Give my perspective on where the lab is going, where the field is going, and tips about surviving and thriving in academia
- Help you learn LANDIS, R, ArcMap, and C# as needed.
- Give you feedback on a timely basis, including feedback on project ideas, conference posters, talks, manuscripts, figures, and grants
- Support your career development by introducing you to other researchers in the field, promoting your work at talks, writing recommendation letters for you, and letting you attend conferences as often as finances permit
- Help you prepare for the next step of your career, whether it's a post-doc, a faculty job, or a job outside of academia. The more honest you are with me about where you want to go next, the more I can help you.
- Care for your emotional and physical well-being, and prioritize that above all else

All of the above, and you will also be expected to:

- Develop your dissertation research. Your dissertation should have at least 3 substantial experiments that answer a big-picture question that you have. Much of your work has to be done independently, but remember that others in the lab are there to help you when you need it
- Learn the appropriate tools to conduct your research whether it's LANDIS-II, R, ArcMap, or C#.
- Help mentor undergraduate students in the lab when they need it – either because they ask, or because I ask you to. Undergrads can also help you collect data.
- Present your work at departmental events, at other labs (if invited), and at conferences
- Apply for grants (e.g., NRSA or NSF grants). It's a valuable experience, and best to get it early.
- Seek out and apply for fellowships and awards (including travel awards, etc.).
- Think about what you want for your career (academia – research or teaching, industry, science writing, something else), and talk to Melissa about it to make sure you're getting the training you need for that career
- Make sure you meet all departmental deadlines (e.g., for your exams and thesis) -- and make sure Melissa is aware of them!
- Be patient, including with your PI. She will forget things you just talked about, and repeat some stories over and over.
- Prioritize time for research. Coursework and TAing are important, but ultimately your research gets you your Ph.D. and prepares you for the next stage of your career.
- Realize there are times for working long days, and times for leaving early to go to the park and enjoy the sunshine.

Code of Conduct

Essential Policies

The lab, and the university, is an environment that must be free of harassment and discrimination. All lab members are expected to abide by the university policies on discrimination and harassment.

The lab is committed to ensuring a safe, friendly, and accepting environment for everybody. We will not tolerate any verbal or physical harassment or discrimination based on gender, gender identity, and expression, sexual orientation, disability, physical appearance, body size, race, or religion. We will not tolerate intimidation, stalking, following, unwanted photography or video recording sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention. Finally, it should go without saying that lewd language and behavior have no place in the lab, including any lab outings.

If you notice someone being harassed or are harassed yourself, tell Melissa immediately. If Melissa is the cause of your concern, then reach out to the department chair or another trusted faculty member in the department.

Scientific Integrity

The lab and university are committed to ensuring research integrity, and we take a hard line on research misconduct. We will not tolerate fabrication, falsification, or plagiarism.

A big problem is why people feel the need to engage in misconduct in the first place, and that's a discussion that we can have. If you are feeling pressured to succeed (publish a lot, publish in high impact journals), you should reach out to Melissa and we can talk about it – but this pressure is something we all face and is never an excuse to fabricate, falsify, or plagiarize. Also, think about the goal of science and why you are here: you're here to arrive at the truth, to get as close as we can to facts about forest ecosystems and the processes within them. Not only is research misconduct doing you a disservice, but it's also a disservice to the field. And it risks your entire career. It is never right and never worth it. Don't do it.

Authorship

Like other labs, we will follow the ESA code of ethics with respect to authorship:

"Authorship credit should reflect the individual's contribution to the study. An author is considered anyone involved with initial research design, data collection and analysis, manuscript drafting, and final approval. However, the following do not necessarily qualify for authorship: providing funding or resources, mentorship, or contributing research but not helping with the publication itself. The primary author assumes responsibility for the publication, making sure that the data are accurate, that all deserving authors have been credited, that all authors have given their approval to the final draft; and handles responses to inquiries after the manuscript is published."

At the start of a new project, the student or post-doc taking on the lead role can expect to be the first author (but talk to Melissa about it if you aren't sure). It is best to list all co-authors alphabetically after that and put a disclaimer on your paper that you will determine authorship order right before submission.

Melissa will typically be either the second or the last author unless the project is primarily under the guidance of another PI and Melissa is involved as a secondary PI – then Melissa will be second to last and the main PI will be last. Students and post-docs who help throughout the project may be added to the author list depending on their contribution, and their placement will be discussed with all parties involved in the paper. If a student or post-doc takes on a project but subsequently hands it off to another student or postdoc, they will most likely lose first-authorship to that student or post-doc, unless co-first authorship is appropriate. All of these issues will be discussed openly, and you should feel free to bring them up if you are not sure of your authorship status or want to challenge it.

Old projects

If a student or post-doc collects a dataset but does not completely analyze it or write it up within 3 years after the end of data collection, Melissa will re-assign the project (if appropriate) to another person to expedite publication. If a student or post-doc voluntarily relinquishes their rights to the project before the 3-year window, Melissa will re-assign the project to another individual. This policy is here to prevent data (especially expensive data, e.g., fMRI) from remaining unpublished but is meant to give priority to the person who collected the data initially.

General Policies

Hours

Being in the lab is a good way of learning from others, helping others, building camaraderie, having fast and easy access to resources (and people) you need, and is relatively free from distractions at home (e.g., your bed or Netflix). That said, hours in academia are more flexible than other jobs -- but you should still treat it as a real job (40 hours/week) and show up to the lab. During a pandemic (!), you will be expected to work from home. You will NOT be expected to come to the lab until the campus resumes normal activities.

My primary concern is that you get your work done, so if you find that you are more productive at home (lab-mates can be chatty sometimes), feel free to work at home occasionally. If you have no meetings and no other obligations that day, it might be a good day to work at home – but you can't do this all the time, and I expect to see everyone in the lab regularly.

For graduate students, I understand having to be away for classes and TA-ing, but show up to the lab regularly when you don't have those obligations.

To encourage lab interaction, try to be in most weekdays during 'peak' hours (assuming no other obligations) – e.g., between 10 am and 2 pm. This is not a hard rule, you can work at home occasionally, and I understand other obligations. But keep it in mind.

PI Office Hours

In addition to weekly meetings (see below), and occasionally dropping by the lab, you can find Melissa in her office. Her door is almost always open; if it is, feel free to ask for a chat. She will always say yes, though sometimes she can only spare a couple of minutes. If her door is closed, assume that Melissa is either gone, in a meeting in her office, or does not want to be disturbed – so please send her an email

Google Calendars

The lab has a Google calendar. Please use it to put any leave/vacation on the calendar so I know when you will be out of the office. You don't need to list every doctor's appointment, just vacations, and trips.

At the beginning of each semester, we will decide if we want to meet weekly, bi-weekly, or just whenever it seems appropriate.

Presentations

Learning to present your research is important. Very few people will read your papers carefully (sad, but true) but you can reach a lot of people at conference talks and posters. Also, if you plan on staying in academia, getting a post-doc position and getting a faculty position both significantly depend on your ability to present your data. In fact I'd argue that presentations are likely to be an important part of any job. Additionally, every time you present your work, you are representing not just yourself but the entire lab.

It is therefore highly encouraged that you seek out opportunities to present your research, whether it is at departmental talk series and events, to other labs (within or outside of UO), at conferences, or to the general public. If you are going to give a presentation (a poster or a talk), be prepared to give a practice presentation to the lab at least one week ahead of time (two weeks or more are advisable for conference presentations, and many weeks ahead of time are advisable for job talks, which require much refining). Practice talks will help you feel comfortable with your presentation, and will also allow you to get feedback from the lab and implement those changes well in advance of your real presentation.

Templates for posters are available from Melissa, and you can use those as much or as little as you'd like. Some general rules for posters should be followed: minimize text as much as possible (if you wrote a paragraph, you're doing it wrong), make figures and text large and easy to see at a distance, label your axes, and make sure different colors are easily discriminable. Other than that, go with your own style.

Melissa is also happy to share slides from some of her talks if you would like to use a similar style. You'll get a lot of feedback on your talks in any case, but other people's slides might be helpful to you as you are setting up your talk. As with posters, feel free to go with your own style as long as it is polished and clear.

Data Management

Data is one of the most valuable assets in our lab, second only to the people within the lab. Therefore, it is incumbent upon us to maintain the highest standards of data safety and quality, defined below.

All lab data must be stored on the UO or approved back-up device:

The servers are backed up daily but you must leave your computer on at night to be backed up! Each lab member should back up raw data on an external hard drive, as well as the code needed to reproduce all analyses. **You should not store data locally on your computer. Hard drives fail unexpectedly and data on them cannot always be retrieved.**

Make sure you create documentation/metadata that describes how you completed your research. We want to make our research as repeatable as possible and transferable to others.

Funding

Funding for the lab currently comes from Melissa's grants. If you need to buy something or have to charge a grant for something, let Melissa know and she will oversee the process.

At some point, you will likely be asked to provide a figure or two for a grant Melissa is writing, and/or provide feedback on the grant. Relatedly, you are entitled to read any grant Melissa has submitted, whether it is ultimately funded or not. Aside from being a good opportunity to learn how grants are written, this will also allow you to see her vision for the lab in the years ahead. Feel free to ask Melissa to see any of her grants.

Public engagement

I consider engaging with the public an essential part of science and, more specifically, of our mission as a lab. Linking with the public forces us to keep in contact with real-life (not always easy in research). Moreover, it's a way to give back to the taxpayers what we've received from them in the first place. So, try to get involved in some kind of science activity with the public, whether it's volunteering in a school or helping in your neighborhood, and please engage in this actively and enthusiastically, as often as possible given your schedule. And tell Melissa about it so she can put it on the lab website. We want others to know we value outreach and encourage others to do the same.

I'm a huge convert to Twitter as a way to engage with other scientists and learn about the latest research. Please create an account and follow your science idols. Retweet new papers that come out or science activities that you think are awesome. Promote science!

Printer set-up

We have a bit of a "well-aged" printer. It prints great but needs a restart every once in a while (you'll know its time for a restart when you see a warning about firmware on the LCD screen). To initially set up the printer to your workstation follow the steps below.

For PC:

1. Go to the start menu and open the settings window
2. Click on devices and open printers and scanners tab to the side
3. Click the "Add a printer or scanner" button and wait for it to finish searching. Once it has completed click "The printer that I want isn't listed" and it will open the Add printer window
4. Click "Add a printer using IP address or hostname". The following window should be filled out as below with IP address 10.128.43.14 and using port 2
5. Click next and it should find the printer and you are good to go!

If you get an error where the port is already occupied, try port 3 (or 4).

If it can't find a Dell printer when it looks for drivers, go to this website and download/extra the folder contents of "Dell Open Print Driver" to your HD.

https://www.dell.com/support/home/en-us/product-support/product/dell-2330d/drivers

Then use the Browse function to navigate to the dellopd.inf file and hit Next.

Use the testing the printer option to make sure it works. Ta da!

Travel

Travel to conferences is a large part of our lab's activities. It's important to communicate our research findings to others and learn more about new, ongoing work in other research labs.

Here at UO, we need to use Concur software. First step is to make sure you can log into Concur.

https://concur.uoregon.edu/

Then make sure you know how you will pay for each expense. If you need an index, talk to Melissa.

Then click on Requests and fill out the form (see screenshot below). Hit submit.

Once you hit submit, you will get a screen that asks for Expected Expenses

Fill out the flight info. To get the flight cost, use the Concur Travel tab (at the top) and search for the best flight. Add $200 to the cost listed on the Expected Expenses so you have a buffer in case flight costs go up slightly.

Then add your expected hotel expenses. Put in any notes to help the staff understand your expenses.

Then add your meals per diem. They automatically put in the amount based on the city you are visiting.

Make sure you hit Submit and then you're good to go.

Once you get approval, then you can book your flight through Concur (you **MUST** book through Concur or Premier Travel Agency). You can book hotels and any other anticipated travel needs with Concur or by yourself. You only need to use Concur or a Travel Agency for flights. Also, it's best to use a travel agent for international travel at UO.

Thanks for reading the lab manual! This lab manual was inspired by several others, and borrows heavily from them (e.g., Marian Alley, https://github.com/alylab/labmanual). It's also a work in progress. If you have ideas about things to add, or what to clarify, talk to Melissa.