

July 8, 2024 Theory Working Group Call

Attendees: Freya Olsson, Caleb Robbins, Jody Peters, Mike Dietze, Alyssa Willson

Agenda:

1. How were the meetings?
 - a. EFI2024 Conference, ASLO, SFS
 - i. ASLO and SFS went well!
 - ii. Steve Munch gave keynote at EFI2024 about EDM
 - iii. Worth considering running EDM for Challenge
 - iv. Connect Caleb with Steve. Ethan Deyle at BU could also be a good connection
2. ESA Oral Session
 - a. <https://events.rdmobile.com/Sessions/Details/2373040>
 - b. Have social on Wednesday to announce it during the session? Need to see the schedule to figure out if other events are going on.
3. Next call - July 29 check in with group
4. Check in with Caleb - Using the NEON Forecasting Challenge to explore predictability across variables and scales
 - a. GitHub Repo: <https://github.com/robbinscalebj/NeonPredictability/issues>
 - b. Have retrained a few models with the chlorophyll update.
 - c. Still need to work with Quinn to get those scored
 - d. Caleb has retrained some of Abby's models - has some questions for her about some that are in GitHub with some issues to see if we get those resolved so we can include them in the analysis.
5. Marcus - machine learning forecasts and NEON Forecasting Challenge. Check in with Marcus next time.
6. Check in with Cole and Shubhi - simulations, weighted permutation entropy and handling data gaps. Check in with Cole and Shubhi next time.
 - a. Using simulations and NEON data - can we pull info from time series using weighted permutation entropy and realized permutation entropy - use it to look at how predictable the time series are
 - b. 2 things -
 - i. Simulate from models and permutation entropy
 - ii. Looking at the NEON data
 - c. How does data gaps affect understanding of predictability

7. Blog post idea for code review materials (Jody)
 - a. On January call the group talked about Jody drafting the blog post and running it by the group. There is no definite timeline for this, but hopefully within the next month or two
 - i. SORTEE group has a lot of energy between code review and seems like there is overlap with EFI
 - ii. SORTEE: <https://www.sortee.org/>
 - iii. Has Slack channel - here is the link to join
https://join.slack.com/t/sortee/shared_invite/zt-2fnqytett-AND1mTuXBKQWYyWUXKn6YA
 - iv. Library of code mistakes:
https://docs.google.com/presentation/d/12QN3WUc5v1Df7OArEox2U7IN_qnHHuwzjCYil4idC8/edit#slide=id.p
 1. Can add anonymously issues that people have found when their code has been reviewed
 2. E.g., day/time errors, misunderstanding of function
 3. It is structured with the same headings that were in the paper on code review