

# Becoming a Plenary or Keynote Speaker in an International Robotics Conference

## Perspectives From an IEEE RAS Women in Engineering Panel

By Julie Stephany Berrio Perez<sup>1</sup>, Efi Psomopoulou, Heni Ben Amor, and Daniel Leidner

The IEEE Robotics and Automation Society (RAS) Women in Engineering Committee organized a virtual event for the 2022 International Conference on Robotics and Automation (ICRA) and was honored to host Lydia Kavraki, Katherine J. Kuchenbecker, and Vandi Verma as keynote speakers and panelists. These distinguished women have made significant contributions to the field of robotics and have been recognized for their exceptional achievements in research and education: they have all been past keynote or plenary speakers at a major international robotics conference. The presenters were invited to provide their valuable insights as women in the robotics field, engage with the attendees in meaningful conversations, and share their experiences and expertise. The event was held online in Gather, prior to the 2022 ICRA conference, to offer a platform for those unable to participate in the in-person event and to act as an icebreaker for early-career researchers who might be attending ICRA for the first time (Figure 1). The event also enabled attendees to connect and network with other professionals in the field, as well as to contribute to the discussion on the critical topic of diversity and inclusivity in robotics.

The event started with the speakers Kuchenbecker, Kavraki, and Verma (speaking order), each presenting

lessons learned over the course of their careers and what they would do differently in hindsight. They also participated in a panel answering a curated list of questions provided by the audience prior to the event. The speakers encouraged young people to take advantage of opportunities, speak up, advocate for themselves, and not be afraid to ask for help and seek mentorship. They also mentioned the importance of being aware of unconscious bias and being proactive in creating a more inclusive and diverse environment. In this column, we will explore some of the

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ideas they presented on cultivating a passion for a research subject as well as having the knowledge and enthusiasm to share it with others.

### WHAT DOES IT TAKE TO BE A KEYNOTE SPEAKER?

According to Vandi Verma, Deputy Section Manager for the Mobility & Robotics section at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory, California Institute of

Technology, in Pasadena, CA, USA, a few key factors contribute to giving rich and engaging talks. Verma began by discussing the importance of an *aliveness*



**FIGURE 1.** The invited speakers and some members of the Women in Engineering Committee in the auditorium space of Gather town.

*detector*. This, she explained, is a sense of being alive and passionate about what you do, which is often triggered by a specific moment or experience. This can be anything from a breakthrough in your research to a moment of intense focus and concentration on a project. She suggested that these moments can fuel your passion and give you the drive to keep working on something that excites you. Once you learn how to tune into your *aliveness detector*, Verma says, you can use it to choose which subjects you want to *deep dive* into. To have something to talk about, you need to have a deep understanding of that subject. This requires immersing yourself in the field, studying it, and gaining expertise over time. By doing so, you can speak confidently and authoritatively about your subject. Another factor Verma highlighted is *curiosity*, which can also be translated into networking. Being curious about related fields and other people's work is essential. In this way, you can find connections between different areas of knowledge and broaden your perspective. This can be particularly important when speaking to a broader audience beyond your immediate field. The last thing that Verma wanted to point out was the desire to *make a difference*. This comes from impatience with the world and the desire to see change happen faster. You can create a movement that drives change and innovation by speaking out about your ideas and engaging others.

## BALANCING PERSONAL GROWTH, LEARNING, AND GETTING THE JOB DONE

Many researchers strive to achieve balance in life, especially when balancing personal growth, learning new things, and getting the job done. However, Lydia Kavradi, Director of the Ken Kennedy Institute at Rice University, in Houston, TX, USA, and Katherine J. Kuchenbecker, Director of the Haptic Intelligence Department at the Max Planck Institute for Intelligent Systems in Stuttgart, Germany, said that the reality is that achieving perfect balance is nearly impossible, and it is important to accept that things are not always going to be entirely balanced. In that sense, Kavradi and Kuchenbecker gave their perspective on this topic in the shape of tips and strategies that can help balance personal growth, learning, and getting the job done:

- *Structure your day or week:* This allows you to spend time on things that are important to you, whether they are work-related or not. For example, you could set aside time in the morning to spend with your family, or go on vacation with your loved ones. Similarly, you may want to limit your time on urgent but less-important tasks and allow more time to focus on things essential for your work or personal growth.
- *Delegate tasks and trust others to help you get things done:* This requires collaboration and mentoring, which can be challenging to

learn. However, by mentoring others, you can step away while still trusting that the work will continue to be done. This strategy may not be applicable to early career researchers, in which case the suggestion would be to focus on learning to prioritize tasks and seek help when needed.

- *Learning new skills:* It is essential to stay current on industry trends and knowledge by learning from others in your field, attending workshops, or participating in online courses. By stepping outside your comfort zone, you can gain new perspectives and insights to help you solve problems and grow professionally.

## SETTING BOUNDARIES AND PRIORITIZING GOALS IN YOUR PERSONAL LIFE

Our three speakers acknowledged that it can be very tempting to say “yes” to every new opportunity or request, especially in the early stages of your career. However, constantly overextending yourself can lead to burnout, stress, and a lack of progress toward your long-term goals, making it crucial to set boundaries and prioritize your goals in your professional life. The speakers suggested a few strategies to help toward that goal:

- *Give yourself time before making a decision:* When a new opportunity or project is presented to you, take some time to evaluate how it aligns with your current goals and priorities. Consider the potential impact on your workload, schedule, and mental health. It's necessary to say “no” sometimes, especially if an opportunity doesn't align with your current season of life or goals.
- *Communicating your boundaries and limitations to others is also essential:* Let your colleagues, boss, or department know what tasks you are and aren't willing to take on. This can prevent misunderstandings and ensure that everyone is on the same page. Be assertive but respectful if you need to push back on a request or project. Explain your reasoning and offer alternative solutions if possible.



**FIGURE 2.** The speakers engage with attendees during the breakout session on work-life balance.



**FIGURE 3.** The networking/mentoring breakout space.

■ *Promote and advocate for others:* If you're presented with an opportunity that doesn't align with your goals or season of life, consider recommending someone else who would benefit from it. This helps others and builds trust and goodwill in your professional relationships.

## NETWORKING

The event concluded with a networking session in the cafe area of the virtual space, where three "breakout" areas were set up on the topics of networking/mentoring, work-life bal-

ance, and education so that attendees could converse with the speakers in a more informal setting (Figure 2). This format allowed attendees to talk directly with the speakers, as well as build connections with other peers. The breakout rooms were a valuable addition to the event, as they facilitated more in-depth, personal conversations and let the experts share further insights (Figure 3). The speakers discussed their experiences and challenges as women, such as "being the only woman in a research group/meeting/committee" and "being a

woman in a male-dominated field." They highlighted the lack of representation, the pressure to prove oneself, and emphasized the importance of creating an inclusive, supportive culture in research.

## CONCLUSIONS

The conversations with Katherine J. Kuchenbecker, Lydia Kavraki, and Vandi Verma were of high value for all the attendees, as was evident from their excellent feedback. The distinguished speakers highlighted the importance of cultivating a passion for one's subject, gaining expertise, being curious, and having the desire to make a difference in one's professional life. Achieving a perfect work-life balance may be unrealistic, but a relative balance can be achieved by structuring time, delegating tasks, learning new skills, and staying current. Balancing personal growth, learning, and completing tasks is an ongoing process that requires self-reflection, self-awareness, and adaptability. The speakers provided valuable advice about setting boundaries, prioritizing goals, and communicating limitations in order to effectively manage workload, and achieve long-term success and fulfillment in one's professional life. The event format also allowed attendees to discuss various topics directly with the panel. 

