

Cybersecurity Advisors Network

## **Behind the Keys:** Women Who Secure the Future (In)Securities Special Edition: Day 1 Featuring:





### Celebrating International Women in Tech Day







Irene is a globally recognised cybersecurity leader specialising in AI governance, cyber policy, and quantum readiness, focusing on bridging the communication gap between scientists and classical computer users.

Named one of the Top 20 Cybersecurity Women of the World 2024, Irene is dedicated to building resilient digital ecosystems and fostering the next generation of professionals.

As a Strategic Steering Committee Member at the Global Forum on

Cyber Expertise (GFCE) and a Founding Partner of Women in Cybersecurity Middle East (WiCSME), Irene champions innovation, diversity, and inclusion in STEM. Her expertise spans quantum and AI GRC, cyber policy development, and thought leadership, shaping the future of cybersecurity globally. *Feature in (In)Securities- Special Edition- Day 1* 



## 1. What inspired you to pursue a career in technology/cybersecurity, and how did you get started?

My journey began in high school when I took on typing jobs using a manual typewriter to self-fund my daily allowance partially. My parents still gave me my allowance, but I felt good that they didn't have to. It wasn't about computers yet —but it sparked my discipline, attention to detail, and independence.

Just before university, I enrolled in a summer class on basic computer fundamentals. That was my first hands-on experience with computers, and I was instantly hooked—especially with flowcharting. I loved the logic behind decision blocks and seeing how a process could lead to a clear output. That experience lit a spark in me and inspired me to take up Computer Science in university. It was the beginning of everything.

# 2. Can you describe a defining moment in your cybersecurity career that made you realise this was the right path for you?

A defining moment was when I received an unexpected call to rejoin an entity in Abu Dhabi—this time to help implement Information Security Standards. At that point, they had no dedicated information security department or resource, but a mandate had been issued, and they needed someone to take the lead.

Since I had worked there before and was familiar with their environment and operations, they reached out to me for the role. I even said, "I don't speak Arabic, I am not a local, and I am a woman." That opportunity marked the beginning of my transition into cybersecurity. Being trusted to build something so critical from the ground up made me realise that this field was not only a natural next step, but also one where I could truly make a difference.



## 3. Can you share some of the key challenges you faced as a woman in this field, and how you overcame them?

When I moved to the UAE in 2007, I brought with me 17 years of experience in IT. But before relocating, I was cautioned—"IT is a man's world there; you might not get the same position, or even land a job in IT." Sadly, that warning proved true. From 2007 to 2012, I worked outside of core IT—in roles such as Business Analyst, Project Manager, and Strategy Consultant under Corporate Strategy and PMO.

Eventually, I returned to a technical path when I was appointed as Head of Information Security. That opened doors to speak at conferences, but I often found myself the only woman in the room. I've experienced both discrimination and harassment along the way. I remember moderating a panel discussion with all-male speakers—only to discover there was no seat provided for me. I stood throughout the entire session, a subtle yet powerful reminder of how women are often overlooked, even when they're leading.

Another time, after winning a cybersecurity competition for one of my projects, two men from a non-winning team approached me. At first, it seemed like a congratulatory conversation, but their tone quickly turned sarcastic. One of them ended with a mocking question: "So tell us, how do you secure the tails of camels in the desert?" Moments like that are hard to forget.

In each of these situations, I had to manage with strength, professionalism, and self-respect. Sometimes the way I handled things would surprise even me—but when no one else is standing up for you, you learn how to stand tall on your own. And that, in itself, is a kind of power.



# 4. Who has been your biggest influence or mentor throughout your career, and what specific lessons or turning points have you experienced because of them?

To be honest, mentorship was something that was missing from my journey especially ten years ago and earlier. I didn't have a mentor to guide me through the challenges or help me navigate career decisions. I had to stand on my own, figure things out as I went, and build my path one step at a time. It wasn't easy, but it made me resilient and resourceful.

That gap is exactly what motivates me today. When young women in cyber or students reach out for advice or mentorship, I make time—because I know what it feels like to walk that journey alone. A turning point came in 2018 when I met other women working in cybersecurity across the region. Together, we co-founded Women in CyberSecurity Middle East (WiCSME). That community filled a gap I hadn't even realised was so deep. For the first time, I felt truly connected, seen, and supported by peers who understood the journey.

One key lesson I've learned is that in this era of digital transformation—where digital influence often outweighs knowledge and skills—we need to be present, accessible, and intentional in guiding the next generation. Not just to share knowledge, but to help them cut through the noise, find their voice, and build meaningful careers. Mentorship today is not a luxury—it's a necessity.







# 5. What are the biggest challenges women face in the technology/cybersecurity industry today? Can you share specific examples from your own experiences?

Despite growing awareness, women still face significant underrepresentation in the cybersecurity field. According to the World Economic Forum, as of recent reports, women make up only about 25% of the global cybersecurity workforce. That figure drops even lower in highly technical or leadership roles. This imbalance is not just a numbers issue—it reflects deeper systemic challenges around access, visibility, and unconscious bias.

In the UAE, while there's strong government support for innovation and digital transformation, the gap remains noticeable—particularly in emerging areas like AI, quantum computing, and advanced cybersecurity disciplines. These are fields where women are not only underrepresented, but where the demand for talent far exceeds the available skilled resources, creating a double-edged challenge: innovation is accelerating, but inclusive participation is lagging.

From my own experience, one of the biggest challenges women face is being judged before they even speak. Perception plays a huge role. That's why I always emphasize the importance of making an immediate impact when you introduce yourself—whether in a meeting, on a panel, or during a pitch. Your first few seconds can shift the energy in the room. It's unfortunate that we still have to prove ourselves faster and more often, but it's a reality many of us have learned to navigate.

Another challenge is the lack of visible role models. Without representation, it's harder for young women to imagine themselves in these roles. And when they do enter the field, they often find themselves isolated, especially in technical or leadership settings. As we embrace emerging technologies like AI and quantum, cybersecurity remains a critical layer—but so do the skills gaps and biases that can hold women back. According to WEF, lack of mentorship, limited access to education and training, and workplace cultures that are not inclusive continue to be top barriers for women in tech. Overcoming these isn't just about equity—it's essential for innovation and resilience in the digital age. *Feature in (In)Securities- Special Edition- Day 1* 



6. How has the industry evolved for women since you started your career? Have you noticed any significant shifts, and can you share a personal story that illustrates these changes?

The industry has definitely come a long way since I began my career. When I started speaking at cybersecurity conferences in 2013, I was often the only woman in the room. At that time, women made up just 12% of the global cybersecurity workforce. Fast forward to today, the latest World Economic Forum report shows that figure has increased to 25%—a clear sign of progress, though there is still much work to be done.

This growth hasn't happened by chance—it's the result of intentional, collective efforts by women in cybersecurity communities around the world. One of the most impactful movements I've been part of is Women in CyberSecurity Middle East (WiCSME), which I co-founded in 2018. As Head of Governance and Communications, I lead collaborations with local and international conference organizers through our regional affiliates. A major part of these partnerships is advocating for women's presence in every aspect of these events—from keynote speakers and panelists to moderators and advisory board members.

A great example of this change is Black Hat Middle East and Africa (BHMEA). WiCSME has been involved with BHMEA since its very first edition, and this year marks our fourth year of collaboration. The organizers have even shared that this region has the highest number of women speakers across all Black Hat editions globally—a powerful reflection of how far we've come when women are actively supported and empowered. BHMEA collaboration itself is led by Dr. Reem Al Shammari, the Chair of WiCSME, whose leadership has been instrumental in driving inclusion at that level. The same momentum is visible in other major platforms like GISEC and GITEX, where more women are now not only attending—but shaping the conversations. These shifts may have taken time, but they are reshaping the industry in ways that are lasting and meaningful.



7. What role do diversity and inclusion play in fostering innovation in tech/ cybersecurity? Can you share a personal example or case study where diversity directly led to innovation within your team or project?

Diversity and inclusion are essential in cybersecurity because they bring different ways of thinking to the table—which is critical when tackling complex, evolving challenges. Innovation thrives when people with varied backgrounds, experiences, and perspectives collaborate. It leads to more creative problemsolving, more inclusive solutions, and ultimately, stronger cybersecurity outcomes.

A great example is our work with the ITU Mentorship Programme. Initially, WiCSME partnered with ITU as mentors and mentees. But in 2023, ITU entrusted WiCSME to manage the entire mentorship program for the MENA region. This was a huge step forward—and also a unique challenge. One of the key barriers for some women to fully participate was the language gap. Many valuable resources were in English, and that was intimidating or limiting for Arabic-speaking participants.

To solve this, WiCSME took the initiative to translate mentorship materials into Arabic. This inclusive move not only made the content accessible but also created a more welcoming environment. As a result, the MENA cohort represented 30% of the global mentee pool—a remarkable increase in engagement.







## 8. What are the most exciting trends or developments in the industry right now that you're passionate about?

One of the most exciting developments I've been deeply passionate about lately is quantum computing—not just the technology itself, but the cybersecurity implications that come with it. Last year, I intentionally began my journey into the world of quantum—not to become a quantum scientist or physicist, but to understand how this emerging technology will impact security, risk, and digital trust as we know them.

What fascinates me is how quantum challenges our current understanding of cybersecurity. Encryption methods we rely on today may become obsolete in the future, and organisations need to start preparing for that transition. I've made it a personal mission to engage with quantum experts, developers, and researchers —to learn their world and, importantly, to translate what I jokingly call the "Martian language" of quantum science into something the "Earthlings"—the rest of us in classical computing—can understand.

It was a true honour to be invited recently to speak at the Quantum Innovation Summit, alongside scientists, quantum developers, and researchers. I approached the conversation not from a purely technical angle, but by wearing my project management (PMP) hat—looking at how we can realistically plan and manage the transition from classical to quantum systems, while addressing the governance and cybersecurity concerns that come with it.

This intersection of emerging tech and cybersecurity is where I see so much

### potential—not just for innovation, but for leadership, collaboration, and forward-thinking resilience.







### 9. What advice would you give to young women considering a career in technology or cybersecurity?

First, don't wait until you feel 100% ready—start where you are, and grow as you go. Technology and cybersecurity are vast fields, and no one knows everything. What matters is your curiosity, your willingness to learn, and your ability to keep going, even when it gets tough.

Second, know that you belong here. You might walk into rooms where you're the only woman. You might be questioned, judged, or underestimated. Let those moments fuel you—not define you. Speak with confidence, and when you introduce yourself, make it count. Set the tone for how others will see and hear you.

Third, find your community. Whether it's a mentor, a peer group, or a platform like WiCSME—surround yourself with people who inspire and support you. It makes a huge difference.

And finally, stay open to opportunities. You may start in one area—coding, policy, risk, operations—and find your passion in another. Cybersecurity is not one path—it's a landscape full of possibilities. Be bold, be curious, and bring your whole self to the table. We need more women shaping the future of this field.



## 10.Can you share examples of initiatives or programs that have made a real difference in promoting women in our field?

One of the most impactful initiatives I've been directly involved with is Women in CyberSecurity Middle East (WiCSME). What began as a small community in 2018 has grown into a powerful regional movement, connecting thousands of women across the Middle East. WiCSME provides mentorship, training, visibility, and leadership opportunities for women in cybersecurity—whether they're just starting out or already leading in the field.

A major milestone was in 2023, when WiCSME was entrusted by the International Telecommunication Union (ITU) to lead the ITU Mentorship Program for the MENA region. To overcome language barriers and make the program more accessible, we translated the mentorship materials into Arabic, which significantly improved participation. That year, MENA represented 30% of the global cohort, a remarkable success in increasing inclusion.

WiCSME is also a proud partner of the Global Forum on Cyber Expertise (GFCE) and continues to actively contribute to capacity-building discussions. We regularly participate in the GFCE Annual Summits, including the most recent one in Washington, D.C. I also have the honour of serving as a member of the GFCE Strategic Steering Committee (SSC), where I work with global peers to guide strategic priorities around cyber capacity building worldwide.

In addition to this, our partnerships with regional and global conferences such as Black Hat MEA, GISEC, and GITEX have made a tangible difference in women's representation. For example, Black Hat MEA shared that this region has the highest number of women speakers across their global editions, which is a testament to how collaboration can lead to systemic change.

These initiatives don't just support women—they actively reshape the ecosystem, making it more inclusive, representative, and resilient.



# 11.If you could envision the ideal future for women in cybersecurity, what would it look like? What key changes would have been made?

In the future I envision, we won't need to have conversations about "women in cybersecurity" as a separate topic—because representation will be natural, balanced, and normalized across the entire field. Women will be visible in every role, from technical experts to executive leaders, and they won't be questioned for being there.

One of the key changes would be removing systemic barriers—things like unequal access to training, lack of mentorship, language limitations, or biased hiring practices. Instead, organisations and institutions will proactively create environments that are inclusive, supportive, and flexible. Mentorship and sponsorship will be built into career development, and women won't have to "prove themselves" just to be heard.

I also imagine a world where cybersecurity education starts early, and girls see it as exciting, meaningful, and entirely within reach. Programs like WiCSME and others will be part of mainstream education and professional development—not just regional or community efforts, but embedded in global strategies.

And most importantly, diversity will be understood as essential to cybersecurity —not optional. The threats we face are complex, and we need diverse minds and experiences to solve them. That's the future I'm working toward—one where women don't just join the field, but thrive, lead, and shape its direction.