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 $\underline{https://nyutandon.photoshelter.com/galleries/C0000DKT3j1lAvpA/G0000wWEN6K5BdhY/l0000bOLGfs0Wdpg/tables.pdf.}$

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IEEE honors NYU WIRELESS founder Theodore S. Rappaport

with Communications Field Award

IEEE Eric E. Sumner Award cites pioneering researcher's contributions to communications technology

BROOKLYN, New York, Thursday, July 11, 2019 – <u>Theodore (Ted) S. Rappaport</u>, a New York University professor and founding director of the research center <u>NYU WIRELESS</u>, is the recipient of the 2020 <u>Eric E. Sumner Award</u> from the Institute of Electrical and Electronics Engineers (IEEE), which cited his pioneering research in the field of wireless telecommunications.

Rappaport's groundbreaking research in radio wave propagation, wireless communication system design, and broadband wireless communications circuits and systems, including work at millimeter wave (mmWave) frequencies (30 to 300 gigahertz), paved the way for several generations of wireless technology and sparked the commercialization of fifth-generation (5G) wireless technology. As 5G rolls out, it will bring broadband speeds to wireless communication, thereby potentially revolutionizing medicine, enabling autonomous vehicles, and inexpensively connecting rural communities to the digital world.

Before Rappaport published his seminal 2013 paper, "Millimeter Wave Mobile Communications for 5G Cellular: It Will Work," in an IEEE journal, few experts acknowledged the possibilities of tapping that underutilized spectrum. Now, NYU WIRELESS, which Rappaport launched upon arriving at the NYU Tandon School of Engineering in 2012, is moving well beyond 5G research. Rappaport's latest comprehensive overview, "Wireless Communications and Applications Above 100 GHz: Opportunities and Challenges for 6G and Beyond," highlights the technical challenges and opportunities for the coming decades, particularly in the terahertz (THz) electromagnetic spectra. With other NYU WIRELESS researchers, he is exploring THz for ultra-fast, high-capacity data transmission and revolutionary applications for communications, medical imaging, precise position location, semiconductor testing, and new kinds of spectroscopy.

"Ted Rappaport has been a linchpin in making NYU a world leader in the field of wireless communications, as well as an educator who has inspired and nurtured the next generation of innovators in the field," said NYU Tandon Dean Jelena Kovačević. "We congratulate him on this latest well-deserved honor from IEEE and are eager to watch as he helps usher in the new era of 5G and beyond."

Rappaport is the David Lee/Ernst Weber Professor of Electrical Engineering at NYU Tandon, a professor of computer science at NYU Courant Institute of Mathematical Sciences, and a professor of radiology at the NYU School of Medicine. He is serving his third term on the Technological Advisory Council of the Federal Communications Commission and was recently elected a fellow of the National Academy of Inventors.

Among his other honors are the 1990 Marconi Young Scientist Award, 1999 IEEE Communications Society Stephen O. Rice Prize, 2002 Fredrick E. Terman Outstanding Electrical Engineering Faculty Award from the American Society for Engineering Education, 2005 IEEE Vehicular Technology Society Stuart F. Meyer Award, 2011 IET Sir Monty Finniston Medal for achievement in engineering and technology, 2015 IEEE Donald G. Fink Paper Prize Award, 2017 IEEE VTS Neal Shepherd Memorial Best Propagation Paper Award, and 2018 Armstrong Medal from the Radio Club of America. He has more than 100 U.S. or international patents issued or pending and has authored, co-authored, and co-edited 18 books, including the world's best-selling books on wireless communications, millimeter wave communications, and smart antennas.

His most recent award is named in honor of the late IEEE President Eric E. Sumner, who was instrumental in developing early switching systems.

About the New York University Tandon School of Engineering

The NYU Tandon School of Engineering dates to 1854, the founding date for both the New York University School of Civil Engineering and Architecture and the Brooklyn Collegiate and Polytechnic Institute (widely known as Brooklyn Poly). A January 2014 merger created a comprehensive school of education and research in engineering and applied sciences, rooted in a tradition of invention and entrepreneurship and dedicated to furthering technology in service to society. In addition to its main location in Brooklyn, NYU Tandon collaborates with other schools within NYU, one of the country's foremost private research universities, and is closely connected to engineering programs at NYU Abu Dhabi and NYU Shanghai. It operates Future Labs focused on start-up businesses in downtown Manhattan and Brooklyn and an award-winning online graduate program. For more information, visit http://engineering.nyu.edu.

About NYU WIRELESS

NYU WIRELESS is a vibrant academic research center that is pushing the boundaries of wireless communications, sensing, networking, and devices. Centered at NYU Tandon and involving leaders from industry, faculty, and students throughout the entire NYU community, NYU WIRELESS offers its industrial affiliate sponsors, students, and faculty members a world-class research environment that is creating fundamental knowledge, theories, and techniques for future mass-deployable wireless devices across a wide range of applications and markets. Every April, NYU WIRELESS hosts a major invitation-only wireless summit, in cooperation with Nokia Bell Laboratories, for the center's industrial affiliates

and thought leaders throughout the global telecommunications industry. For more information, visit wireless.engineering.nyu.edu.

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