Investigative Workshop
Scientific Collaboration Enabled by High Performance Computing

EVALUATION SUMMARY REPORT
13-15 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>8</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The group discussions were useful.</td>
<td>5</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>The presentations were useful.</td>
<td>6</td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The presenters were very knowledgeable about their topics.</td>
<td>10</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This workshop met my expectations.</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>This workshop was appropriate to my level of expertise.</td>
<td>5</td>
<td>12</td>
<td>1</td>
<td>1</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>2</td>
<td>13</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mathematical tools available for modeling the research data</td>
<td>2</td>
<td>13</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>New methods and modeling techniques that need to be developed</td>
<td>3</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How to adapt existing theoretical frameworks to fully use available data</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>2</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>Very Satisfied</th>
<th>Satisfied</th>
<th>Neutral</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Level of engagement varied hugely by participants. Some are shy, and that shouldn’t prevent them from being part of the discussion, others sort of dominate the discussion. There are people whom I’ve never heard, and I can’t recall who they are / what they do. A facilitator can manage the exchanges, for instance by promoting round table discussions, or getting to know a little more the participants to engage them. Said otherwise, the workshop needed a facilitator, which is a different role from organizer.

Lightning talks are recommended so that those that did not get a chance to present can let the rest know what their research is about. Poster sessions sometimes work out and sometimes don’t. Posters along the corridor at NIMBioS - I doubt if anyone checked them out. Lightning talks would be more useful.

The majority of participants did not seem like they were interested in the speakers and were doing other work during talks. The majority of organizers also did not seem interested. The intent of the workshop was unclear - what did the audience want from the event?
The workshop could have been more effective if:

Structure the breakout sessions so they have goals and facilitators.

Reduce the long presentations and emphasize their focus on seeking, or sharing tips about, collaborations.

Better directed breakout sessions and clear session topics (methods, tools, etc.)

15 out of 19 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 workshops topic?

I would definitely say so!

I really enjoyed the breadth of topics presented at the workshop.

19 out of 19 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?

Somewhat yes! I believe if we have similar ones every year, we will eventually get there. It is a challenge for any discipline to understand CS concepts and vice versa, so we would need several more of these to bridge that gap.

12 out of 19 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?

I already have a future collaboration and a proposal planned.

12 out of 19 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?

No comments reported.

10 out of 19 attendees developed plans for collaborative research with other workshop participants with whom they had not previously collaborated.

What would you change about the workshop?

Breakout sessions

The diversity of skills and application areas for participants was useful, because it made it more likely to find new potential collaborators. There were some useful presentations which pointed out opportunities for collaborations or funding that can be approached as a team.

Combination of talks and discussions in working groups.

Exposure to various topics on HPC

I believe the mix of biologists, computer scientists and mathematicians was very well done. Talking to poster presenters was also very helpful.

Networking. Interacting with researchers at different career stages. Very diverse set of participants.

Meeting researchers that are not traditionally in my sphere of interactions.

Poster presentation session was great. We had a chance to explain our research and get feedback from audience. I got lot of suggestions and future improvements.

Bringing together scientists with such diverse backgrounds

Finding common research interests...

Discussions and breakout sessions

The discussions -- both during the Q&A and during the breakout sessions.
The breadth of topics covered and the time to chat with colleagues.

Combining HPC with mathematical and computational biology research.

Networking with the attendees

**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>18</td>
<td></td>
<td></td>
<td></td>
<td>1</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></td>
<td></td>
</tr>
<tr>
<td>Housing arranged by NIMBioS</td>
<td>14</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel arranged by NIMBioS</td>
<td>11</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments about accommodations:**

Convenient hotel location, simple process for reimbursement, NIMBioS center with everything needed. The accommodations were perfectly fine.

Great

It was great
What do you feel was the most useful aspect of the workshop?

Nothing.

The breakout sessions were a good idea, because interactions are really what the workshop meant to promote, but these sessions were improvised without a plan. They need to be better structured, with facilitators, and a scaffold (e.g., get to know each other, identify at least 2 persons with shared interests; repeat exercise with a different group; develop collaboration plans). I also appreciated the intention of having presenters who’re looking for collaborations, but the implementation can be improved. It’d be sufficient to have 30 mins and a focus on ‘here is what I do, here are the areas in which I would like new collaborations’. Some presentations seemed to be more like an intro to a field in which most of the audience (judging by time spent on phone/laptop) had little interest, and that was a missed opportunity to focus on collaborations.

I find it very good the way it was.

In the panel, I would add someone from academia for sure for the next time. 1-2 industry speakers would also be useful. So a mix of such panelists would make it more resourceful. The panel was a great idea, and having a 90 minute panel would be definitely useful. A mix of academia, labs and industry panel would be very useful.

I would also request the organizers to give an idea of what is going to be available for breakfast and lunch. It just helps to plan the morning better. Not expecting eggs being served every morning but knowing eggs, potatoes, bread will not be served, will be useful.

Avoid “all sugar” breakfast - highly recommended.

Clearer expectations on the focus of the workshop.

Breakout sessions were good but it would have been even better if we have some hands on experience (lab sessions or something). This is just a suggestion.

Plan the discussion sessions in advance so people can prepare topics for collaborations before arriving at the workshop.

Have a detailed discussion on how GPU’s accelerate programs. Have a challenge session where slow codes are discussed in detail.

More talks

Some of the talks went longer than they should have and this cut into the Q&A time. I would also have enjoyed hearing some short talks instead of all long talks. Perhaps some talks about things that are currently hard to do rather than talks about achievements.

The poster session was spread across three rooms and I feel that some of the presenters were ignored. There needs to be better information if this is the case.

Increase the ratio of time spent on discussion & breakout sessions to the time spent on presentations. Also increase the time for poster presentation. Add a discussion on HPC resources somehow to engage all the attendees more.
Thank you for organizing this workshop. I’ve made some useful connections and hope to pursue them in the future. For transparency, the organizers may want to reflect on the feedback received and share their thoughts about the next workshop. Reflection is a valuable exercise in itself.

A great workshop!

Excellent bunch of people, wonderful to meet them. The opportunities for mentorship (at many levels) was particularly appreciated.