Participation in Scientific Meetings or Conferences

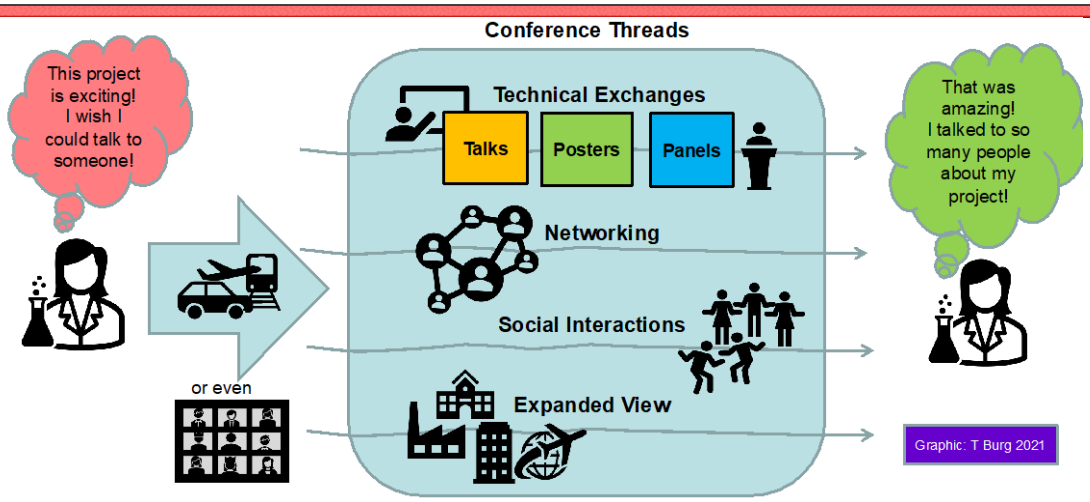
Scientific meetings, workshops, or conferences come in various sizes and scopes and occur all over the world, throughout the year. These meetings are special events designed to bring together many stake holders in a particular research field in a single place to communicate advances and recent developments in the field of interest. These conferences may be attended by students, faculty, clinical professionals, industry employers, government officials, or vendors from industry. The level of expertise is often diverse at such meetings and they present a unique opportunity for the presentation of research through poster sessions, oral presentations, or design competitions.

What is a Scientific Meeting?

Scientific meetings (e.g. workshops or conferences) have various sizes and scopes and occur all over the world, throughout the year. These meetings are special events designed to bring together everyone in a particular research field in one place to communicate advances and recent developments in the field. These events are usually hosted by a professional organization (e.g. the Society For Biomaterials, IEEE, the Orthopaedic Research Society, the Federation of American Societies for Experimental Biology) and they may be attended by members and non-members of the Societies, including students, faculty, clinical professionals, industry employers, government officials, or vendors from industry. Vendors are representatives from companies that sell products (like equipment, labware, books, etc.) related to the research that's being presented; these companies pay a conference "sponsor" fee to have the opportunity (including an informational "booth") to introduce researchers to their company and products/services. The level of expertise is often diverse at such meetings and the meetings present a unique opportunity for the presentation of research through interactive sessions involving content such as poster presentations, oral presentations, or design competitions.

Why Attend a Scientific Meeting?

- Technical Exchange: Share knowledge and learn new things through oral and poster presentations, workshops, and panel discussions
- Socialization: Attend dinners, lunches, breaks, field trips, to put faces to names and create social bonds
- Networking: Scan job boards, hear word of mouth about trends and updates, and meet new people who can help find new opportunities
    - For students or faculty members: Meet potential collaborators with synergistic expertise to pursue additional research goals
    - For students: Meet potential employers or future research advisors
    - For faculty members: Meet potential student researchers
- Expansion of Your View: **T**ravel to see where your colleagues live and work. Visit local laboratories, companies, and institutions



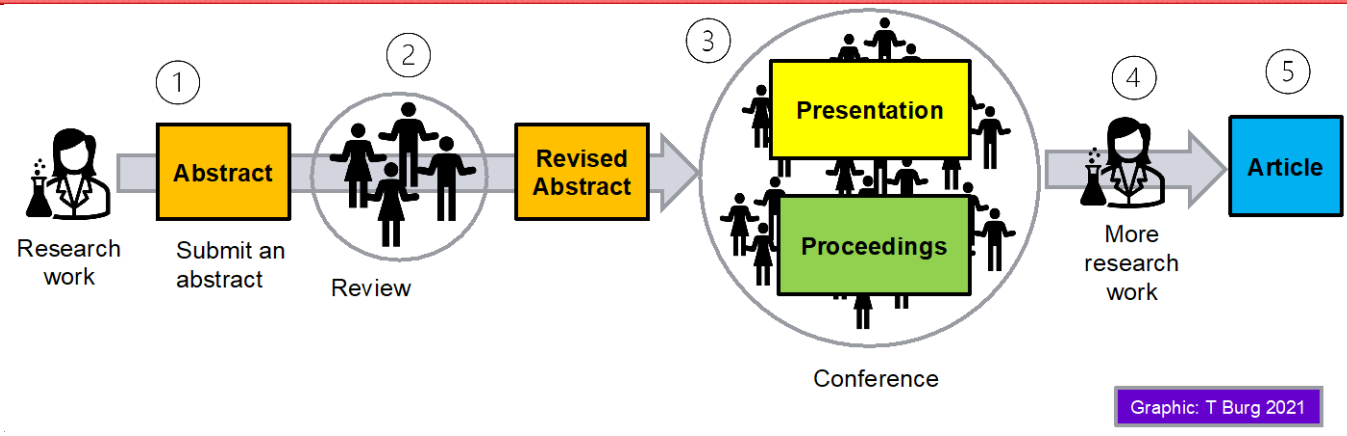
Who Sponsors a Scientific Meeting?

Typically, professional organizations sponsor conferences related to the interests of their members.
Example: IEEE Engineering in Medicine & Biology Society (EMBS) is the world's largest international society of biomedical engineers. The 10,000 members reside in some 97 countries around the world. They host:

- A large annual meeting for all members: Annual International Conference of the IEEE Engineering in Medicine and Biology Society
- Conferences with specialized technical focus
  - IEEE EMBS Annual International Body Sensor Networks Conference
  - IEEE EMBS International Biomedical & Health Informatics Conference
  - IEEE Healthcare Innovation and Point of Care Technology Conference
  - IEEE EMBS Micro & Nanotechnology in Medicine
  - IEEE EMBS Special Topic Conference on Neural Engineering
- Conferences with specialized technical focus that they co-sponsor
  - IEEE Biomedical Circuits and Systems Conference
  - IEEE International Conference on Rehabilitation Robotics
  - IEEE International Conference on Biomedical Robotics and Biomechatronics
  - IEEE International Symposium on Biomedical Imaging

What is the Process to Present?

1. Researchers generally present intermediate results or new ideas at a conference as the means to alert the community to the ideas and to get feedback. The first step is to capture the idea as an abstract, which may be a paragraph, single page, or multiple pages, depending on the conference.
2. The conference committee decides if the idea fits with conference theme/goals. Technical review by peers occurs (researchers at other institutions and organizations).
3. Researchers present at the conference. All conference abstracts are published as a book called "Proceedings" (online and/or hard copy). The Proceedings serve the important purpose of disseminating the research presented at the conference as a resource to attendees as well as to those researchers who were not able to attend physically.
4. Researchers incorporate feedback to complete the research.
5. Researchers publish a journal article with final results



Goals for Attendees of Scientific Meetings:

1. Observe and learn the current state-of-art in your respective field of research
2. Meet potential collaborators with synergistic expertise to pursue further research goals
3. Present/disseminate scientific research
4. For students: Meet potential employers or future research advisors
5. For Faculty: Meet potential student researchers

Tips for Attendees of Scientific Meetings:

Scientific conferences can be a tremendous opportunity for professional development and growth as a researcher. Many of these meetings can be large in number of attendees and potential sessions. Below are several tips for making the most out of these opportunities.

1. Establish a major objective for attending the meeting (i.e. recruiting, learning about research, etc.) While several objectives may be important, having a primary objective may help to organize the time spent at each part of the conference.
2. Using the program guide, develop a plan for people with whom you would like to meet and/or sessions you would like to attend. This can be done during the first day at the conference, or before arriving.
3. Create a short summary of each item on your personalized agenda. If you attend a session, write some short notes about what you learned. If you meet with a colleague, write down some notes about the happenings of the meeting and steps moving forward.
4. When exchanging business cards, make a note on the front or back of the business card that will remind you of the topic of conversation and how you need to follow up with this person.
5. When attending sessions or viewing posters from other researchers, make a list of questions to ask in follow up communication. Because of the large volume of information and attendees, it may be difficult to ask all of your questions in the moment. Following up with the presenter is a good way to build collaborations and have more in-depth conversation.
6. In addition to program guides, many scientific meetings publish a record of the presentations given during the meeting in a document called a Conference Proceeding. The Conference Proceeding is published by an editorial board like a scientific journal, and in many cases, the process of peer review (see Peer Review materials in the Scientific Community Module) is similar for acceptance of a conference abstract. Proceedings have a wide range of formats, including short abstracts, one-page abstracts, short articles (< 4 pages), or full articles. These proceedings serve the important purpose of disseminating the research at the conference to those that were not able to attend physically.