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Immediate Release

NYU WIRELESS Founder Theodore S. Rappaport Elected as National Academy of Inventors Fellow

BROOKLYN, New York, Wednesday, December 12, 2018 – [Theodore S. Rappaport](#), an NYU professor and founding director of the research center [NYU WIRELESS](#), has been [named a fellow](#) of the National Academy of Inventors (NAI).

His pioneering work in radio wave propagation for cellular and personal communications, wireless communication system design, and broadband wireless communications circuits and systems at millimeter wave (mmWave) frequencies (30 to 300 gigahertz) has paved the way for fifth-generation (5G) wireless communications, which will enable consumers to enjoy speeds up to 100 times faster than those obtained with 4G devices.

Rappaport was cited by the NAI for his spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development, and the welfare of society.

Before Rappaport published his seminal 2013 paper, [“Millimeter Wave Mobile Communications for 5G Cellular: It Will Work,”](#) in an IEEE journal, few technologists acknowledged the possibilities of tapping that underutilized spectrum, which is expected to usher in an era in which physicians routinely use sophisticated virtual-reality gear to operate from remote locations on patients; cars sharing a road communicate in order to avoid accidents; hundreds of millions of people around the globe get access to the Internet at broadband speed; and smart buildings make the most efficient possible use of energy.

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Since Rappaport arrived at the NYU Tandon School of Engineering in 2012 to launch NYU WIRELESS, the first U.S. academic center to merge wireless engineering research with computer science and medicine, the school has been at the forefront of next-generation communications, with vital explorations of mmWave technology, channel modeling, Massive MIMO, circuits, and nano devices.

The center is now moving well beyond 5G research, with a recent focus on terahertz (THz) electromagnetic spectra for ultra-fast, high-capacity data transmission and revolutionary applications for communications, medical imaging, pharmaceutical monitoring, semiconductor testing, and new kinds of spectroscopy.

NYU Tandon Dean Jelena Kovačević said, “As an NAI Fellow, Ted Rappaport will be taking his rightful place in a select and impressive group. We are proud that the organization has recognized, as we do here, that Ted exemplifies what it means to be an innovator. We consider him an enormous credit to our school and are grateful to count him as a colleague.”

Rappaport and the other 2018 NAI Fellows will be inducted on April 11, 2019, at Space Center Houston in Texas, with U.S. Commissioner for Patents for the United States Patent and Trademark Office Andrew H. Hirshfeld keynoting the event.

The 2018 class of fellows represent 125 research universities and governmental and non-profit research institutes worldwide and are named inventors on nearly 4,000 issued U.S. patents.

Rappaport is the David Lee/Ernst Weber Professor of Electrical Engineering at the NYU Tandon School of Engineering, a professor of computer science at NYU Courant, and a professor of radiology at the NYU School of Medicine. He previously launched two of the world's other preeminent academic wireless research centers, at the University of Texas at Austin and Virginia Tech. He has served on the Technological Advisory Council of the Federal Communications Commission, assisted the governor and CIO of Virginia in formulating rural broadband initiatives for Internet access, and conducted research for the National Science Foundation, Department of Defense, and dozens of global telecommunications companies.

Among his many laurels 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.

Rappaport is the founder of the companies TSR Technologies, Inc., a cellular radio/PCS software radio manufacturer now owned by Keysight; and Wireless Valley Communications, a pioneering creator of site-specific radio propagation software for wireless network design and management that he sold in

2005 to Motorola. He received bachelor's, master's, and doctoral degrees in electrical engineering from Purdue University and is a Distinguished Engineering Alumnus of his alma mater.

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>.

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