

Subject: Re: Postdoc ad: Help advertise
From: Michael Betancourt <betanalpha@gmail.com>
Date: 5/8/19, 7:35 AM
To: <e.wolkovich@ubc.ca>

Yes! That should be absolutely fine (the data to fit the model is at the day of event level, no finer). I can't think of a reason to need to model is continuously — I have seen it modeled hourly (i.e., using hourly temps) or with daily temps with no real difference. All that said, I can't think of any models that I work on where this would be an issue so if you have an example where it matters that would help.

It's more a question of what level of precision is needed for the science goals. For example, if the overall climate effects were sensitive to sub-day timing then one would want to model the events to the precision.

Sounds like days are enough in which case everything can be done in terms of discrete sums which makes the model a bit easier to implement.

Conditioned on the parameters and the daily temperatures we can invert $F^{\{*\}}$ and $C^{\{*\}}$ to determine the expected time for each event. But how is the expected time related to the actual time? In other words, what is the distribution of observed event times given the expected event times? It should be Gaussian; it always has been in my experience with phenology data (except perhaps in super extreme climates where we don't plan to apply this model, and where I am not sure it should be applied).

My (pedantic) worry is that a Gaussian won't really match the discreteness of the day timing being modeled and observed.

At some level I think that's happening is that there's really a continuous latent model but observations are happened only at the day level so we end up with a Gaussian censored across day-wide bins. This is reasonably approximated by just using a Gaussian only if the standard deviation is much larger than a day (i.e. the width of the distribution is much larger than the censoring bins).

I know! I am not really looking for replies so soon, but I do think human nature means it helps people to see a date. I have been saying 'application review will begin 15 May and continue until the position is filled' recently. Maybe something along the lines of 'flexible start date, but application review will begin 15 May so please contact soon if interested' ... I would wait up to 10 months or so from now for the right person to start.

Should I mention that on my Twitter post? It might help spur on some applications.

Thanks again for the help with drafting the ad also! I have been passing along the advice to others also — amazing how often we copy what we see without thinking through how it will be perceived.

Haha. Ironic how much of academic is copy and pasting despite the claims that everyone is working on something novel. 😊