



Photo courtesy of Teresa Meng

Teresa Meng

CMOS Wi-Fi

U.S. PATENT NO. 6,356,748: Spectrum control for direct conversion radio frequency reception

Inducted in 2026 Born: Jan. 17, 1961

Teresa Meng's groundbreaking research, engineering expertise and entrepreneurial leadership revolutionized Wi-Fi, making it faster, more energy efficient and more affordable, and bringing connectivity to everyone, everywhere. She pioneered the integration of all RF (radio-frequency) and digital communication functions on a single CMOS (complementary metal-oxide semiconductor) chip, laying the technical foundation for future Wi-Fi devices and driving the widespread adoption of Wi-Fi.



Full Bio: <https://www.invent.org/inductees/teresa-meng>

Primary Connections:

- Atheros Communications (acquired by Qualcomm Inc. in 2011): Founder, CEO, CTO and Director, 1998-2011
- Stanford University: Professor of Electrical Engineering, 1988-2013

Education:

- National Taiwan University: B.S., Electrical Engineering, 1983
- University of California, Berkeley: M.S., Electrical Engineering and Computer Sciences, 1985; Ph.D., Electrical Engineering and Computer Sciences, 1988

Key Memberships/Awards:

- Marconi Prize, 2024
- American Academy of Arts and Sciences: Member, 2021
- IEEE Alexander Graham Bell Medal, 2019
- Association for Computing Machinery: SIGMOBILE Outstanding Contributions Award, 2018
- National Taiwan University: Distinguished Alumna Award, 2010
- University of California, Berkeley, Electrical Engineering and Computer Sciences Department: Distinguished Alumna Award, 2010
- National Academy of Engineering: Member, 2007
- CIO Magazine: 20/20 Vision Award, 2002
- MIT Sloan eBusiness Awards: Innovator of the Year, 2002
- IEEE Fellow, 1998

Things You Should Know:

- Meng was born in Taiwan and attended an all-girls high school there.
- She has enjoyed studying history, literature and philosophy since her youth.
- She credits her father with helping her build the confidence to succeed in electrical engineering, which is a male-dominated field.
- In 1998, Meng founded Atheros Communications to commercialize her CMOS-based wireless technology for broader access by more consumers.
- In 2001, her team at Atheros announced the industry's first CMOS Wi-Fi transceiver.
- She served as the first CEO of Atheros Communications, which had a successful IPO in 2004. It was acquired by Qualcomm Inc. for over \$3 billion in 2011. Atheros' chairman of the board was President John Hennessy of Stanford University.
- She later focused her research on applying signal processing and circuit design to biomedical applications, collaborating with neural scientists on neural signal detection and neural prosthetic systems.
- Meng directed a research group in exploring implantable biomedical devices and received eight patents for this work.
- She is a strong advocate for women in engineering and technology.
- In 2019, she became the first woman to receive the IEEE Alexander Graham Bell Medal.