FRAGOMEN

Fragomen's Semiconductor Industry Group presents the second installment of the "Voice of the Industry" Q&A series, designed to provide readers with valuable insights and perspectives from leading voices within the sector.

The October 2025 Q&A features Shari Liss, Vice President of Global Workforce Development and Initiatives at SEMI.

Shari, what inspired you to pursue a career in the semiconductor industry, and what has your journey been like?

I've loved math for as long as I can remember. As a kid, I looked forward to math homework and finding patterns. It always made sense to me. But it wasn't clear where that love of math could lead. Like many kids, I certainly didn't grow up knowing what semiconductors were or that there was a whole world of innovation I could explore. That's part of why I'm so passionate about helping others make those connections sooner, as early as grade school.

At the heart of my work, in all the roles I've held, I've always believed that education and opportunity can change the course of a life.

Early in my career, I worked in education, where I saw firsthand how many bright, curious young people, especially women and students from underrepresented backgrounds, never had the chance to see themselves in science or technology careers. That realization became my motivation and purpose in this work.

As CEO of Ignited, I helped connect educators directly with industry by placing teachers inside companies so they could bring real-world experiences and applications back to their classrooms. That experience showed me how powerful it can be when industry and education truly work together to open doors for students.

When I joined SEMI, I saw an opportunity to bring that impact to a global scale. Through programs like SEMI U, High Tech U, SEMIquest, and the National Network for Microelectronics Education (NNME), we're helping students see what's possible and we're giving them clear, supported pathways into meaningful, high-tech careers. As Vice President of Global Workforce Development and Initiatives, I now get to scale this work and reach more students, potential workers, veterans, and others around the world.

My journey has been all about building bridges between educators and employers, learning and opportunity, purpose and possibility. Seeing those connections translate into real jobs, thriving programs and a broader workforce in the industry is what keeps me inspired every day.

What are the unique challenges and opportunities for women in this field today?

One of the biggest challenges for women in semiconductors is the visibility of the field. Many essential roles that make chip manufacturing possible, from equipment maintenance to process engineering, remain largely unknown outside the industry. This lack of awareness can discourage women from seeing these as exciting, high-tech, purpose-driven careers.

Once women enter the field, they often face additional hurdles. These include a lack of mentors and sponsors, limited flexibility in work environments and underrepresentation in leadership roles.

Yet, the opportunity today is enormous. As the semiconductor industry continues to expand globally, we have a unique chance to design more inclusive and supportive systems from the ground up.

Through initiatives like SEMIquest, SEMI U and our earn-and-learn programs, we're showing how intentional outreach, practical training and visible role models can attract and retain women at every level of the talent pipeline.

We're also helping redefine what it means to work in "high tech," making it clear that women belong at every table where this work happens.

How can companies create more inclusive environments that support women in STEM and leadership?

With the long-term talent and skills gap facing the semiconductor industry, I believe that we need to be intentional about inclusion to build the deepest talent pipeline possible.

If we want to see more women thrive in STEM, companies need to move beyond statements of commitment and start building structures that make inclusion real. That means creating mentorship and sponsorship opportunities that go beyond advice and truly open doors for advancement. It means ensuring women have access to leadership roles and clear paths for career growth. And it means offering flexible work arrangements so women can advance their careers without having to choose between work and life.

Representation also matters deeply. When women see other women doing the work and succeeding across all kinds of roles, it changes what they believe is possible. And that visibility must be backed by recruiting, training and workplace cultures where belonging isn't a program or an initiative, but part of how business gets done every day.

The companies that thrive will be the ones that recognize this cultural shift as essential to innovation, growth and success.

Are there any mentorship or sponsorship programs that have made a significant impact on your career?

Yes! I've had incredible mentors throughout my journey—some through formal programs, others through genuine relationships built over time.

Early on, mentors helped me see the potential to lead programs that connected education, community and industry and to understand how to measure their impact. Later, at SEMI, I had the support of leaders who encouraged me to build new initiatives, take risks and help shape the global conversation around workforce development.

What's made the biggest difference for me in my career is not just mentorship; it's true sponsorship. It's people who say, "You can do this, and I'll help make sure you get the opportunity." That kind of belief in someone's abilities changes careers. And now, I do my best to pay that forward, to be that voice for others, especially young women leaders ready to take their next step.

What advice would you give to young women considering entering the semiconductor sector?

Be curious and be bold. Don't wait to be invited in, seek out experiences that let you explore what this industry is all about. Whether it's a hands-on program, an online course or jumping into work that feels challenging, every experience helps you see how your skills connect to real, world-changing work.

Find mentors and sponsors early. The right people will not only help you navigate your path but also work with you to expand it.

Know your worth. The semiconductor industry needs your creativity, perspective and problem-solving. This is an industry that builds the future, and your voice is essential to shaping it.

And finally, stay adaptable. The pace of this industry means you'll always be learning, evolving and growing. That's what makes this field so exciting. It's never static, and neither are the people who I've seen succeed and thrive in it!