

SWE GRASSROOTS ORAL HISTORY PROJECT

Michelle Tortolani Interview

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Michelle Tortolani is an engineering manager at Northrop Grumman Electronics Systems in Maryland. Prior to that, she was vice president of repeater engineering and operations at Sirius XM Radio Inc. and led development and manufacturing of accessories for digital satellite receivers at WorldSpace Corporation. She is a graduate of Boston University, having received bachelor and master degrees in electrical engineering in 1982 and 1987. Tortolani is a Fellow life member of the Society of Women Engineers, and served as its national president from 2007 to 2008. She is also a member of IEEE, Women in Technology, and American Association of Engineering Societies.

During her 2010 SWE Grassroots Oral History Project interview recorded for the SWE Baltimore/Washington Section's Diamond Anniversary Panel, Tortolani describes how she became involved in SWE and eventually served as national president; challenges and opportunities the Society faced in the 2000s; and fond memories from her time in leadership.

- July 2016

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SUE PARSONS: All right. Good afternoon. Please introduce yourself and tell us what years you were SWE president.

MICHELLE TORTOLANI: Good afternoon. I'm Michelle Tortolani and I was SWE [Society of Women Engineers] National President in 2007 and 2008.

SP: When did you first join SWE and what made you join?

MT: I actually joined SWE as a freshman at Boston University in 1978. And my reason for joining was really twofold. Initially, it was to get more information about being an engineer. I had really pursued math and science in high school, really had no idea what electrical engineering was about, but as I coursed through a summer job someone suggested that I should pursue electrical engineering. So I went into electrical engineering really not knowing what I would do as an electrical engineer, how I would use my education. So the avenue with SWE was to network, meet some other female engineers, meet some practicing engineers, and kind of learn more about what I would do as an electrical engineer. And also, at the same time, I met a senior at BU, who was Felicita Saiez, who I am friends with until this day. [01:00] She was the outgoing—I think she was president of the BU [SWE] Section at the time. And they had no young members of the section, so they were recruiting really hard to get the freshman involved. And so she recruited me to be a member of SWE. So that's how I got involved.

SP: What was your first leadership role in SWE?

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MT: It was actually as a student. I mentioned that Felicita was recruiting new leaders, so I quickly became treasurer of the student section, was secretary of the student section. At the time, before we had regions, we had kind of quadrants of the country and I was the alternate student rep [representative] for the Boston down to [Washington] D.C. quadrant of the country. So I had those leadership positions as a student. Then when I first got out of college, I was involved in SWE with different projects. I was a charter member of the Orange County section in California. [02:00] But really didn't take on any leadership positions until I got to the Washington, D.C. area in 1992. Came to a meeting here and got hooked in. Had pretty much every section, BWS [Baltimore-Washington] section position you could have except COR [Council of Representatives] rep. So I went through the treasurer, VP, the president as two terms. So that's what really got me started in the leadership positions with the Society.

SP: When did you first start thinking about running for SWE national president and what were you—what made you think in that direction?

MT: I think it was as part of me being 2000 [conference] co-chair.

Recording Technician: Let's try it again. Re-answer the question again.

MT: Okay. As part of me being 2000 co-chair, I started to think about what I wanted to do next. And during the time that I was co-chair of the 2000 conference, I spent five years in that planning, and really got a taste for national strategy because as part of that position I was on the conference management committee and I was a key player in looking at the change of date for the conference from June to fall,

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and also looking at going from a section-hosted conference to a HQ-[headquarters], Society-hosted conference. [03:00] So it gave me a taste of that strategy and I was starting to think, “Well, what am I going to do next after the 2000 conference?” And I remember discussing it with Penny Wirsing, who was the co-chair with me. And she goes, “Oh, isn’t this enough?” And she goes, “You’re crazy! You want to go and do more, get on the board?” But I think I was really hooked with the taste and really working on the strategy and seeing the changes that were positive for the Society and where we could take it in that direction.

SP: What was your position in your company when you were president, or running for president?

MT: Okay, so maybe just to back up a little, when I first got on the board in 2001, I was working for XM Satellite Radio. So they’re a start-up technology firm. [04:00] And through the whole career of me being on the board, the seven years plus being president, I was with XM. When I started out as president, I was senior director for repeater engineering and operations, and about three months into the term, I was promoted to vice president of repeater engineering and operations. XM was very, very supportive of the work that I did with SWE through all of my years on the board. Supportive philosophically, supportive in giving me some of the time off, but they couldn’t help me financially. We didn’t make a profit. And so as long as I could balance everything—so needless to say, it was challenging. But I was very passionate about both my job, because I was really excited about

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the work that we were doing at XM at the time, and I was really excited about being part of the national leadership for the Society.

Knowing that I did want to be on the board and once I did get on the board, I really drove us to look at how can we support people like myself that come from small companies. [05:00] If you look at the folks that we have that become president of the Society, I would say 90 to 95 percent of them come from large companies. You know, Peggy Lane came from a smaller company. Vi Brown, who was president two years prior to me, was self-employed. And we really needed an avenue to encourage those types of individuals because you want to have diversity on the board. You want to be able to have people from the government sector, from academia, from small companies, from large companies. So I was the first national president that actually had a travel line item in the budget. While it may sound minor when you say it, that was a major accomplishment with the Society. So between that travel line item, my own personal investment, I was able to cover the travel and do the role of SWE president. [06:00]

SP: So, what experiences prepared you to become SWE president?

MT: I think there was a few, I think. I was a member of the Boston University Alumni Board of Directors for several years, so I did have some experience through that role, working with volunteers, trying to encourage and excite volunteers about projects. I think the work that I did at XM, working with a very disperse team, working in areas of new challenges and new risks, helped me to prepare for that.

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I think managing multiple projects also helped me prepare to be president. And I think the good advice and friendship of past presidents that I had made through the years within the Baltimore-Washington Section and then Ronna Robertson, who was president a few years prior to me, helped me prepare and enlightened me as to what I would encounter along the way. [07:00]

SP: What was going on within SWE when you were on the board and your year as president?

MT: Well, the decade started out on a very high point of—we celebrated our fiftieth anniversary, so it was a tremendous way to start the decade. We saw a large growth in membership. At the beginning of the decade in 2000, we were approximately fourteen thousand members. At the end of the decade, we were just over twenty thousand. We saw a lot of growth in our professional membership. Peggy [Layne] mentioned how—you know, we went through the period where we had tremendous growth in our student membership and the professional membership had decreased [in the 1990s]. Well, we saw growth in our professional membership so that drove the development of our—our professional development program. So that's one key thing that I saw through the decade.

We saw the advent of our partnerships with diversity-based societies. In 2006, we did joint memberships with NSBE, National Society of Black Engineers, and SHPE, Society of Hispanic Professional Engineers. [08:00] And then a year later, we did a joint membership with the American Indian Society of Engineers and

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Scientists, and that is a mouthful. (laughs) And then we expanded all three of those joint memberships to students. They started out as professionals and we expanded them to students. We also saw us beginning to look at partnerships with other technical societies. We partnered with the American Society of Mechanical Engineers to work on public policy, so I really saw the advent of our partnerships. And then, of course, there was public policy.

So let me talk about international first. We had been looking over the years of how to expand our international engagement. And if you look back at our history, we've actually been involved internationally since 1964 when we hosted the first ICWES [International Conference of Women Engineers and Scientists] conference. [09:00] Hosted it again in '84. In the mid-nineties, we saw more interest in international because we had a website. People could see what we were doing. We even considered during the year that Gail Mattson was president—which was, what, late nineties?—looking at whether we should expand international and decided that we shouldn't due to the financial state of the Society and due to the challenges that we were seeing with other professional societies.

So in the 2000 decade, we saw more and more of our membership taking assignments internationally and saying, "You know, I'd really like to benefit from SWE internationally and I see the interest internationally." We were also seeing international individuals who had become members of SWE looking for a more structured basis internationally. And also during the 2000 decade, we saw a lot of our corporate partners who were expanding globally and they were looking for

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SWE to provide the benefits to their employees that their domestic-based employees were gaining. [10:00]

So in FY [fiscal year] '08, we completed the development of our international strategy and approved four pilot programs with Japan, Germany, India, and Nigeria. And the approach we decided to take with the international strategy—because we saw that the type of infrastructure we had here in the states wasn't going to be something that would fit in each of these areas. So we looked at a hybrid approach. In some areas, sections might make sense. In other areas, it might be a partnership of like organizations to SWE. And in other areas, it might be a partnership with a corporation. So each of those four pilots were kicked off with a different model in mind, and they're now in their second year of progression. We see that two of the models have been completed. [11:00] One is a partnership with a like organization, and that's with Japan, and that's with JWIN, Japanese Women's—what is the I? I'm, like, forgetting what—

SP: IT?

MT: No. JWIN? Japanese Women's—

Off-Camera: Network?

MT: Innovative Network.

SP: Innovative Network.

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MT: And in Nigeria we were looking at a partnership again with a like organization to SWE. Those ladies, after much deliberation, while they're very excited about the work that SWE is doing, have decided not to partner with us and to continue to be international members. And then in Germany, we're looking at a section-based model. That's a very active group. They do daily [business] professional development conferences. And then in India, that one is really just kicking off. Initially we're looking at a partnership with Cummins but it's also looking that the ladies are interested in a section-based partnership. [12:00] So that strategy has really developed and is now well into its implementation.

And then I think the fourth item is the public policy. One of our objectives is to be a center of information for women and engineering. And when you think of that objective and what is the next step, it's really to be an advocate for women in engineering. And I think beginning in the late nineties into the early years of the 2000 decade, we had more and more members that were approaching us, said, "We want you to take a bigger voice. We want you to take a stronger voice. We want to see you up on the [Capitol] Hill, talking to policymakers. We bring a lot to the table with studies that we've done, surveys that we've done, our outreach programs, our professional development programs, really want to see you take a bigger voice.'

Interestingly enough, I think we really had kind of a mixed bag with our membership. [13:00] There was those members that were really excited and interested about us taking that public policy step. But I also think that there was some members that were a little nervous, thought maybe we were going to lobby

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or maybe we were going to speak out on issues that we all didn't agree with. So it was, in the beginning, a slow process. I think there was a lot of education involved and when I look now, in 2010 and look at—that initiative really started off in 2004—in the six years that have gone by we've made tremendous strides. We've released three position papers. Two were released in FY '07—and actually, calendar year 2006—one on K-12 [kindergarten through twelfth grade] technology and technological-literate workforce. The second paper was the application of Title IX to STEM [science, technology, engineering, and mathematics] fields. And then the third paper was just released a year ago in 2009; SWE, Title XI, and equal opportunity in STEM fields. [14:00]

We also took on the role as chair of the stakeholders planning committee for the diversity and innovation caucus. That's the House [of Representatives] diversity and innovation caucus. And in that role, we plan educational briefings to members of Congress and their staff, and we talk about some of the statistics in STEM fields. What is the situation with K through 12 education, the interest in math and science and getting young people interested in math and science? What are some of our recommendations that policymakers can do? We also talk in support of various educational bills. Both Peggy and Suzanne [Jenniches] had mentioned that we had recently been on the hill a couple weeks ago talking in support of two education bills, one geared through K through 12 education and a second bill really looking at the results of some of these programs at the graduate level, looking at the data. [15:00] So we really have taken an active

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role, and we've also worked to educate our members and how they can also become more active locally in policy.

SP: So, going back to your year as president, what sort of leadership and management challenges did you face as the leader of the Society?

MT: I think one of them was really roles and responsibilities. At this point, we had really a well-established headquarters. We had expanded in our headquarters. We had executive director, a deputy executive director, we had a fund development director, someone focused on marketing. So we really had the key areas covered. But I think sometimes the members of our board had a hard time letting loose of those day-to-day operational tasks. And so I think one of the challenges was to keep us focused, thinking strategic. [16:00] We have paid staff to do the day-to-day operation and the day-to-day work, so let's stay focused. Look at that strategy. Where do we need to take the Society so that we keep growing? Listening to our members. Looking at what services they're looking for, what we need to expand those services. So I think that was really the challenge. And we did a lot of training through those years, both prior to me being president and even after me being president, looking at what is the role of the board of directors and what we should be focused on.

SP: What was going on in the engineering community at large and what effect did that have on SWE?

MT: Well, I think in the engineering community STEM careers, the amount of students really pursuing STEM careers. If you look at—just take the percentage of women

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in the engineering workforce. Right now, it's approximately 10.8 percent. [17:00] We've remained flat at 10 percent, approximately 10 percent, for the past ten years. When you look at the number of young men and young women entering engineering, it's either been flat or decreasing. So I think the work that we were doing in public policy really worked hand in hand in that. What can we do to interest more young people to go into the sciences, engineering, and technology? What can groups like the Society of Women Engineers do? What can we do to educate the general public?

We've also done a lot of work on the messaging. You know, what interests young women going into engineering? What's the motivator? And what we've really have found what motivates young women is flexibility in that career. The challenge. I'm going to help people. I've got different career path within engineering that I can pursue. I can be in a lab environment. I could be a sales engineer. [18:00] I could do research and development. We also saw how important it is to bring those practicing engineers into the classroom so that young people get a first-hand look at, What does an engineer do? And I know for me as a college student, that was really important—probably a little late since I was already in college. But I think getting those young people really interested in engineering. They really need to know first-hand. What do you do as an engineer? Give me some examples.

SP: But, what were the big national issues at the time you were president? How did they affect SWE?

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MT: I think—national issues? I think just looking from engineering companies, companies becoming more global, meeting the needs of their employees. Them, in turn, looking at societies like SWE to help them meet those needs. We talked a little bit earlier of our international expansion and why we're pursuing that. [19:00] We had specific partners coming to us and saying, "I've got employees stationed in Germany. I've got them in Italy. I've got them in China. We like the work that you're doing with professional development. We really would like our employees in those areas to have the benefit of those services."

SP: So, coming back to a more personal level, what are some of the most memorable things that happened in your year as president?

MT: I think there's a lot. I had a fantastic time as SWE president, just meeting the people. I went to every single region conference between being president-elect and president. And what really just wowed me as I went to each of the region conferences, the excitement with our members, of the K through 12, the outreach projects they were doing, the excitement of their own careers and how SWE helped their careers, seeing the industry that was prominent in that area. [20:00] And I just learned so much as an individual, going from area to area.

And I will have to say, one region conference sticks in my mind. Region D conference was hosted by the University of Miami student section. The president of the University of Miami is Donna Shalala who was the cabinet member under [President Bill] Clinton for Health and Human Services. And I met her about four months prior to the conference at a briefing that we were doing, congressional

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staff STEM briefing. And she had mentioned—she goes, “Oh, the SWE student section is hosting the conference and they’re real excited. They came and talked to me about it.” So a few months later, I’m in Miami at the Region D conference. Well, the banquet, the Saturday night banquet is at Donna Shalala’s house. The students had gone to see her and said, “You know, we really like the university’s support.” She said, “Well, how can I help you? What’s the most expensive event?” And they said, “The Saturday night banquet.” [21:00] She was like, “You’ll have it at my house.” So, six buses of, like, 350 students pull up to her house and what impressed me was Donna Shalala stood in the vestibule, the entryway of her house and shook everyone’s hand and seemed so excited that we were there. She was an avid supporter of SWE and STEM. And she gave some of the opening remarks, and it was just a wonderful evening. So that region conference always sticks in my mind.

And then I think the third memorable was my visit to Japan. And this was part of our international strategy, looking at how we wanted to engage internationally. So in fiscal year '07, [Yukako] Uchinaga-san, an executive at IBM, won the Upward Mobility Award. She shortly thereafter retired and was really looking to develop SWE-like organizations in Japan, wanted to partner with SWE. [22:00] So one of the first events we did, even before we had a partnership finalized, was a joint conference with SWE, JWING, the Japanese Women’s Innovative Network, and JWEF, Japanese Women’s Engineering Forum. And JWEF is an organization very much like SWE, volunteer-based, whereas JWING, its membership is corporations.

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We did a one-day professional conference and I was the keynote speaker to speak on "SWE: Your Career Development Partner." And I was a little apprehensive going there, not knowing how some of our lessons learned and what SWE does for us as professionals here in the states, how that would translate in Japan. And I knew from the time that I stepped off the plane that it was going to be a good trip. [23:00] They had a lady assigned to me every single day, made me feel totally at home, totally welcomed. I felt like I knew these ladies from day one. We kept my slides in English and I had a Japanese translator and it translated very well. When we did the Q and A [question and answer period], even though Japanese women in the engineering field are somewhat behind where we are, some of the same challenges. You know, work/life balance, going up the corporate ladder, getting more training, professional development training. So we saw that it really did translate well, and we also—it was a learning experience for us to see how a partnership might work between JWIN and SWE. And at this past year's, our conference in 2009 in Long Beach, we signed a memorandum of understanding with JWIN and they're already starting to think about planning another joint conference. So, that was a really memorable experience and it was really one of the stepping stones for our international strategy. [24:00]

SP: What was your experience at your national conference?

MT: Had a great time. I mean, I was just excited that it was our largest conference at the time. I believe we hit nearly 6,000 attendees. We had largest attendance of corporations at the career fair. We had just a wide variety of seminars and

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workshops—again, one of our largest numbers at the time, over two hundred workshops and seminars. Wonderful opportunity to meet our members and network. And I think one of the things, regardless whether I was president or not, that I always find inspiring every time I go to a national conference is the Achievement Award banquet. I am always inspired when I see that Achievement Award recipient receive that honor. [25:00] Once again, I was at the conference during the year that I was president. So I always find it a wonderful experience.

SP: What would be your message to future SWE leaders?

MT: I think it's a tremendous experience.

Recording Technician: Try it again. Just re-answer the question. Say, "My message to—"

MT: Okay. Yup. My message to future SWE leaders is that it's a tremendous experience. I know that I learned definitely as an individual, helped me grow. I learned more about our membership. I think it's an opportunity for you to expand your skills. I think it's an opportunity to help progress the Society and that was really one of my main drivers is, Where can we take the Society further? Look at where we can expand our reach. So, I think it's an excellent experience and I think there is a lot of support within the Society. So, while you may think this is a lot to take on, there is a lot of support and training along the way that can help you, support you through the term. [26:00]

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SP: I know it's only been a short time since you were SWE president, but how do you see yourself staying involved in the Society?

MT: Well, since I left being president two years ago, I've been chairing the Achievement Award committee, so very excited about this. This is my second year and as I mentioned, that is one award that really does inspire me so I'm really honored to be chairing that committee. I've also stayed involved supporting the Society, various conferences. I just recently spoke at the Region F conference on our international strategy. Have supported some of the public policy meetings, most recently, the congressional visits on Capitol Hill. Have supported some meetings locally. Several months ago, I spoke down at Pax River [Naval Air Station Patuxent River], very southern portion of the Baltimore-Washington Section boundaries. We really have a group of ladies there, they're excited and interested in staying involved. So I definitely see myself as staying involved. [27:00]

SP: And how would you like to see SWE change?

MT: I think continue to grow. And right now, we are hitting somewhat challenging times with the downturn with the economy. We have seen some of our membership decrease. Our sponsorship has stayed about neutral with the impact from the recession. But I want to see us to continue to grow. I think you get these dips. You see the ebb and flow of the economics, and we'll ride through it. But I really want to see us really grow, grow our voice at the table, grow our position within the STEM field and as a knowledge base for women in engineering.

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SP: Well, thank you for taking time to answer our questions today.

MT: Yup. Thank you.

END OF INTERVIEW