

VOL-01 | ISSUE -03 | 2025

# The Silicon Leaders

Excellence in The Spotlight

The 10 Key  
**Women**  
leaders  
in Medical Device  
Development and  
Innovation, 2025

**Navigating Regulatory  
Pathways**

A Framework for Medical Device  
Innovation in Global Markets

**Meeting Emerging  
Healthcare Needs**

Medical Device Innovation for  
an Aging Population

**Yonina Eldar**

Professor of  
Electrical Engineering  
Weizmann Institute  
of Science

*Bridging Research and  
Real-World Impact.*

# Yonina Eldar

*A Commitment  
to Inclusivity  
and Innovation*



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**“MEDICINE AND TECHNOLOGY MUST  
EVOLVE TOGETHER  
TO HEAL, TO IMPROVE, AND TO INSPIRE  
A HEALTHIER WORLD.”**







# Editor's Desk





# Pioneering Progress and Defining The Future of Healthcare

**T**he medical device industry is at the forefront of innovation, driving advancements that enhance patient care, improve diagnostics, and revolutionize treatment methods. In 2025, women leaders are playing a pivotal role in shaping this industry, bringing visionary leadership, groundbreaking research, and cutting-edge technological solutions to the forefront.

In this edition, we highlight **The 10 Key Women Leaders in Medical Device Development and Innovation, 2025**—a group of trailblazers who are redefining healthcare through their expertise, strategic vision, and unwavering commitment to progress. Their contributions span across biomedical engineering, regulatory affairs, AI-driven diagnostics, wearable health tech, and next-generation medical devices, ensuring that the industry remains agile, efficient, and patient-centric.

These leaders are not only pushing the boundaries of innovation but are also advocating for greater representation, mentorship, and inclusivity within the sector. As they develop life-saving devices and pioneer new medical technologies, they are shaping the future of healthcare, making it more accessible, efficient, and effective for patients worldwide.

Through this feature, we celebrate their achievements, explore their impact, and gain valuable insights into how their leadership is driving the next era of medical advancements. Their dedication and ingenuity are transforming the medical device landscape, setting new benchmarks for innovation, and inspiring future generations of leaders in healthcare technology.

*Michael Wayne*



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*Bridging Research and  
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# The 10 Key Women leaders

## in Medical Device Development and Innovation, 2025

Featured Person	Company Name	Brief
<b>Cindy Cltd</b> National Technology Vertical Manager	DB Schenker dbschenker.com	Cindy plays a pivotal role in enhancing digital transformation and streamlining logistics solutions for the company's technology sector clients.
<b>Claire Long,</b> Managing Director	90TEN Group 90ten.co.uk	With a degree in biochemistry, Claire loves working on some of the most life-changing therapies. Claire brings a competitive streak and a big smile to 90TEN.
<b>Donna LaVoie,</b> President and CEO	LaVoie Health Science lavoiehealthscience.com	Donna is a leader of specialized thinkers in health and science marketing and a proven strategic communications executive in biotechnology, healthcare, medical device, and pharmaceutical fields.
<b>Grace Leong,</b> CEO and Partner	Hunter hunterpr.com	Experienced marketing PR professional and PR agency CEO with an award winning record within the in the marketing communications industry.
<b>Guillaume Viallaneix,</b> Founder and President	MedTech Momentum, Inc. medtechmomentum.com	Guillaume Viallaneix is the Founder and President of MedTech Momentum Inc., with over 30 years of experience as an executive and entrepreneur.
<b>Karen Root,</b> Director, Experience Strategy	Boehringer Ingelheim boehringer-ingelheim.com	Karen boasts over 20 years of expertise in life sciences. Her diverse background spans human vaccines, medical devices, pharmaceuticals, computer software, publishing, consumer packaged goods, and technology start-ups.
<b>Kathy Bloomgarden</b> CEO	Ruder Finn, Inc. ruderfinn.com	Kathy holds decades of experience in steering Fortune 500 companies, startups, nonprofits and more through important communications moments, crises and milestones.
<b>Lisa Dodd,</b> Co-founder and Director	CAN advertising Ltd can-advertising.com	Lisa has a very visual eye and a keen awareness of what 'works.' As such she is a tremendous asset to any advertising campaign or video production.
<b>Suvi Ahlajaervi</b> Vice President of Corporate Development	Orbis Oy orbis.fi	With a strong background in corporate growth, strategic partnerships, and market expansion, Suvi plays a key role in driving innovation and sustainable business transformation within the organization.
<b>Yonina Eldar</b> Professor of Electrical Engineering	Weizmann Institute of Science weizmann.ac.il/pages/	With a strong academic and research background, Yonina has made significant contributions to compressed sensing, statistical signal processing, and biomedical imaging technologies.



A portrait of Yonina Eldar, a woman with wavy brown hair, smiling. She is wearing a red V-neck top with puffed sleeves, a pearl necklace, a watch, and rings. Her hands are clasped in front of her. In the background, there is a larger, semi-transparent version of her face.

# COVER STORY

**Yonina Eldar**  
Professor of  
Electrical Engineering  
Weizmann Institute  
of Science



*Bridging Research and  
Real-World Impact.*

# Yonina Eldar

*A Commitment  
to Inclusivity  
and Innovation*

*"Mentorship is about empowering individuals to  
think critically, embrace challenges, and pursue  
their passions with confidence-fostering trust,  
building resilience, and creating lasting knowledge  
that benefits society."*

*"Science knows no country because knowledge belongs to humanity and is the torch which illuminates the world." – Louis Pasteur.*

**F**or **Yonina Eldar**, this quote encapsulates her mission to advance scientific discovery that transcends boundaries and serves humanity. With a passion for bridging fundamental research and real-world applications, Yonina envisions a future where interdisciplinary collaboration fuels innovations in healthcare, communications, and beyond. Her commitment to advancing knowledge and advocating for gender equity and inclusivity in science underscores her belief that diversity in science is crucial for driving meaningful change. Through mentorship and community engagement, Yonina strives to create opportunities that empower underrepresented groups, ensuring their contributions help shape a more equitable and innovative future.

### **Defining Moments in Early Life & Career**

Yonina shares, *"Growing up in a home where knowledge and curiosity were deeply valued, with both parents being educators, I was taught the importance of seeking knowledge and making an impact."* Her parents often used everyday moments—during travel or family dinners—to teach about the world, sparking Yonina's desire to learn and contribute meaningfully to society. Though her parents were not scientists, their dedication to education and intellectual curiosity laid the foundation for her career.

As a student, Yonina always enjoyed mathematics and physics and wanted a career combining these fields. It was also crucial to her to engage in work that had an impact on people and involved collaboration. During her undergraduate studies, she was mentored by Professors Arie Yeredor and Udi Weinstein, who introduced her to the beauty and immense potential of signal processing and scientific research. Under the supervision of Prof. Arie Yeredor, they built elements of a speech recognition system as part of an undergraduate project, which truly inspired her. She was fascinated by how probability theory could be translated into a functional system capable of mimicking human operations. This blend of theoretical elegance and practical impact drove her to delve deeper into the field.

Her Ph.D. work under Professor Al Oppenheim at MIT solidified her passion for combining theoretical research with real-world applications. Professor Oppenheim's emphasis on creativity, out-of-the-box thinking, and real-world impact greatly influenced Yonina's approach to

research and innovation. Upon completing her Ph.D., she knew her passion lay in research, development, and working with young, talented students.

Later, while raising her five children, Yonina encountered the limitations of medical imaging firsthand during a hospital visit. This experience ignited her passion for developing technologies that make diagnostics faster, more affordable, and universally accessible."

### **Significant Mentors and Role Models**


Yonina reflects, *"Throughout my career, I have been incredibly fortunate to have mentors who shaped my path and became close friends and colleagues."* Professors Arie Yeredor and Udi Weinstein were instrumental in her early academic journey, emphasizing clarity in understanding and teaching while exposing her to the beauty and boundless possibilities of signal processing. Professor Al Oppenheim became a pivotal influence at MIT, demonstrating how theoretical rigor intertwined with creativity could be harnessed for groundbreaking practical applications. His insistence on thinking creatively and pursuing unconventional ideas has profoundly shaped Yonina's research philosophy.

She has also been inspired by two remarkable female colleagues and friends: Professors Andrea Goldsmith and Muriel Medard. Their passionate approach to research and leadership and their unique ability to combine deep theoretical insights with impactful real-world applications have been pivotal in her career. Beyond their professional achievements in academia and industry, their leadership and advocacy for diversity, as well as their unwavering commitment to mentoring others, have further inspired Yonina to champion inclusivity and empowerment in her work.

Above all, Yonina's parents remain her ultimate role models. Their commitment to making a difference and unwavering support have guided her values and aspirations, inspiring her to choose research and educational activities that she believes will benefit society.

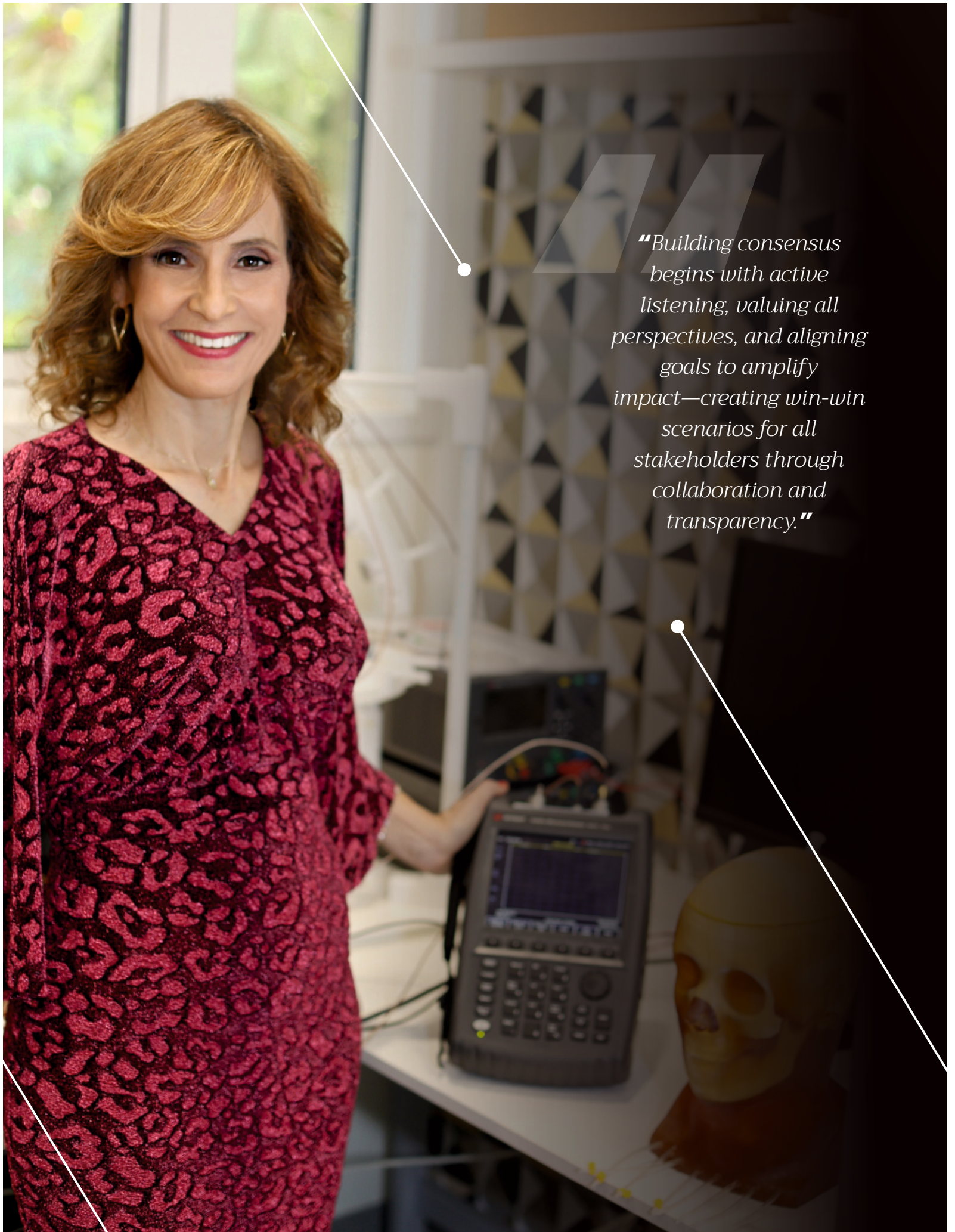
Today, as a mentor, Yonina focuses on nurturing talent in diverse areas, from signal processing and artificial intelligence to interdisciplinary applications in medical imaging, communications, autonomous driving, and biology. Beyond professional guidance, she is particularly passionate about mentoring women in academia. Having faced and overcome many challenges as a female scientist,



A woman with blonde, wavy hair is smiling and leaning on a metal railing. She is wearing a bright red, long-sleeved, belted dress. The background shows an outdoor patio area with tables and chairs, and some greenery. The image is framed by a dark grey overlay on the left side, which contains a quote.

*"Interdisciplinary research provides a unique opportunity to tackle complex challenges by integrating diverse perspectives, connecting engineering, mathematics, and science to create impactful technologies that improve human health and quality of life."*





*"Building consensus begins with active listening, valuing all perspectives, and aligning goals to amplify impact—creating win-win scenarios for all stakeholders through collaboration and transparency."*



Yonina strives to “create an inclusive environment where women feel supported, empowered, and encouraged to pursue their ambitions confidently.”

### **Intersections of Engineering, Mathematics, and Science**

Yonina emphasizes, *“Interdisciplinary research provides a unique opportunity to tackle complex challenges by integrating diverse perspectives.”* For Yonina, mathematics is the foundation, connecting engineering and science coherently. She has always been motivated by the potential of signal processing to uncover scientific insights, enabling advancements in diagnostics and therapy. “By combining engineering and mathematics with science, impactful technologies can be created that directly improve human health and quality of life.” This fusion of disciplines continues to drive her research and inspire the projects pursued in her lab.

With its ability to analyze and interpret complex data, signal processing offers transformative potential in science and engineering. It allows the uncovering of patterns and insights that were previously inaccessible, enabling advancements in medical diagnostics, personalized therapies, and even fundamental scientific discovery. Yonina’s motivation stems from “a desire to bridge these fields, harnessing mathematical rigor to create technologies that improve human health and well-being.”

### **Communication Gaps between Experts from Different Backgrounds**

Yonina shares, *“Bridging communication gaps between experts from diverse fields requires a shared language of curiosity and clarity, and it begins with fostering a culture of mutual respect, trust, and curiosity.”* She encourages her team to ask questions and share their perspectives openly, no matter how basic. Yonina strives to create an environment where team members feel comfortable asking questions and exploring ideas outside their expertise, with a strong sense of confidence and security. This often involves breaking complex concepts into intuitive components and finding analogies that resonate with everyone, regardless of their background.

A critical aspect of this process is guiding her team to think independently as researchers, encouraging them to approach challenges creatively. While it may sometimes be easier or faster for her to work on specific problems herself, Yonina intentionally steps back to mentor and empower her team. This approach ensures that they learn not only to

solve specific problems but also to approach challenges with the mindset of an independent thinker and innovator. Encouraging this growth fosters a collaborative spirit where ideas from different fields can merge seamlessly, leading to groundbreaking solutions.

Additionally, Yonina emphasizes the importance of personal connections, humor, and shared values. Fostering trust and camaraderie, whether through team-building activities, community service, or informal gatherings, helps create an environment where interdisciplinary collaboration thrives. By aligning technical goals with broader societal impacts, she ensures that every team member feels secure and invested in the mission, regardless of their background.

### **Mentoring the Next Generation of Researchers and Innovators**

Yonina reflects, *“Mentorship is about more than guiding research—it’s about empowering individuals to think critically, embrace challenges, and confidently pursue their passions. It’s also about fostering trust, building confidence, and keeping sight of broader goals, such as creating lasting knowledge and positively impacting the world. True mentorship emphasizes advancing oneself and supporting and caring for others in the process.”*

Yonina focuses on creating a supportive and inclusive environment that encourages interdisciplinary collaboration, curiosity, and growth. Regardless of their background, every individual is given space to explore their interests and develop their unique strengths. Her approach emphasizes building technical expertise and cultivating the confidence and resilience needed to tackle complex problems independently.

Additionally, Yonina strongly emphasizes social awareness, teamwork, and creating a collaborative atmosphere where individuals support and learn from one another. Helping young researchers discover their potential and make meaningful contributions is one of the most rewarding aspects of her work. “Watching students grow into capable researchers and socially responsible leaders is a deeply fulfilling part of my career.”

### **Building Consensus and Driving Collaboration**

Yonina explains, *“Building consensus begins with active listening and ensuring that all perspectives are valued. She prioritizes aligning goals and demonstrating how collaboration can amplify impact, creating win-win*

*scenarios for all stakeholders. Regular, open discussions and a commitment to transparency and honesty are key to driving meaningful partnerships."*

Yonina also invests time in developing personal relationships with collaborators and understanding their motivations and values. *"Shared goals beyond technical achievements, such as societal impact or community engagement, often serve as powerful unifying forces."*

### **Most Rewarding Experience as a Mentor**

Yonina shares, *"Seeing my mentees grow into confident, independent researchers who make meaningful contributions to their fields is incredibly fulfilling. Watching them overcome challenges, develop innovative ideas, and succeed in their careers while building families and partnerships and creating social impact reaffirms my passion for academia."*

One of the most gratifying moments is witnessing a student who initially lacked confidence deliver a compelling presentation, secure a competitive opportunity, or launch a project with real-world impact. These milestones highlight the transformative power of mentorship and the profound difference it can make in shaping someone's journey.

Equally rewarding is seeing her mentees embrace social responsibility, using their skills to address real-world challenges and improve the lives of others. Their successes inspire Yonina to continue supporting the next generation of leaders."

### **Definition of Leadership Philosophy**

Yonina asserts, *"Empower others to think boldly, act decisively, and collaborate effectively to make a meaningful impact."* She strongly believes in creating an environment where people feel confident taking risks, sharing ideas, and growing as independent thinkers.

As Albert Einstein said, *"I never teach my pupils; I only attempt to provide the conditions in which they can learn."* This resonates deeply with Yonina's approach to leadership—"fostering curiosity, resilience, and a shared commitment to creating positive change.

### **Role in the Next Generation Transformation**

Yonina envisions, *"The next generation of leaders will drive innovation by embracing interdisciplinary approaches,*

*leveraging advances in computational power, and addressing societal challenges with creativity and determination. They will focus on making advancements accessible, inclusive, and impactful, ensuring technologies like medical breakthroughs, autonomous vehicles, defense systems, and communication tools are affordable and widely available to diverse communities worldwide. They will prioritize inclusivity and societal impact, ensuring their work benefits diverse communities."*

As the reliance on signal processing grows, these leaders will face increasingly complex challenges, requiring faster, more efficient, and cost-effective solutions to serve billions globally. Yonina's role is to mentor and collaborate with them, fostering curiosity, resilience, and creativity while emphasizing the importance of social responsibility. She strives to create an environment where diverse voices are valued, encouraging her team to take calculated risks and explore unconventional ideas that will help improve human health and well-being, accessibility, and connectivity around the globe.

Additionally, Yonina aims to bridge academia and industry, ensuring that foundational research translates into practical applications. Through her mentorship in both professional areas like signal processing and AI and personal advocacy for women and other minorities in academia, Yonina *"aspires to inspire the next generation to lead with integrity, purpose, and innovation, sharing values and impact to improve human health and well-being."*

### **Long-term Aspiration for Society**

Yonina shares, *"I aspire to continue building an interdisciplinary lab that bridges fundamental research and real-world applications. By collaborating with clinicians, engineers, and scientists, my aim is to develop technologies that address critical challenges in healthcare, communications, and beyond."*

She is also deeply committed to advocating for gender equity and inclusivity in science. Through mentorship, program development, and community engagement, Yonina strives to create opportunities for underrepresented groups to thrive and contribute to advancing knowledge and innovation. <sup>15</sup>





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