



Evaluation Summary Report

Workshop: *Research Collaboration
Workshop for Women in Mathematical
Biology*

June 22-25, 2015

Pamela Bishop
Evaluation Manager
National Institute for Mathematical and Biological Synthesis

About this event

This collaborative workshop aimed to help build a strong collaboration network of women working on problems in mathematical biology by facilitating the formation of new collaborative research groups and encouraging them to continue to work together after the workshop. The format of this workshop was designed to maximize the opportunities to collaborate.

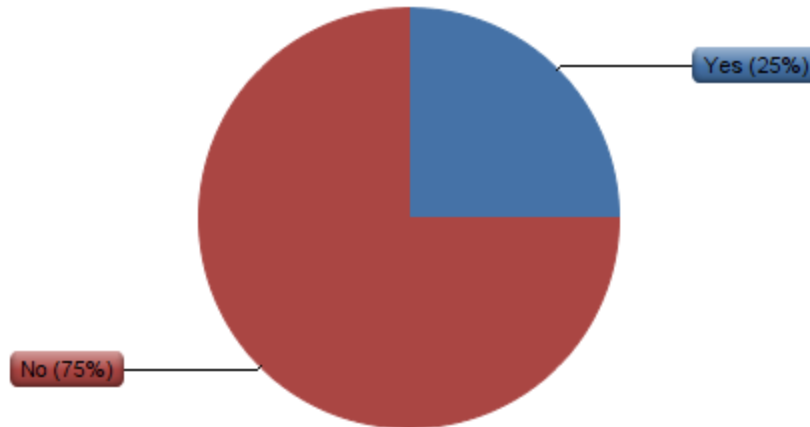
- Four teams, each led by two senior women researchers, worked collaboratively on a problem.
- Team members were chosen from applicants and consisted of junior researchers from both mathematics and biology.
- Team members could express their project preference in their application
- Each team worked intensely and presented their findings at the end of the workshop.
- Each team is expected to continue their research and obtain results for a joint publication.

The format of this workshop followed that of the highly successful WhAM! Research Collaboration Workshop for Women in Applied Mathematics held at the Institute for Mathematics and its Applications (IMA) in September 2013. The workshop structure, with leaders, projects and working groups planned in advance, was intended to be bi-directional: senior women met, mentored, and collaborated with the brightest young women in their field on a part of their research agenda of their choosing, and junior women (tenure track faculty, post-docs and advanced graduate students) developed their network of colleagues and supporters and encountered important new research areas to work in, thereby improving their chances for successful research careers.

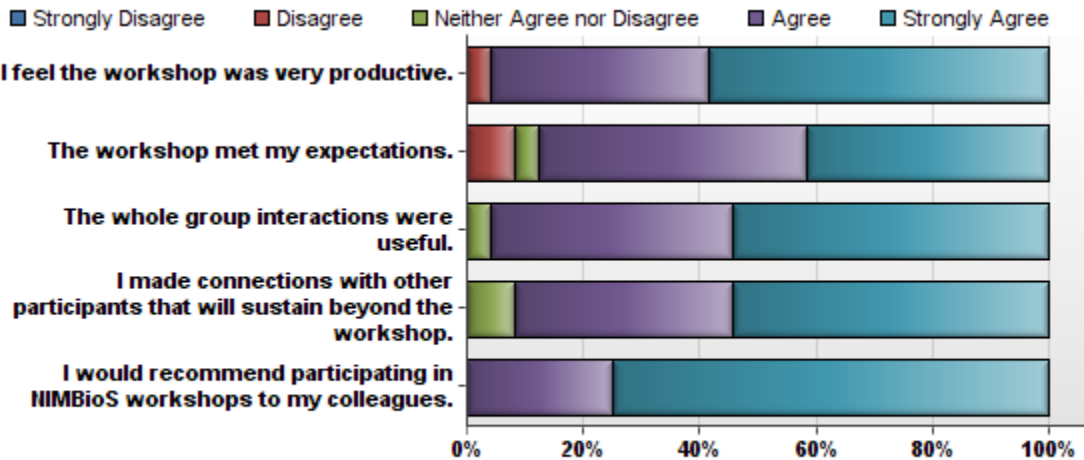
Evaluation surveys were sent to all 26 participants, 24 of whom responded.

Participant Response Summary (n = 24)

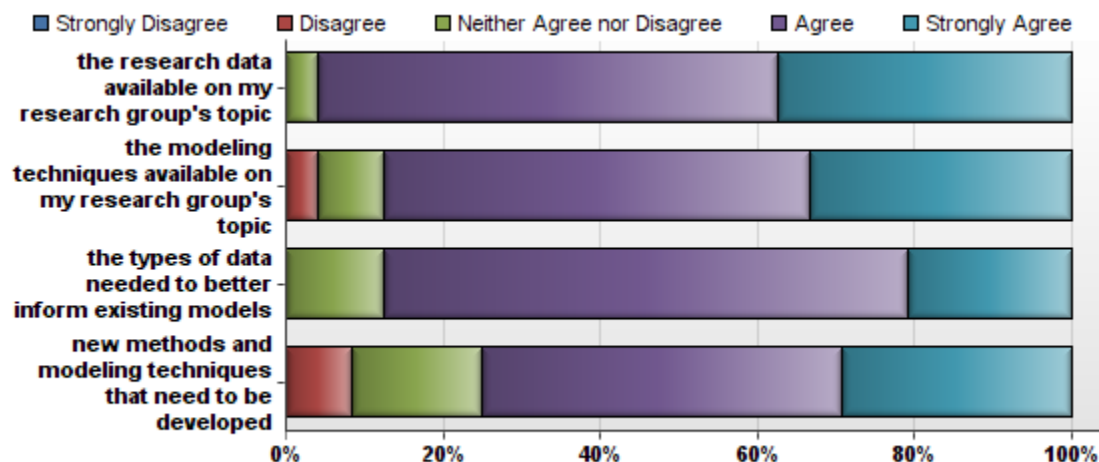
Were you a project leader in your research group?



Please check the appropriate box to indicate your level of agreement with the following statements about this workshop:



As a result of participating in this workshop, I have a better understanding of:



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

Mix of expertise

*Networking with other post-docs and assistant professors and getting advice from them.
Learning about different modeling techniques and tools.*

Focusing on a single topic for 3 1/2 days, being able to devote all this time to a given problem with the help of a group of people with different (and complementary) expertise, skills and viewpoints.

Meeting other female scientists.

The networking

Coming from a mostly biological background, some of the things that were most useful to me were perhaps not what others drew out of the workshop. First, it was useful to me to learn that I was as comfortable with the conceptual and basic quantitative aspects of modeling as individuals with stronger math backgrounds, and that I could successfully lead a group in the formation of a model, even though some of the building blocks were new to me (Matlab, formalism using differential equations). Exposure to those building blocks was also helpful - it turns out that Matlab is quite easy (I normally use R), and differential equations are intuitive. I look forward to learning Latex while we pull together the Proceedings paper.

The interaction with my group.

I was very impressed how much preparation my group leaders had done beforehand, I felt that helped us as a group to get a lot further than we would have otherwise been able to reach. I also think it was crucial that the project leaders were very motivating, encouraging, inspiring, and supporting throughout the workshop. The group leaders were like role models for us participants. I'm also very happy that because the project work was so well prepared, the group work started off quickly and I was able to see how one can work efficiently in a very short time. That is, I feel like I could see how one can take full advantage of the 3+ days when working physically in a same place with people coming from different

backgrounds, and that the short time slot is best used in hypothesizing, going further in the problem solving, and finally planning for future work, without paying too much attention to minor details that can be checked easily on one's own after the workshop.

Experience working with another scientist

Non-judgmental atmosphere. I felt like everybody was open to my ideas and we were having really good discussion.

Automatically forming collaborations through the workshop format.

It was very useful to get to work on a project with senior women in the math-bio fields - they have a lot of experience, so I learned a lot about both modeling techniques and their experience being professors at different schools. I also thought the presentation at the end was great and helped put together what we had worked on for a few days.

It was very helpful for me to see how other people create models--my only previous experience has been in the context of one lab, and I didn't know how general it was. This whole experience helped me to realize that I knew more about modeling than I had previously assumed, and made me feel a great deal more capable of starting new collaborations.

Working together

Problem solving!

The dedicated time and intense format of the workshop. Actually working on a modeling project that we were expected to make some progress on

Developing a new research collaboration.

Help junior women make connections.

It's a great idea to group people and focus on a topic in a time manage style.

Being given time to socialize with everyone involved in the group as well as with the members of your own group helped to make connections with people strong both on a social level and an intellectual one.

Talking with other participants.

Working in my research group was the most useful aspect. I enjoyed learning about the tools available for modeling, and it opened my eyes to new possibilities for my own research.

The leader of our group was very helpful and she introduced us to new technology that allow collaborative research. She also introduced us to a new software developed particularly for modeling and simulations.

What would you change about the workshop?

The workshop would have been more productive had it been extended at least another day or two. Presenting our work on Thursday morning meant my group was essentially presenting work from 2.5 days.

I would have it run the full week.

On one hand, I would like to say I would have wanted to spend even just a half a day more working with the group. But on the other hand, I think it was very good that the workshop was so short, I feel it made me work more efficiently and think more straightforward because I knew there was not going to be too much time to be wasted.

Maybe ask the organizers to distribute reading ahead of time and decide on software which going to be used during the workshop.

Maybe a little more time to work on the programme. Or sometimes social activities help you interact with the other groups more.

Not much! If anything, I would make it a day longer so that we'd get a chance to work more on the project, as well as interact with the women from the other projects.

I didn't get to know many participants well outside of my working group. Some structure to encourage of mixing of the groups at meals etc. might be helpful.

One day longer

If the workshop was 4.5 days instead of 3.5 days then the group could have made more progress on the project. However, we may not have been able to keep the intensity up for another day

I think it should have been made clearer that we aim to recruit junior participants who are new to the research topic. While interactions within each group seemed productive and intense, there were much fewer interactions among different groups, even though we shared meals.

It would be more beneficial to the participants if there are clear goals for the journal paper besides the conference volume.

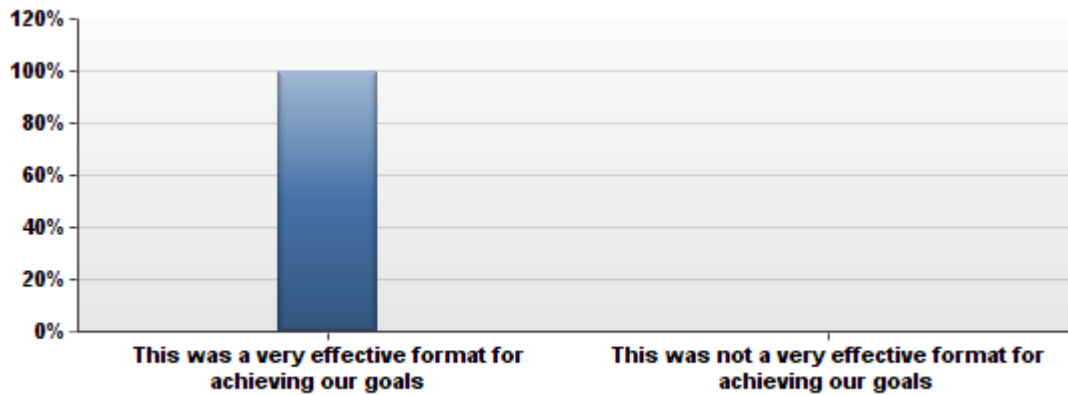
Make it longer!

I think that the idea of having groups lead by organizers already working in a given area had both good and less good impacts on the workshop. It was clearly nice to have perspective from those deeply versed in the literature of a given field. However, I felt that our group sometimes missed out on opportunities to explore relevant data from other fields because the project leaders already had such a clear idea of where we should be heading.

I think our group needed one additional day to make more progress before the workshop ended. I would have liked fewer coffee breaks and to start before 9am (to have more time to work).

I wouldn't change anything - very useful experience just wished I knew about these opportunities few years earlier. Still I hope the institute will continue to exist so more women scientist could benefit from these opportunities.

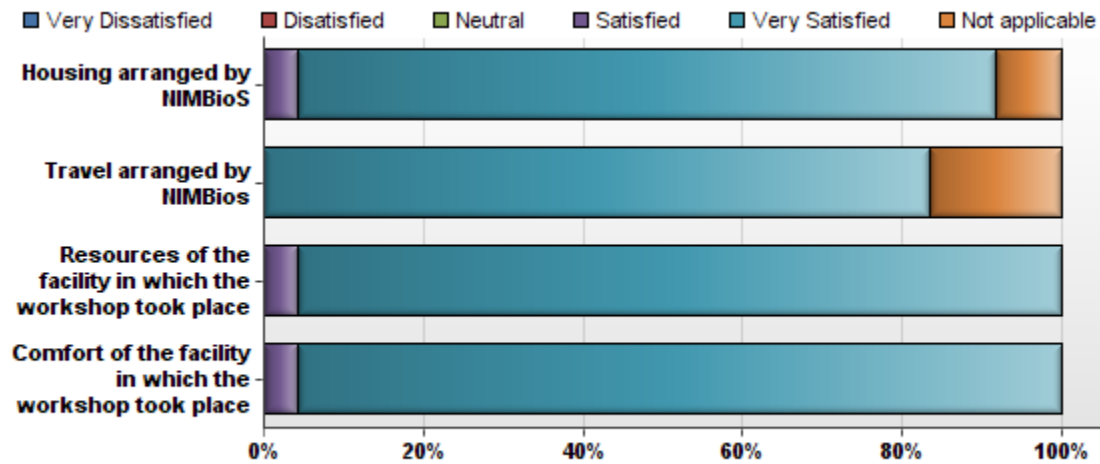
How do you feel about the format of the workshop?



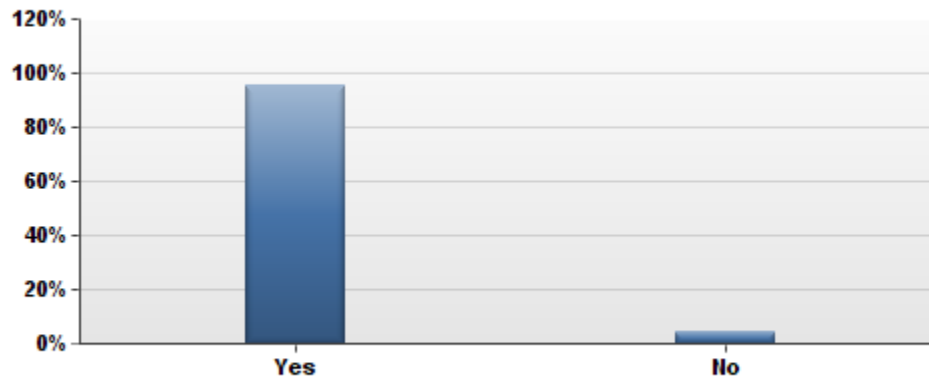
The workshop format would have been more effective if:

No data

How satisfied were you with the following accommodations?



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?



Comments:

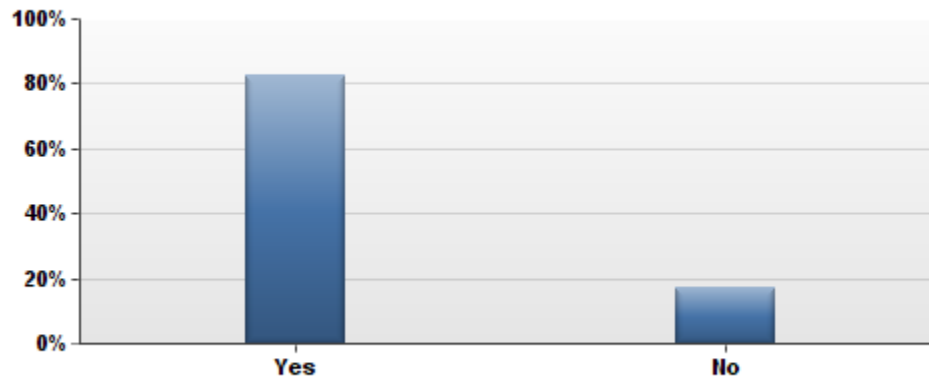
I think I was very lucky to be in a group with two amazing group leaders that were very well prepared before the start of the workshop. Their preparations increased a lot the understanding of our project subject I was able to obtain beforehand, during, and after the workshop. I think the understanding I obtained during the workshop helps me to improve my performance in my own research area as well.

It was the most amazing workshop I've ever attended. The group dynamic was great - we seemed to understand each other really well and provided huge amount of help and support. There were no clear expert in the specific question we were working on, that might help us to be more receptive to each other ideas.

It's my great pleasure to work with my group. The collaboration with people in other disciplines is much more nature and productive than I expected.

The diversity of mathematical approaches and the variety of research topics were useful in understanding research in other areas.

Do you feel that the exchange of ideas that took place during the workshop will influence your future research?



Comments:

The workshop topic was too far removed from my research area.

Yes, in particular the other group leader and I are considering converting our project into a grant.

I learnt to work under pressure and achieve more things in a shorter time frame, I think this workshop increased my abilities to work more efficiently than I was able before attending the workshop.

I will definitely use this experience to organize research in my group and extend it to accommodate my teaching.

Yes, I think it will be useful to see what type of biological problems can be approached with mathematical tools, and how collaborations between the disciplines can occur.

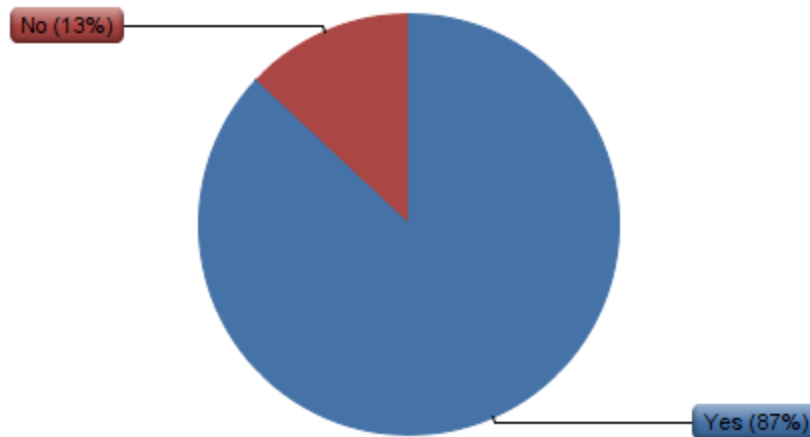
I hope to continue working with my group on this research topic.

The topic was very similar to my own research and I feel that the workshop helped me to understand key concepts that will help in my current research.

I was able to witness some of the amazing tools available for modeling. This is very useful in thinking about what is possible with my own work.

I will definitely continue working on the new topic area I have started during the workshop.

Did you develop connections with other participants that you feel will advance your career?



Comments:

The connections may advance my career through knowing a female scientist I can talk to about general things but the connections will not affect my research.

Our group seems strongly motivated to convert our project into a publication, so it is likely that we will be working together for a while. Beyond that point, I hope that we maintain contact - they were a lovely group of individuals.

I aim to stay in touch with the group so that I could possibly work with the same people in the future during a short time visit, for example.

I definitely felt more confident in my ability to start the project from scratch and organize the long-term goals

While I am not sure specifically how this will help, I do know that hearing about people's experiences getting postdocs/teaching jobs/research jobs at different types of institutions was helpful in getting a sense of what I will want to do.

I met several people that I hope to collaborate with in the future.

I was one of the senior group leaders, most everyone else was junior to me

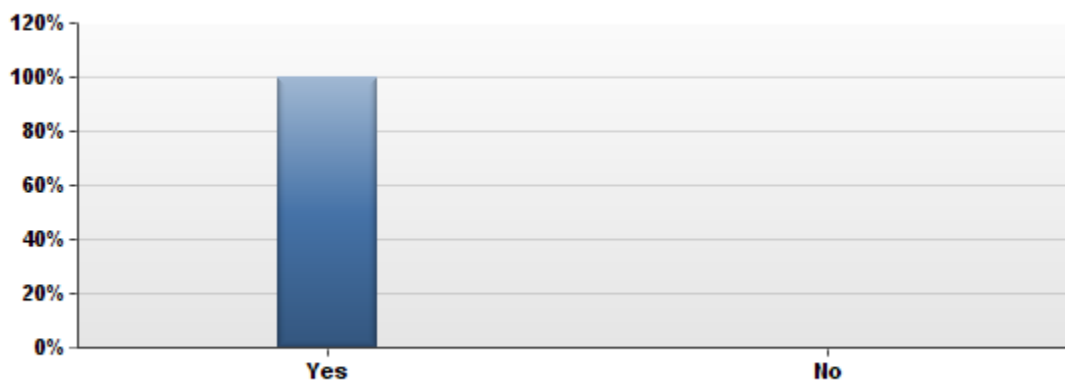
But I think it will enhance the careers of the more junior participants.

I had some great conversations at the workshop!

I met several participants with whom I might collaborate with in the future. In addition, I enjoyed interacting and talking with senior faculty about their experiences as academics.

I think yes but am not sure how exactly. Still I think any connection are beneficial for anybody's career.

Did you, or do you intend to, make plans with your research group to continue working on your project together after the workshop?



Comments:

We will publish a proceedings paper and hope to publish a journal article.

We put together a to do list to organize our proceedings paper, made arrangements to hold a meeting over Skype in August, and then a subset of us will meet at the Society for Neuroscience meeting in November. Before the proceedings paper is due next summer we would like to meet again as a full group in person at NIMBioS.

We are currently working on the proceedings article that all the groups of the workshop are going to contribute to, and we also made plans how to extend the work done during the workshop to a journal article.

Yes, we are already emailing and collaborating to continue our project.

We have a Skype meeting scheduled for next month, and plan to continue working on the project, with the goal of submitting a paper on the topic.

We are preparing a manuscript to be included in a proceedings volume and plan on preparing another manuscript for journal publication

We have already divided tasks and set up online forums to continue working on our project.

We are planning to meet in the fall to continue the work we started.

Please use this space for any additional comments:

I found the format of small groups highly effective. The most productive NIMBioS working group that I have been involved with.

As one of the senior investigators, I felt that the younger scientists were eager for advice regarding their careers and personal choices, and the workshop format allowed for very productive informal exchanges in that context.

Our project was too broad when presented to us. We had a short time together, and too much time was spent on background. The leaders need to come to the workshop with material boiled down to the essentials so we can understand the relevant material and get to work.

One more day to work might have been useful. The food was delicious.

This workshop not only improved my understanding of a biological application that was completely new to me but also made me experience in real life how I can change my working habits in order to become more efficient in doing research without compromising quality of the work at all.

I'd like to help the organizers - it was an amazing experience and I hope they will offer other workshops in similar format in the future. It was amazing to be a part of amazing group of women.

Really brilliant week, so great that NIMBioS are able to pay for everyone to attend!

Thanks for organizing it!

Thank you so much for supporting this workshop! I found it incredibly helpful for my professional development and research skills.

We should continue this type of workshop

I greatly appreciated the gluten-free breakfast and lunch options that were provided for me.

This is one of the best workshops that I had even attended. I wishes there are more such opportunities in the future.

Excellent workshop. I really enjoyed it and I learned a great deal. I hope to participate in another NIMBioS workshop in the future. Thank you for this great opportunity!

I can't thank enough to our group leaders - they were very knowledgeable and I hope to continue collaborating with them and the whole group.