

NIMBioS

National Institute for Mathematical
and Biological Synthesis

9th Annual Undergraduate Research Conference at the Interface of Biology and Mathematics

EVALUATION SUMMARY REPORT

11-12 NOVEMBER 2017

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Associate Director for STEM Evaluation

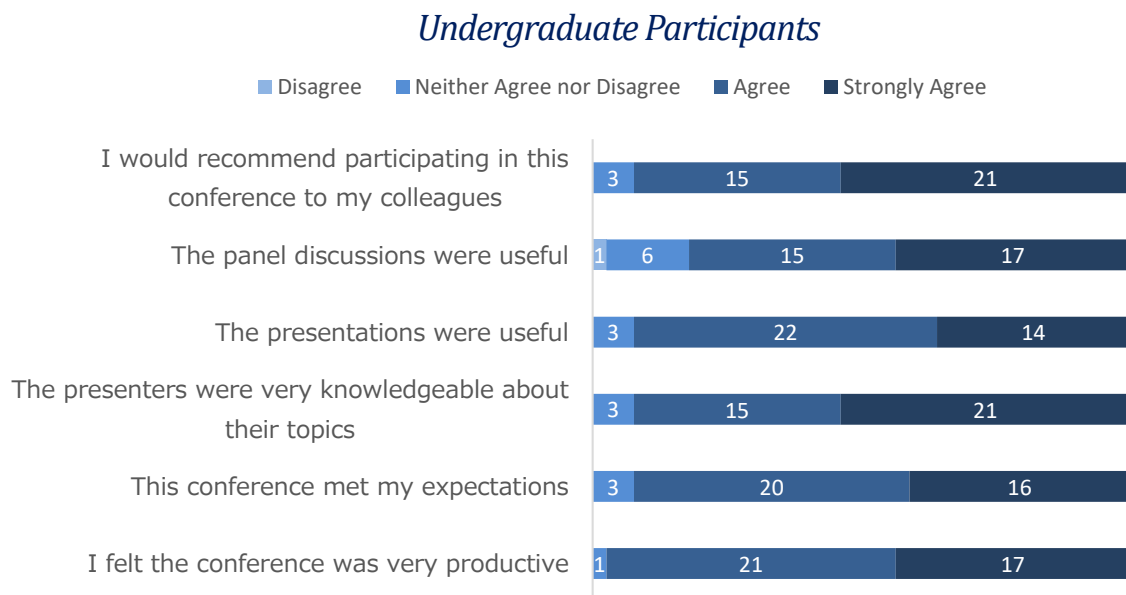
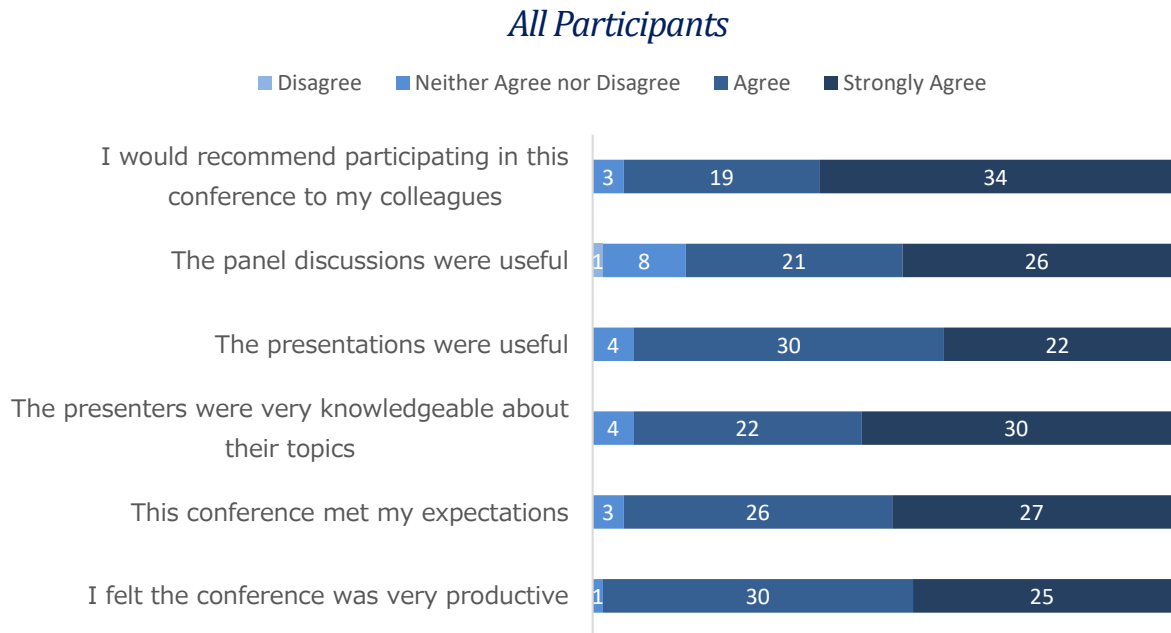
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A total of **57** participants took part in a feedback survey of the 9th Annual Undergraduate Research Conference (URC) at the Interface of Biology and Mathematics. Of those, **40** (70%) were undergraduate students and **17** (30%) were non-undergraduate students.

Figure 1a. Level of agreement with various aspects of the URC:



Non-Undergraduate Participants

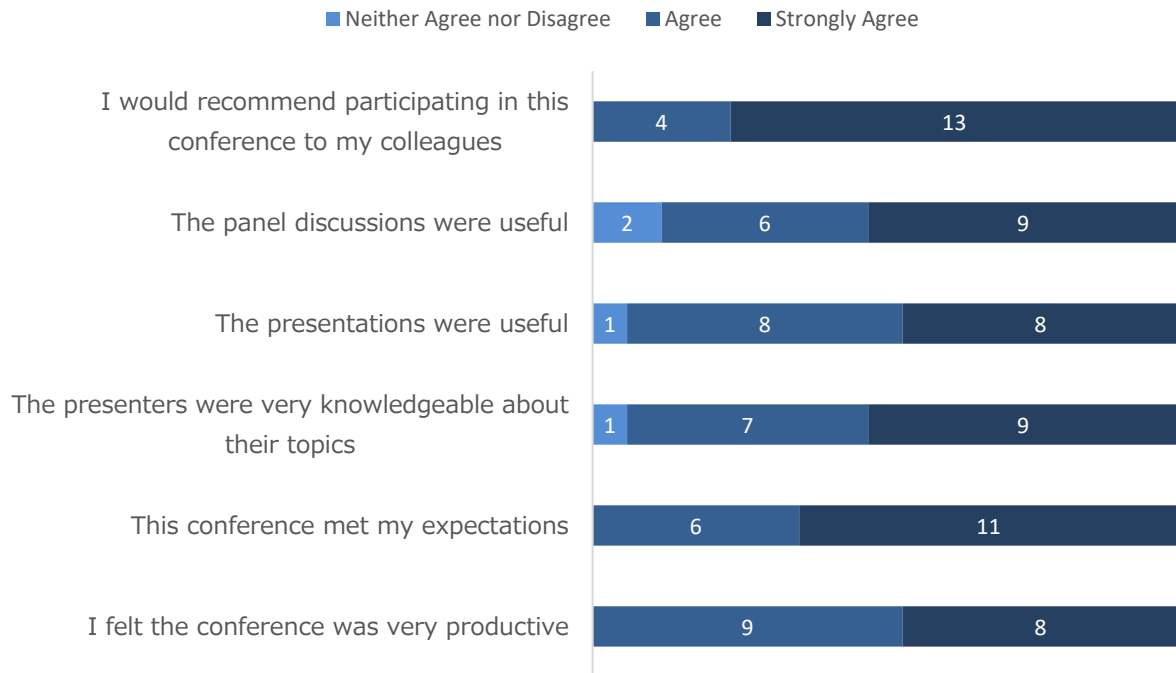


Figure 2. As a result of participating in this conference, I have a better understanding of:

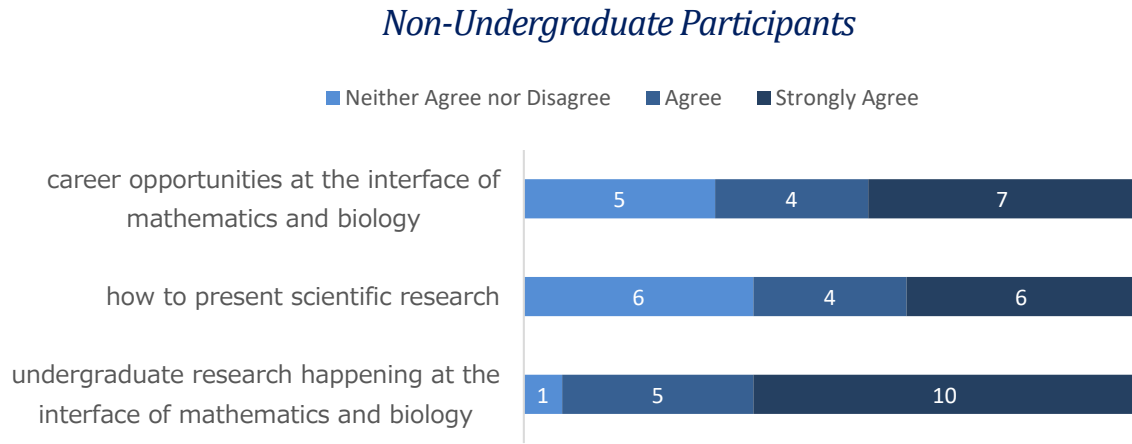
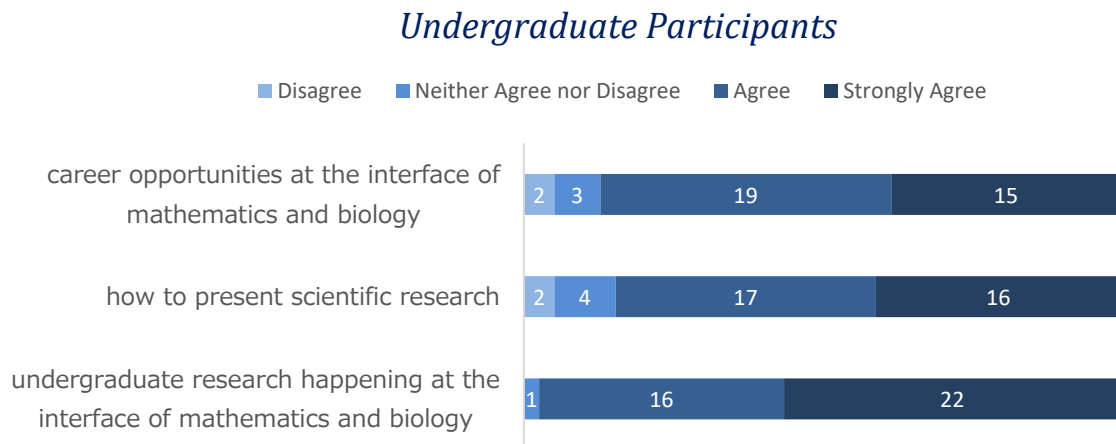
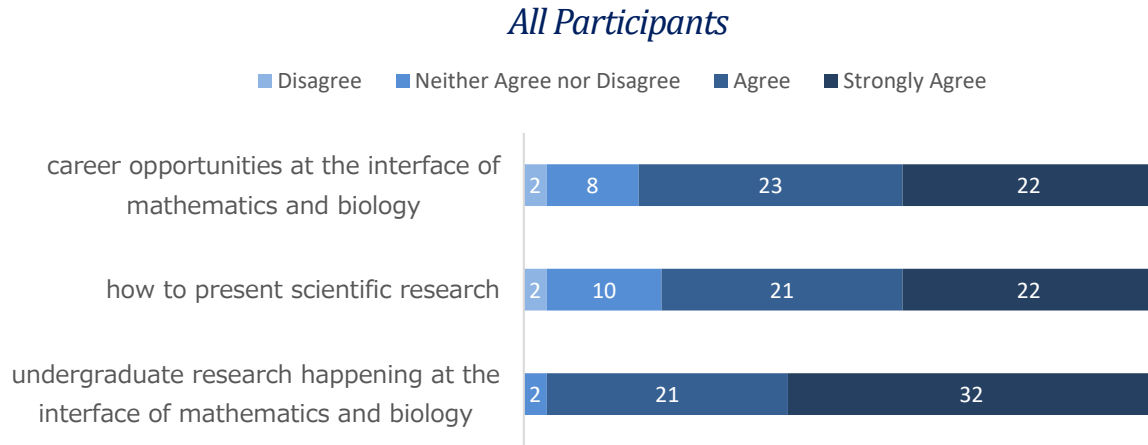
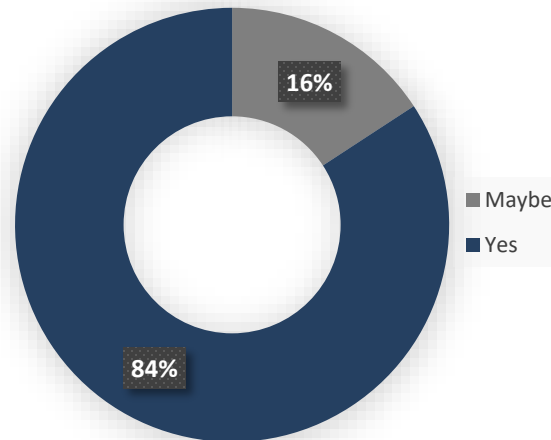


Figure 3. Do you feel that participating in the conference helped you make connections with others within the interdisciplinary field of math and biology?

Undergraduate Participants



Please explain:

At this conference I got to see people who I had met at previous conferences and it was nice to see them and remember there are lots of other students who want to study math biology.

By presenting research, individuals of different majors become engaged and you are able to network with them.

I did not know many individuals in this career path before, but met some very nice individuals that I hope to come into contact with again. I also know some new names to be looking out for in the future of research articles in this area of study.

I felt that a majority of the presentations were math focused, and the presenters were not adequately able to make the biology connections.

I got to connect and talk to people from around the country.

I got to know many people doing the dynamics system.

I met a lot of professional staff at UTK who helped explain to me my options for future study. I also enjoyed talking to students with completely different majors than my own but who were interested in studying the same thing

I met quite a few like-minded individuals, but my situation is slightly unique since I will be attending medical school, not graduate school.

I was able to hear and talk to students who were using similar techniques and research.

I was able to many graduate school professors and I made friends with many of the conference participants!

It was great meeting other students with the same interests as myself as well as adults

It was interesting seeing all of the different projects and meeting the students that worked on them. Most of us come from a similar mathematical and biological background, but there were differences in what our interests were. I enjoyed connecting with other students about their projects and why they thought they were important.

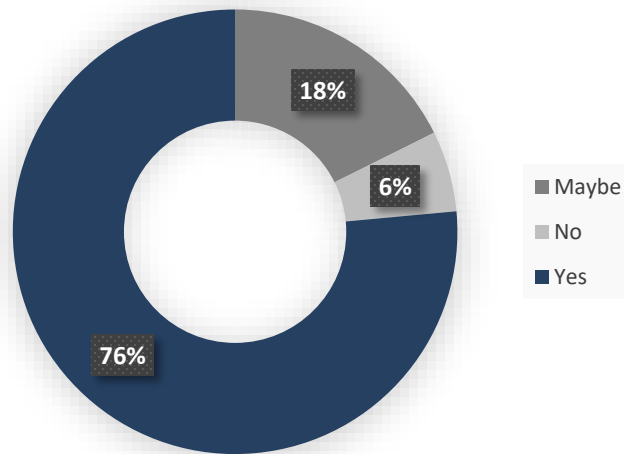
The conference gave the opportunity to network. In the conference space, it was very open and easy to talk to everyone involved.

The conference highlights the many ways that math can be integrated into biological math models. Unfortunately, I feel like this was the only type of information being presented and I feel a better representation of the biology would be important to incorporate into the conference.

They are more on the biology side and I am more into the ecology

We met several other undergraduates working on research similar to ours which helped us begin to develop a network of connections with fellow students.

Non-Undergraduate Participants



Please explain:

There was a wide variety of topics presented and discussions with other attendees during common times (dinner, breaks, the networking activity) gave me an opportunity to talk with others about research opportunities and the research taking place.

There were many options to get to know other professionals

Figure 4. What do you feel was the most useful aspect of the conference?

Undergraduate Participants

A chance to present work in a formal yet non-intimidating way

Being able to share research and connect to other undergraduates.

Getting the opportunity to present research and talk with other students about their research.

Getting to meet and converse with students from other schools and getting to know more about their college experiences.

Having the chance to talk with others in the field

I felt the conference was useful for gaining insight into how science can become a very integrative field.

I liked listening to the presentations and talking to grad school reps

I liked the panels.

I loved meeting people who are just as interested in science as I am. I made a lot of connections with people who are brilliant and can help me forward my education.

I loved the opportunity to interact with other undergraduate students. I also liked meeting with graduate schools.

I really enjoyed hearing from the lecture note speakers and hearing about their career paths.

I think getting a sense of what other research people are conducting is useful. Also, conversing in scientific terms is helpful in developing academic literacy and critical reasoning skills.

I thought that the oral presentations were most useful.

I thought the most useful aspect of the conference was having the opportunity to practice presenting my research.

Meet friends and see what other subjects that they are working on and how to do reseach

Meeting other students and seeing how they present their work

network activity and presentations. It allowed for a discussion of research

Networking and learning about others research going on at the interface of mathematics and biology

Seeing a variety of presentations

Seeing research

Seeing what modeling in mathematics research looks like - I know what I need to go for.

That the presentations were not just all math or all biology, but a mixture to get different aspects of the STEM fields.

The career panel was most useful.

The keynote speakers and the interactions with other students, especially that SET activity. I have been to conferences before where there isn't a strong facilitation amongst the student participants which I think should be done more often and was done well at NIMBIOS

The most useful aspect of this conference was possibly the SET game. I've been to other conferences, and this one differs in that it gives attendees the opportunity to actively network.

The networking

The networking opportunities and the many undergraduate 20 minute talks

The networking. After the initial awkward meeting with some people, I really enjoyed getting to know them and learn about different research and graduate school opportunities from fellow undergraduates as well as faculty.

The panel of faculty answering questions about what they do and their experiences in academia.

The panel was very helpful in making me think about my future

The talks were very interesting. I wish there were more presenters for medical programs since there were a lot of premeds there.

Understood some new topics

Non-Undergraduate Participants

My students were able to present their research, network, and get a better sense of the mathbio landscape.

Presentations and the networking activity.

Students presenting

Talks and posters

The conference gives a forum for the students to present - for many of them this is the first conference they participated in. They get very valuable feedback, and the conference has a nurturing atmosphere, where the emphasis is on helping and mentoring students.

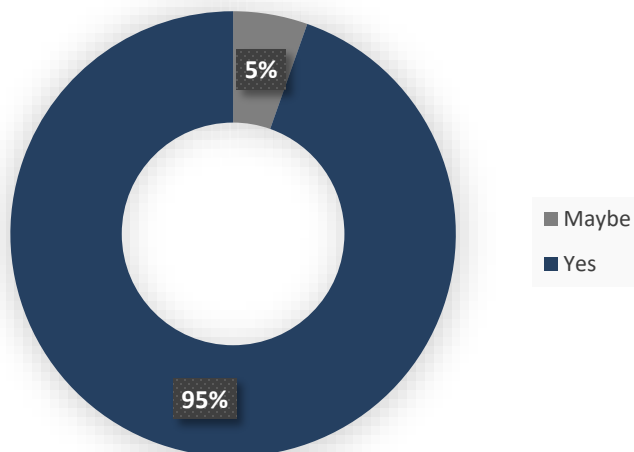
The discussions during poster sessions.

The poster session. It allowed for discussion of research, rather than the limited interaction that occurs in the question and answers following an oral presentation.

The small size allowed us many opportunities to network and get feedback on research and career advice

Figure 5. Do you feel the conference was successful in achieving its goal of creating a forum through which undergraduates can present research and make new connections at the interface of math and biology?

Undergraduate Participants



Please explain:

I feel that the environment was professional without putting too much stress on me to perform perfectly. This was an easy-going conference that made me feel comfortable while presenting.

I had an amazing time sharing my research with others and learning about other ways to apply similar methods of research.

I liked the way the conference was scheduled

I think it was a great example of the intersection of math and biology, maybe even more of a focus on technology/ computer science

I thought the matching game "set" was perfect because it encouraged all of us to interact and see what we have in common with the other attendees.

The collection of students at the conference from different schools in different parts of the country made making new connections a satisfying experience. It was nice to meet and interact with students outside of my school.

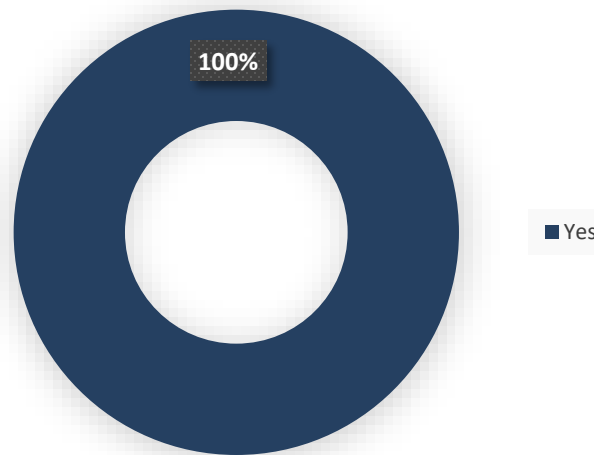
The projects apply mathematics into different kinds of biology.

They introduced a lot of interesting subjects to me.

This is a very welcoming opportunity for students to give oral presentation about their research.

With the panel discussions, students are able to engage with professors and researchers who are more than willing to provide advice or answer other questions

Non-Undergraduate Participants

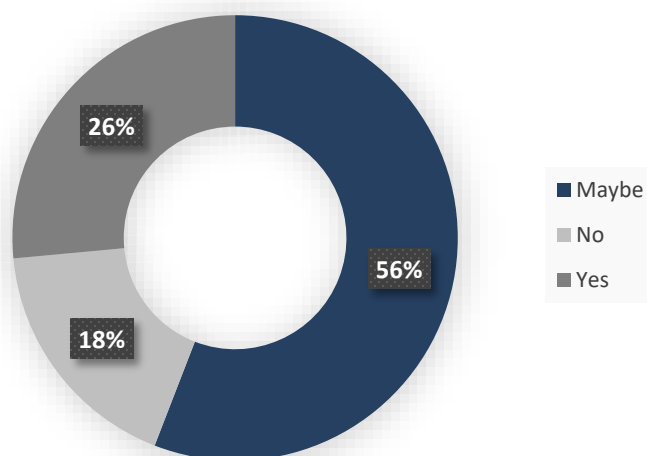


Please explain:

This is a great forum, year after year. I have very positive feedback from my students who participated.

Figure 6. Do you feel that the exchange of ideas that took place during the conference will influence your career plans?

Undergraduate Participants



Please explain:

Especially with the SET game, undergraduates were able to network both with students and professors. This allowed for the exchange of ideas.

Got many new ideas but I will see...

Hearing from a professor at another school and a woman who works at a national laboratory, I see there are many different career opportunities

I am leaning more towards biology side of biomathematics.

I am planning on attending medical school next fall, and that wasn't changed by the conference. However, since I plan to conduct and evaluate research throughout my career, this conference was very useful.

I do not feel like I would enjoy a math-based science career.

I don't yet know what I am going to do for a career, but I took a lot out of conversations and talks that occurred during that meeting.

I feel that I will definitely try to use more math connections in my career.

I got an idea of how to present research and I got good advice from upperclassmen

I had already heard most of the advice given during the grad school panel; hearing the advice again did not change my career plans.

I have a better understanding about math/biology, but I don't think it influenced me to move more toward it career-wise.

I learned some interesting things about research and graduate school. However, I don't know what my career plan is yet, but I did learn more about the possible options.

I plan to go to medical school

I saw some new areas in math biology that I might want to pursue.

I think so, I really valued hearing from people in this field and talking to professors in graduate programs i am interested in

I think the conversations confirmed my areas of interests and areas I'm not very interested in.

I'm not really a math modeling person, but it was really cool to learn from others.

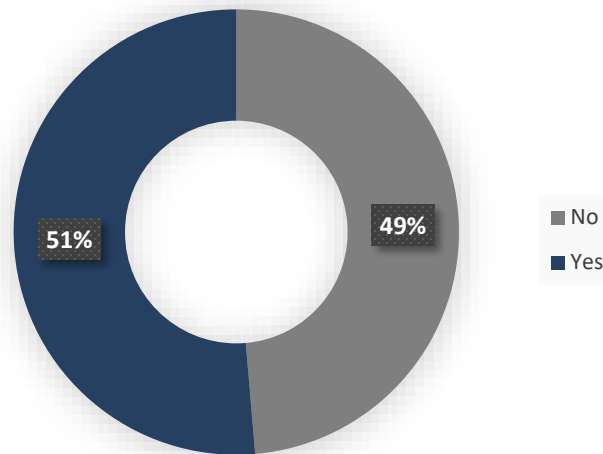
It gave examples that I could do with math modeling

Some of the presentations have influenced my course selections. I think the panel discussion was also helpful in reassuring me and my life choices.

The career panel was very effective, since I was able to hear from people who did not go into teaching, so I am able to think about my options more clearly.

Figure 7. Did attending the conference impact the likelihood of you applying to graduate school?

Undergraduate Participants



Please explain:

Already planned to apply to med school

Applying

As indicated, I was already planning on attending medical school.

Before attending the conference, I already planned to apply for graduate school.

Had no effect

I already decided

I am in the medical school path.

I am more likely to

I am now contemplating taking a gap year between undergrad and graduate school.

I am still undecided about grad school - I am looking forward to working as a mathematician.

I had already planned on applying to graduate school

I have already been accepted to my choice of pharmacy school.

I knew I wanted to attend graduate school before this conference.

I was already in the process of applying to graduate school before attending the conference.

I was already quite sure I wanted to attend graduate school.

I was planning on graduating

I would like to go to grad school now.

It confirmed that I want to attend graduate school.

It has given me the option. However, I am still set toward other plans.

It reinforced my belief that I would like to go to graduate school

My goal has always been to go to grad school

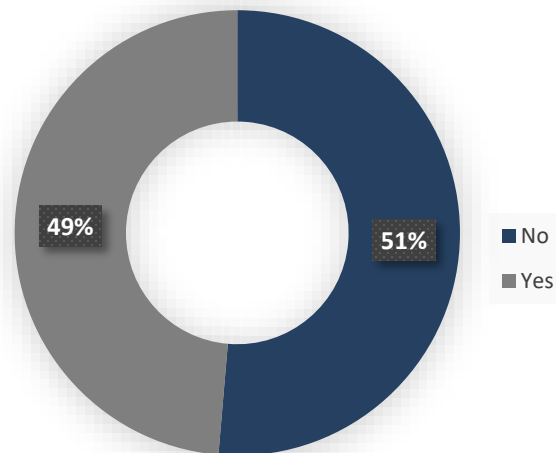
Slightly more likely to attend graduate school, but I am also aware of other options that I have

The conference made graduate school seem like a more viable option for those from smaller universities

While I learned more about grad school, that decision will be based more off of the opportunities that are available to me, not this conference.

Figure 8. Did attending the conference increase the likelihood of you considering the University of Tennessee as a graduate school option?

Undergraduate Participants



Please explain:

(Med school plans)

Getting to talk with some of the heads of different programs i didn't know existed was very insightful and made me feel a bigger connection to UTK

I already decided.

I am considering applying to UT Knoxville because I really like the friendly atmosphere.

I do not want to go out east.

I don't know that I will, but I had not really heard anything about the University of Tennessee before this conference.

I had my graduate school selection chosen prior to attending the conference and did not want to deviate from my selection

I have already been accepted to the UT Pharmacy school.

I like Tennessee

I met with many professors and I really like the school!

I plan to go in my home state

I spoke with one of the representatives at the graduate fair.

I talked with the GST and are applying to them

I visited and talked to professors at UTK while I was there talking about the math graduate program

I was already planning on applying to UT, but meeting with my prospective advisor again after the conference reminded me of why I wanted to come to UT.

I was quite impressed by the campus

I was really interested in the genetic program.

I will not apply for graduate school.

I would not have considered it before

I'd prefer to go to a graduate school in the north (closer to home).

It has shown me there are lots of opportunities for research at UT.

Knew more about UT

Probably won't go to graduate school for a few years after I graduate. I'm still trying to narrow down a specific field I'm interested in.

The programs at University of Tennessee aren't in the areas that I'm interested in.

UT is probably a good school, I didn't see anything that made me want to go there for sure.

Figure 9. What would you change about the conference?

Undergraduate Participants

I did not like the card game. It was too difficult to find 2 other matching people. I feel better and more connections could have been made if you only needed to match with another person. I did get a little tired listening to nonstop presentations, so little breaks in between (not just 5 minutes, but a real activity) would be helpful.

A wider selection/variety of graduate schools during the graduate school fair.

Allow more time for students to socialize with each other and faculty members at the conference instead of having presentations one after the other.

Breaks in between longer talks

I can't think of anything I would change, I enjoyed it the way it was

I don't think I would change anything.

I think it was very well planned and don't have much criticism. Wonderful job!

I think it would make more sense to have icebreakers before all the presentations rather than after a few on the first day

I would have liked some feedback on my presentation, although I did really enjoy the laid back environment that not being judged created. It made it feel as though we were just all getting together as a group of people that genuinely loved the topics being discussed. So, I think I would have liked feedback if anything, but I also liked not having it.

I would like to split us into different discussion groups.

I would make the panel discussion more diverse and helpful. I think it might be useful to have a more structured discussion that is followed up with questions instead of opening with questions.

I would maybe put more breaks in between presentations because it felt long and tiring at some points.

I wouldn't change anything.

Make it bigger!

Maybe extend the length of it to have more activities for socializing/ networking like the SET game

Maybe set the poster presentations last in both days so the people who were presenting last won't have a bad feeling about the low number of audiences.

More science

Nothing

Nothing it was very informative

Possibly have an award for the best poster and talk.

Possibly have more breaks

Slightly longer poster presentation sessions

Some presenters did not seem prepared

The "get to know each other" game was really forced.

The division of two rooms - if one was interested in both, then it was hard to decide.

The pace between presentations could be slowed a bit

The undergrad research presentations could have been better - perhaps by explaining an overview of what the topic was about and why it was exciting, before going into slides on the mechanics of the research. Dr. Evans had a fantastic presentation and hers was very engaging and relatable, which I felt was what a research presentation should be about.

Non-Undergraduate Participants

I'd probably change the networking activity. Maybe I would have had prearranged seating at lunch so that students would sit with a faculty member, and then there would be discussions/networking facilitated by the faculty member. The panel discussions were useful, but there were too many people for everyone to have a chance to introduce themselves. I would have liked to have seen more of a "lunch with an expert"-type of event.

Nothing

Nothing

Nothing.

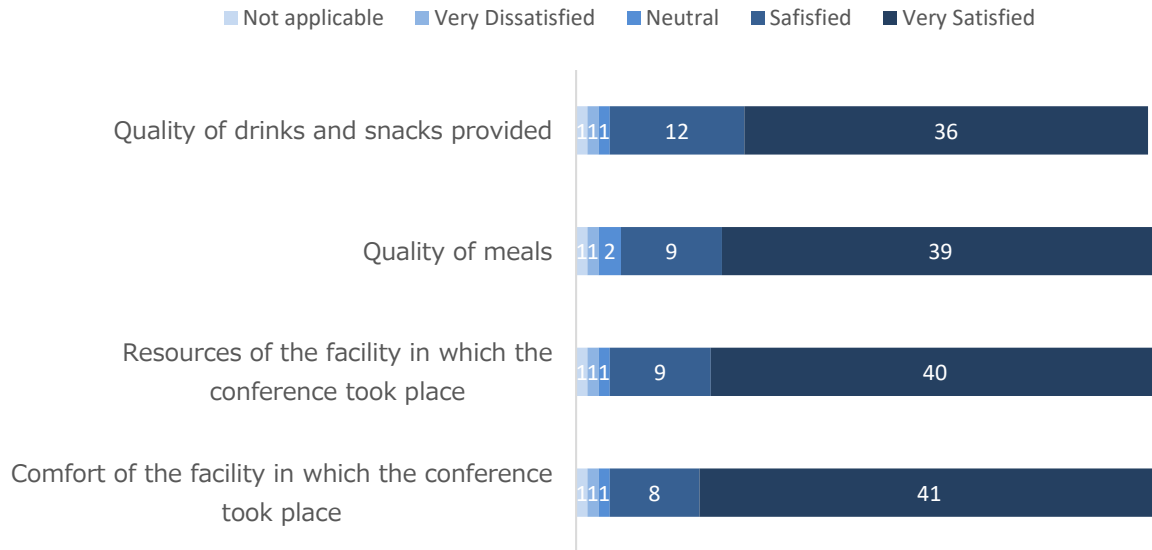
Nothing. :)

Participant list

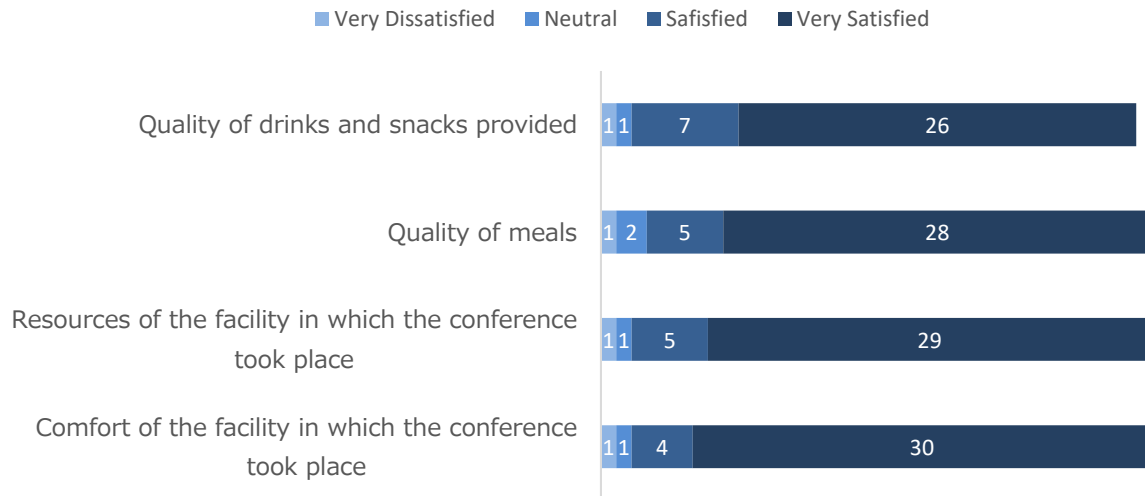
This time there were no medical/veterinary school representatives in the panel - that's usually useful for students, since they are interested in those areas.

Figure 10. Please indicate your level of satisfaction with the conference accommodations:

All Participants

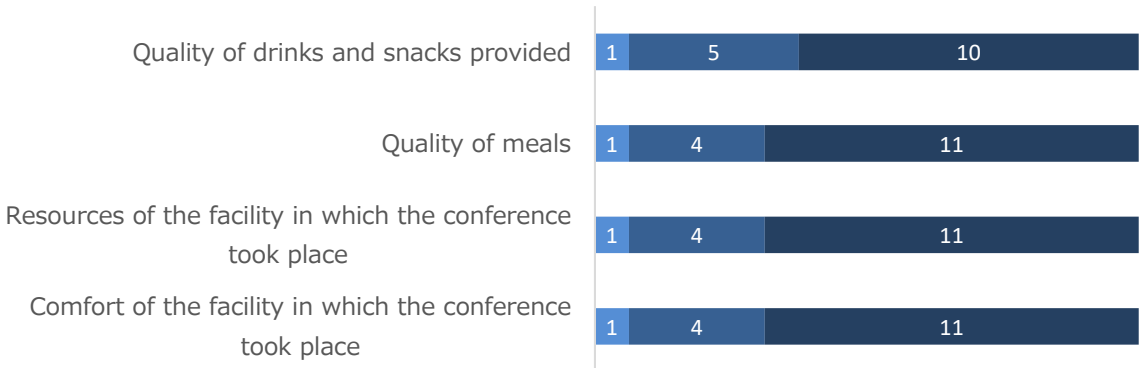


Undergraduate Participants



Non-Undergraduate Participants

■ Not applicable
 ■ Satisfied
 ■ Very Satisfied



Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to conference participants:

Hotel and revenue was great

I liked all of the resources.

I think it would be better if NIMBioS funded travel was paid upfront by NIMBioS rather than reimbursed. This would make it less of a financial burden for students.

I thought everything ran smoothly.

More of a selection for breakfast

More snacks maybe.

More vegan options

Please keep the free water bottles. It was very nice to have.

Figure 11. Please provide any additional comments about your overall experience with the conference:

Undergraduate Participants

Getting to see the math that I've used in classes used in real life was very exciting.

I absolutely loved it. I would not change anything about the experience that was created at this conference.

I think the conference was a very great experience for undergraduates to present their research work. I didn't think my interests and research project allied very well with the majority of the research presented so it was hard to have discussions with other students about my research.

Overall, the conference was a fantastic opportunity for me to share the results of my summer research, network, and improve my ability to understand and evaluate scientific research.

The food and accommodations were wonderful!

Very nice conference. Maybe try to get a more equal mix of math and biology presentations.

Very positive and pivotal experience for me!

Non-Undergraduate Participants

Great conference, thanks for organizing it!

None

None.

The conference was great. I am sure they did not have tons of resources and the most of it.

This is a great conference! I look forward to attending next year!

Very grateful for this conference!