NIMBioS Investigative Workshop

Transients in Biological Systems

EVALUATION SUMMARY REPORT
29-31 MAY 2019

Erica Echols
NISER Evaluation Specialist

Dr. Pamela Bishop
NIMBioS Associate Director for STEM Evaluation
**Figure 1. Agreement with the following statements about this workshop:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would recommend participating in NIMBioS workshops to my colleagues.</td>
<td>18</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The group discussions were useful.</td>
<td>14</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The presentations were useful.</td>
<td>17</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The presenters were very knowledgeable about their topics.</td>
<td>18</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This workshop met my expectations.</td>
<td>12</td>
<td></td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>This workshop was appropriate to my level of expertise.</td>
<td>11</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2. Agreement with “As a result of participating in this workshop, I have a better understanding of...”**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>the research data available on the topic</td>
<td>3</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>mathematical tools available for modeling the research data</td>
<td>5</td>
<td>16</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>new methods and modeling techniques that need to be developed</td>
<td>12</td>
<td></td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>how to adapt existing theoretical frameworks to fully use available data</td>
<td>3</td>
<td>14</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
**Figure 3.** Level of satisfaction with the opportunities provided during workshop presentations and discussions to ask questions and/or make comments:

<table>
<thead>
<tr>
<th>Level of Satisfaction</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Satisfied</td>
<td>15</td>
</tr>
<tr>
<td>Satisfied</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>8</td>
</tr>
</tbody>
</table>

Please indicate any suggestions you have for facilitating communication among participants during the workshop:

The number of participants was somewhat large, which I think made it less conducive to dialogue during the larger group meetings. The break-out groups were also a little large, and in the group I was involved in, there were some participants that rarely participated in discussions; but, several others were actively engaged.

Perhaps there could be a message board where we can have discussion and ask questions. This wouldn’t be as useful during the meetings, because it would probably split focus, but in the evening or during breaks when I have a question to ask and I’m not sure who to ask a message board would be useful. It would also be a good way to keep track of the progress and direction of each of the breakout groups, so that I might feel able to visit another group.

This is a problem with very mixed group. It was handled well.

The workshop format would have been more effective if:

No participant comments provided.

23 out of 23 attendees felt this was a very effective format for achieving their goals.
Do you feel participating in the workshop helped you better understand the research going on in disciplines other than your own on the workshop’s topic?

I rarely work with theoretical/mathematical models of ecological dynamics, and the presentations and discussions related to this topic were useful, partly because they provided a review of concepts that I haven’t seen much since undergrad/grad school.

This workshop brought more attention to long transient dynamics than I was aware of.

The topic of the workshop itself is very relevant to my area of research, while the area that the workshop applied this topic to is very different from my own. So I found this extremely useful.

I made some good new contacts and am participating in a promising new research group. It was an excellent experience. I am sorry this institute is not being continued.

22 out of 23 attendees felt the workshop helped them better understand the research going on in disciplines other than their own on the workshop’s topic.

Do you feel the workshop made adequate progress toward finding a common language across disciplines for research on the workshop’s topic?

The outcomes of this workshop may help the ecological sciences change their paradigm in analysis towards a more holistic approach.

Not sure how to quite answer this as I don’t find this questions very relevant to the workshop. I would have preferred to answer as “N/A”.

...although perhaps too much time was spent on semantics. And it would have been nice to have had more opportunities to bridge statistical/data-driven and dynamics-based approaches.

Yes, there was a lot of attention towards being inclusive and synergistic across a range of fields

21 out of 23 attendees felt the workshop made adequate progress towards finding a common language across disciplines for research on the workshop’s topic.
Do you feel that the exchange of ideas that took place during the workshop will influence your future research?

The workshop was very stimulating in this respect.

I am more interested in testing some of the predictions on the drivers of long transients.

Yes, I learned a lot, particularly relevant applications to my own field as well as raising questions on what is analogous and what is not across fields. I think this was relevant in both directions.

16 out of 23 attendees felt the exchange of ideas that took place during the workshop will influence their future research.

Did you develop plans for collaborative research with other workshop participants with whom you had not previously collaborated?

I was involved in a break-out group that is intending to write a collaborative paper together.

We are collaborating on a number of manuscripts.

Yes, I have made two promising connections.

21 out of 23 attendees developed plans for collaborative research with other workshop participants with whom they had not previously collaborated.
What would you change about the workshop?

It would help to have a digital archive during the workshop, with presenter’s slides and maybe notes from group discussions.

Maybe start with or include some good data sets.

Have two of them to help writing papers.

Give participants more chances to present their research.

The length of conceptual discussions

I would probably like to see more formal presentations. However, just a few more. Reserving majority of time for informal discussions and joint work is surely a plus.

I would have preferred that the organizers would have identified specific goals for the workshop, such as products, etc. But, the working groups seemed to successfully define their own goals.

I think the breakout sessions could have used more structure early on. I also think reporting back to the main group should have emphasized specific accomplishments and goals for the future. I also think some procedure that helped ensure each sub-group contained representatives from all levels of research seniority, graduate student thru full professor, might have been helpful.

One proposal: the first round of sub-groups are led by pre-identified individuals (organizers or other mid-senior level researchers) with some loosely formed written aims. Before arriving at the workshop, participants could read these aims, indicate their level of interest in each one, and potentially offer feedback. Organizers could then assign participants to groups in a way that balanced interests and ensured diverse levels of experience. After a first round of meetings, participants could then switch to another group.

More pre-preparation in giving us the questions we discussed the first day to think about before coming to the workshop. I am not advanced enough in my career to come up with all those questions myself, and if I’d had more time to think about them before the first day I think I could have contributed more and felt less overwhelmed.

A few more presentations

As mentioned before, more chances for exploration of bridges between stats/data and deterministic/dynamics approaches.

I think the workshop is really good and success.

I'm not sure.
The first day was not so useful. It is good to mix bio and math people but the dynamics did not work well in this case. One talk and one broad mixed group on the first day (morning) would have been enough. It should be faster to focus on a fixed problem given only 2 1/2 days.

**Figure 4.** Level of satisfaction with the workshop accommodations:

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources of the facility in which the workshop took place</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Comfort of the facility in which the workshop took place</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Housing arranged by NIMBioS</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Travel arranged by NIMBioS</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Comments about accommodations:**

Staying in the same place and eating on-site made it easier to work with other attendees.

Generally good, but hotel room was stinky. Like the location of the hotel (Four Points) relative to both the UT campus and to downtown Knoxville.

Could have used some more fresh white board markers and white board erase fluid in the rooms :)

Instead of non-reusable plates/cutleries I would prefer reusable ones (even if those can be recycled), but maybe this is not possible with the caterer.

Everything was organized in a super convenient manner. The joint meals were particularly useful (and different from other places). I think that NIMBioS has converged to an optimal setup. It takes time to figure these things out and logistically this was definitely one of the better run workshops I have been to.

Excellent Thanks!!
What do you feel was the most useful aspect of the workshop?

Exchange of ideas with researchers from other disciplines
Small groups working on specific problems/issues
The self-sorted groups
Meeting new people
Timeliness of the topic and quality of the participants.
Discuss science with experts.
Discussion between the participants
Interdisciplinary research
The space for working in groups
The working group discussions, with different groups of people (i.e., not always being with the same small group)
The very informal discussions in small groups were very interesting and useful.
Networking with other researchers that are just a bit outside of my field of expertise, and learning/reviewing concepts/theory that are outside of my immediate area of expertise.

Largely by chance, my sub-group demonstrated some productive synergy that made time spent in the breakout sessions useful. The usefulness was highest once we reached specific, concrete goals for our group.

The breakout groups were very productive. I would have liked to participate in a second one, but I felt that the discussion in each group was evolving so quickly that I didn't have time to spend in a second group.

Organization: Spending much time together (breakfast, lunch, etc.); less talks, much discussion; and researchers from different areas/different time in their career.

Some of the presentations were excellent for setting a common ground for participants. The sustained time in the working groups on the research directions was critical - any less time would have hurt a lot.

The presentations set the stage and the break out group work was interesting.

I think the most useful aspect of the workshop is that I can discuss with a lot of expertise and learn lots of new ideas in my research area. Especially, I can collaborate with several researchers in the new research area.

The introductions and the working groups.
New contacts, new problems, new group
Thanks for all your efforts!

Thank you.

Overall, it was a great workshop. Many thanks to the workshop organizers and to NIMBioS!

Overall, I enjoyed the workshop and hope that my group carries through on the planned manuscript.

A successful workshop

Our leader and all participants were just super! An excellent experience.