IEEE RAS SAC ICRA Report

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At the beginning of May, the annual flagship conference of the Robotics and Automation Society—the ICRA—was held in the gorgeous city of Anchorage, Alaska. It was a great event where a lot of interesting work was presented both by senior and junior researchers. Besides the sharing of research results, one of the benefits of being all at the same place at the same time is the possibility for students to get to know each other and come into contact with leading experts in their fields of research. To this end, the Student Activity Committee (RAS SAC [1]) organized a number of activities complementary to the conference program.

The first program we had was FIBRS [2], continued from the last IROS conference. The aim of FIBRS was to let Ph.D. students act as a student cochair in a session of their choice. Several people jumped at this opportunity. Thanks to all the session chairs who freed up a lot of time to meet with their student cochair before, during, and after the presentations. All the students appreciated the enthusiasm that was displayed and maybe/hopefully some fruitful relationships resulted from these meetings.

To let students also interact with each other, outside of the technical sessions, several informal social activities were organized. Monday, we started out with a “traditional” Alaskan lunch, a hot dog made of reindeer meat. This quickly became known as the Rudolph special. That evening, a large group of people, who could not stay for the weekend, went to hike Flattop Mountain, a steep hill still covered with snow, just outside the city. In the meantime, some other people met in a local bar for dinner and some drinks. Recognizing that the conference organization also had a busy schedule, the next event was not until Thursday evening, when we went with a group of about 30 roboticists on a magnificent pub crawl to celebrate the official ending of the conference. Friday evening, after the end of the last workshops, we had a great time bowling. After a bit of rest, on Saturday, morning a trip to the local museum was scheduled.

Unfortunately, the science display was still closed, but we got to see some great Alaskan art and learned a lot about its history. In the afternoon, a large group of people felt like doing some physical exercise after an entire week of sitting, so we went to do the hike at Flattop. After we saw some magnificent scenery and got wet, everybody made their way safely down the mountain, and we wrapped everything up by having a nice dinner together.

All in all, we were very pleased with the large number of people at each activity, and we hope that everybody enjoyed themselves. If you are interested in pictures, check it out at [3]. Everybody is welcome to share their photos and experiences through the SAC wiki page [4].

The SAC is now busy organizing similar events for IROS this October, in Taipei. Read the “Student’s Corner” column for more details, and follow our monthly newsletter. If you have any comments/suggestions or would like to become involved for the next conference, please don’t hesitate to contact us. We will keep you posted on the plans through all communication channels and are looking forward to welcoming all RAS Students in Taipei.

References

Successfully Presenting Your Research at Conferences and Competitions

Alejandro Perez

Your research, as groundbreaking as it might be, heavily relies upon its presentation. This guide will give you a few pointers on what you can do to successfully present research papers and posters at conferences and competitions.

All negative stereotypes commonly associated with engineering have become obsolete. Modern engineers are expected to develop advanced social, communication, presentation, and leadership skills. The career of an engineer is gradually reading more like that of an athlete rather than what is expected from a scientific profession. It is not just what projects you worked on anymore, but how
they succeeded, the part you played in achieving that success, how
the findings will help the scientific community, and the skills you
used to make it all happen. Similarly, publishing and presenting
your work at conferences and competitions is more than necessary,
it is crucial to the development of your career and the continuation
of your research. However, winning an award for your poster or
paper is not everything. In fact, you can greatly progress career-
wise without winning an award if you make the most of your
interaction with other researchers and present your research effec-
tively. Here are some tips I have used in the past to do just that.

A Priori Reconnaissance
There is a lot that can be done before the actual event. The
obvious thing that comes to mind when thinking about getting
prepared before the event is practice. However, researching differ-
ent aspects of the event can help you decide what needs practice.

Become Part of the Theme
Many conferences focus on a particular topic or area within
your field. For example, ICRA 2010 theme is “50 Years of
Robotics,” and CASE 2010 theme is “Partnership for Au-
tomation.” Your presentation should be aimed at answering how
your research is part of the theme discussed at the conference. By
adding this perspective to your introduction, you will create an
upbeat sentiment, grab people’s attention, and prepare them
to better absorb dry facts and figures. Additionally, it is very
important to focus on how the results of your research project
will help the scientific community further advance regarding the
theme. Dare to share your visions about your research with the
community without boosting your work too much. Well-expe-
rienced professionals look for students with concrete perspec-
tives who share a sophisticated view of the field’s future.

Rivalry Is Your Main Rival
Although some conferences have an actual competition, fellow
presenters are the exact opposite of a rival. You will be surprised
to learn that one of the most beneficial parts of participating in
an event like this is actually meeting other researchers, learn-
ing about the most recent developments in the field, and
exchanging contact information for future collaborations.
The mood at these events is less like “who is the best presenter
here?” and more like “I want to learn as much as I can about all
the research.” If possible, read the list of research projects to be
presented. Reading their papers beforehand (or their abstracts) will
probably make you curious about certain things. Fortunately, you
will actually have the chance to discuss them. Being knowledgeable
about other people’s work will help you leave a great impression.
Take notes! Not just about the topics, but also about the presenta-
tions. Evaluate your own performance as well and save your criti-
cism for your next opportunity. Rereading your notes before the
next occasion will help you avoid committing the same mistakes.

Adapting Your Presentation in Real Time
Preparing only one type of presentation will limit you to only
one set of circumstances in which you can effectively present
your research. Of course, most of your effort should go to pre-
paring a presentation that fits the time interval you are given,
but you should also prepare to compress that presentation if
time becomes limited (something more common than you
might think). A key way to create a presentation in your head
that can be adjusted on the fly is by focusing on areas that need to
be covered instead of practicing what you actually say. What you
learned by researching the event will give you an excellent idea
of what should be prioritized. This knowledge in conjunction
with understanding the basic parts that are important about
your research (motivation, problem, solution, how you did
it, results, and conclusion) will give you the ability to present
completely within any time interval and with no need for
memorization. Here are some common time scenarios:

The 30-Second Talk
This is most common at poster presentations. Session chairs are
sometimes assigned to review too many posters or have lingered
on a certain one for too long. You have to be ready to give only
the most crucial information about your research, without sound-
ing rushed and while keeping your excitement toward your
project. A common misconception is that these types of talks
are not important and irrelevant. Nothing could be further from
the truth. Not only will you have to present like this a lot, most
attendees will only have this amount of time to spend with you.
Be prepared to exchange contact information with those inter-
ested in the topic but not able to spend enough time with you.

The “In Order to Finish All Presentations Before X,
All Talks Will Be Limited to Five Minutes” Talk
This is another common scenario. It usually happens when
attendees spend too much time during the questions round
and gradually limit the time available for the remaining speak-
ers. This amount of time requires practical trimming of the
motivation, problem, and solution with an emphasis on how you
did it, results and a mix of conclusion, and why the project is
important to the scientific community. You should always create a backup-streamlined presentation to be used in this situation. Skipping slides that are being projected makes the attendees feel like they are getting an incomplete version of your presentation. Similarly, exiting full-screen mode to browse for a particular slide will make you seem unprepared and unprofessional.

The Perfect 20–30-Minute Talk
If you are assigned as one of the first to present, you can expect to have the entirety of the time available. However, this can sometimes make you lazy with your presentation skills. Stay sharp, don’t linger, cover the points that you have decided are the most important. Remember, you are talking to a group of people that is very interested in what you have to say about something you truly love. Stay excited and motivated about your work and let them know how beneficial it will be for the scientific community. Avoid being pompous. Humility and a good collaborative attitude are crucial to your success as an engineer. Finally, remember to explain the technical aspects of your research in such a way that everyone can understand. Imagine that you are talking to a group of friends that expect you to be very professional. This is not something far-fetched; you will develop professional relationships with some of the people listening to your presentation. Always begin with a general introduction to your topic that allows people to understand the core of your work, even though it is not exactly their specialty. Save some interesting pictures, thoughts, and results for the end, to provoke the audience to get in touch with you afterward.

No-Go Zones
If you clearly understand what is most important for you to say and how to say it, your presentation will flow naturally, regardless of how and when you give your talk. However, there are some things you should keep in mind at all times; here is a quick list of things to avoid.

- **Reading and memorizing**: Reading your slides is never a good idea. In fact, you should try to avoid readable slides as much as you can. Memorizing is equally hurtful. It will limit the fluidity of your presentation, open you up to sudden freezes, and make your speak in a monotonous way. Remember, you are talking about robots, not trying to become one. However, there are two parts of your talk that will greatly help to have memorized before. One is the way you will begin the presentation, and the other is how you will end it. This will eliminate your initial stage fear and smoothly lead you to becoming familiar with the situation.
- **Ineffective slides**: Slides are a visual aid, not the presentation itself. Don’t segment your paper into slides. Instead, use the slides to demonstrate how things work. Use animations, short movies, images, equations, graphs, and keywords. Also, make them bright and colorful not dark and squint inducing. This is especially true for posters. A colored collage of your research paper is not practical and will drive people away.
- **Unmotivated tone, fading voice**: You are talking about what you love to work on and explaining what great achievements have come from it. Be excited about it. You are literally sharing it with the scientific community. Make it sound that way.
- **Moving around**: For some reason, some people move around a lot when they get nervous. I am not talking about trembling. It’s more of rocking back and forth or tapping a foot repeatedly. This will affect the way your speech sounds and make you look very unprofessional. Typically, it is not something done purposely. Therefore, just thinking about it should help you avoid it.
- **Pauses**: Why would someone pause when they are explaining something? This only happens when you memorize exactly what to say. Try to avoid doing this and just decide on which points you want to cover. Think about this: you would never pause when you narrate a movie to a friend and this is not that different from that. If you are
prone to pauses take a water bottle with you. If you feel like you are about to pause, go over to it and drink. Nobody will notice, and you'll know what to say when you are done.

- **Technology and logistics**: Make sure you are familiar with the room, the projector, the remote, and the pointer—This can save you a lot of trouble. You must decide beforehand where you want to stand, keeping in mind whether you need to step up to your computer to change slides, or not. Make sure you turn off your mobile. Also, get familiar with the way the chair signals the elapsing time. Don’t get frightened by a gong, or don’t overlook a paper sign shown for you.

**Future Work**

Hopefully, this quick guide has helped you realize how important participating on these events is and how easily it is for you to enjoy and do well at them. I avoided talking about obvious suggestions like studying your research, understanding the methods used to solve your problem, and reviewing everything with collaborators, but if you are reading this, you are smart enough to figure that out. In my experience, presenting my work with a good and humble attitude at conferences has been the single thing that has opened the most career paths for me. It is always a good idea to search the internet for tutorials, ask faculty members for advice and to watch skillful presenters. However, you must always remember to be genuine and to avoid copying the style and techniques of other presenters. Remember, being yourself and speaking naturally is an essential part of a good talk. Finally, the most beneficial part of my experience has not come from winning competition and presentation awards, but from meeting new people, getting advice from judges, and learning about what is currently being worked on in the field. If you decide to get involved with the research community, I can safely assure you that you will obtain the same results.

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**P R E S I D E N T ’ S  M E S S A G E**

(continued from page 6)

We hope that these changes will improve your conference-related experiences.

Nikolaos Papanikolopoulos
Vice President for Conference Activities

**Industrial Activities Board**

The Industrial Activities Board (IAB) will continue the focus on delivering outcomes in four areas of activity for the IEEE RAS.

**IEEE/IFR Innovation and Entrepreneurship Robotics and Automation Forum**

The IEEE RAS is working cooperatively with the International Federation of Robotics (IFR) to support activities that promote innovation of new robotics products and services. The IEEE/IFR Invention and Entrepreneurship Robotics and Automation Award that is part of the joint forum has become a highly respected award in the robotics community, recognizing outstanding achievements in bringing new products and technologies to the market. The Innovation and Entrepreneurship Robotics and Automation (IERA) Forum 2010 was hosted by IFR, in conjunction of ISR 2010 and Robotik 2010—6th German Conference on Robotics, 7–9 June 2010, in Munich, Germany, with six Finalists who were judged for the prestigious award that comes with a US$2,000 prize.

**Technology Roadmaps**

An important public relations role for the robotics community is to inform the general public about the likely future trends of robotics and automation technology. Roadmaps for robot technology and products with 5–10 and 20-year timelines are being prepared by both government and industry with considerable work done in Korea, Japan, United States, and Europe. The IAB will continue compiling road-mapping material and resources that are published on the IEEE RAS Web site.

**Standards**

Much of today’s robotics is based on experimental demonstration platforms. To transform robotics into a full product, service-based industry will require industry standards. There is a general expectation that robots will work and operate in public places. Unless robots meet stringent safety and environment standards, deployment in public places will not be possible. The IAB Standards Committee, chaired by Raj Madhavan, that will work closely with IEEE standards. The new focus of the Standards Committee is on data standards that will allow the development of common platforms for mobile robot maps.

**RAM Column**

The IAB will work closely with the editor-in-chief of RAM, Peter Corke, to continue publishing a regular one-page column on Industrial Activities. The column will report on innovation on robotics and automation, results from the IERA forums as well as progress in the road-mapping and standards activities of the IAB.

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