Awards

Józef Modelski: MTT-S Honorary Life Member

■ **John T. Barr**

The highest purpose of the HLM selection is to recognize and honor a deserving Society participant. Of equal importance is the continuity of purpose, intent, and corporate memory encouraged by the HLM designation, thus helping to assure the continuation of the highest motives and objectives that have always been present within the MTT-S.

MTT-S Operating and Procedures Manual

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On 1 June 2019, the IEEE Microwave Theory and Techniques Society (MTT-S) Administrative Committee (AdCom) selected, by acclamation, Józef Modelski (Figure 1) as the 15th MTT-S Honorary Life Member (HLM) in the 67-year history of the Society (Table 1). Józef was born in Kawnice (the Wielkopolska region), Poland, in 1949. He grew up on a farm, and, even at an early age, he had a keen eye for science and experimentation. As other budding electrical engineers have done, he conducted experiments by putting nails into electrical sockets and connecting them with a third nail. Fortunately, with the help of his father, Józef was soon able to repair the expected results of such experiments, damaged outlets.

His father regularly listened to the broadcasts of Radio Free Europe (RFE). RFE was established by the United States at the beginning of the Cold War to transmit uncensored news and information to audiences behind the Iron Curtain (RFE broadcasts to Poland originated in Munich, West Germany).

Figure 1. *Józef Modelski. (Source: Józef Modelski.)*

TABLE 1. The HLMs of the MTT-S.

George C. Southworth	1960
Andre G. Clavier	1961
William W. Mumford	1965
Alfred C. Beck	1967
Donald D. King	1973
Theodore S. Saad	1973
Kiyo Tomiyasu	1978
Seymour B. Cohn	1978
Arthur A. Oliner	1978
Leo Young	1982
Tatsuo Itoh	1994
Peter W. Staecker	2006
Richard A. Sparks	2014
John T. Barr	2017

RFE played a significant role in the collapse of communism and the rise of democracies in postcommunist Europe in 1989. Listening to RFE at the time could get one into trouble. Furthermore, it required some skills, as the RFE broadcasts were jammed by special government stations. So Józef's early interest in both radio electronics and uncensored news overlapped when using a hidden attic radio with a homemade antenna.

In 1967, Józef graduated from the secondary school in Konin, where math, physics, and chemistry were his top subjects. He won nationwide chemistry and physics contests. Academic achievement runs in Józef's family. His older sister Nina was already a student of law at Poznan University when he had to decide on his professional future. Observing her struggles with politically charged subjects, Józef decided to choose a more practical and objective academic path. With his early successes in science, he set his sights on a very prestigious goal: studying electronics at the Warsaw University of Technology (WUT).

The entrance exam for the Department of Electronics at WUT in 1967 was extremely competitive, with only approximately 10% of applicants chosen for admission. Successfully admitted, Józef received his M.Sc. degree in electronics/radio engineering in 1973 and then joined the WUT Institute of Radioelectronics as a teaching assistant. This position carried a full teaching load (practice and laboratory sessions), and the assistant was also expected to carry out research required to obtain a doctoral degree. Józef received his Ph.D. degree (with distinction) in 1978 based on the dissertation "Method of Designing Wideband Microwave Analog Phase Shifter" and his D.Sc. (Habilitation) degree in 1987 for the monograph *Microwave Analog Modulators and Phase Shifters*.

These academic achievements were instrumental for his career promotions to tenured professor (1991) and state professor (1994). In 1976–1977, he spent 13 months in the United States on a Fulbright scholarship, working with the microwave laboratories at the University of Texas at Austin, Cornell University (Ithaca, New York), and the Communications Satellite Corporation (Clarksburg, Maryland). In 1985, he spent six months in Germany on a Deutscher Akademischer Austauschdienst grant. He has held numerous research internships with European telecommunications firms and universities, including ones in the United Kingdom, Italy, Belgium, Portugal, and Germany. Starting in 1986, he spent two years at Braunschweig Technical University (Germany) as a senior scientist and visiting professor.

Józef's research interests focus on microwave techniques, radiocommunications, and television. In the early 1970s, he participated in the creation of methods and equipment for measuring microwave semiconductor diode parameters. Thereafter, for more than 10 years, he focused on the design and construction of microwave modulators and phase shifters for telecommunication systems, at first with semiconductor diodes and then, in the 1980s, with metal–semiconductor field-effect transistors and ferrite elements. During his stay at Braunschweig Technical University, he was involved in researching the design of microwave subsystems using integrated waveguides and was one of the coordinators of a research project focused on working out the prototype of a satellite converter for the German telecommunications industry. During 1983–1994, he conducted research on the design of accurate methods for analyzing dielectric and ferrite resonators, as well as applying these resonators in filters and generators, and for measuring material properties in the microwave band. In recent years, his research interests have included mainly ferroelectric and smart antennas. Józef has managed several major research projects conducted for national entities, including designing the concept and implementation of the GSM-Railway system for Polish railways (1997–2001).

Józef has held a number of senior roles with WUT. During 1980–1985, he acted as a proxy for the rector of WUT and as chair of the Rector's Committee on Foreign Internships for Students. He was head of RF engineering at the Faculty of Electronics and Information Technology in 1994–1996. Then, in 1998–2007, he was a member of the Rector's Committee for University Development and Modernization. Later, in 1988–2000, he headed the Television Division and became head of the Radiocommunications Division at the Faculty of Electronics and Information Technology. From 1996 to 2016, he served as director of the Institute of Radioelectronics. From 2006 to 2013, he was chair of the Council of Academic Sports Association. Since 2016, he has been head of the Radiocommunications Division at the Institute of Radioelectronics and Multimedia Technology. In 1999, he founded the Foundation for the Development of Radiocommunications and Multimedia Technologies, of which he continues to be president. In addition, he was an active educator, teaching many courses and supervising more than 100 B.Sc. and M.Sc. theses as well as 24 Ph.D. dissertations.

As Józef received his Ph.D. degree in the field of microwaves, he quickly became interested in professional conferences, such as those organized by the MTT-S. While attending his first IEEE MTT-S International Microwave Symposium (IMS) conference in 1979 in Orlando, Florida, he was inspired by its size, visibility, and magnitude. The opportunity to meet well-known and respected scientists and engineers and establish working relationships with professionals was a great incentive to join the MTT-S. Unfortunately, at that time, the annual IEEE membership fee was higher than the monthly Polish academic salary. In the 1980s, Józef took all of the academic opportunities he could, writing papers and participating in as many conferences as possible. After the fall of the Berlin wall, the economy of Poland significantly improved, and Józef was then able to join the IEEE in 1990. In 2001, Józef was named IEEE Fellow by the IEEE Board of Directors (BoD) "for contributions to microwave semiconductor phase modulators and phase shifters."

Soon after joining the IEEE, Józef was elected chair of the Polish Aerospace and IEEE Electronic System Society/IEEE Antenna and Propagation Society/MTT-S joint Chapter, the first in Central and Eastern Europe. Under his guidance, the Chapter won many awards and much recognition from all three IEEE Societies. Soon afterward, he was engaged in Chapter formation in Eastern Europe and the former Soviet Union. It was a challenging but rewarding task to help these entities join the international engineering community. His work led to more than 300 new MTT-S members and 14 new Chapters in fewer than 10 years. Also, in that period, Józef helped convert the local Polish International Microwave and Radar Conference (MIKON) into an internationally recognized and leading event in the region.

In what Józef calls the biggest adventure of his professional career, he was elected MTT-S president in 2008 (see Figure 2). Józef felt that being president of the MTT-S was one of the most beautiful and rewarding experiences ever. He never expected to be chosen to hold this position, as nearly all of the leading roles in the MTT-S (up to that time) had been held by those living/working in the United States. He had been active in the Society for a number of years, and this gave him a chance to put all of his knowledge to use. Józef, coming from behind the Iron Curtain, saw his election to Society president as a sign of trust. And, for him, holding the position of MTT-S president was an invaluable life lesson about the importance of cooperating and seizing opportunities.

Even as Józef was rising through the MTT-S ranks, he was also a major participant in IEEE Region 8 leadership. After holding a number of senior positions, he became the Region 8 director of the IEEE BoD for 2009–2010. This led to a number of roles at the most senior leadership levels of the IEEE, on the IEEE Board Transformation Working Group, the IEEE Governance Committee, the IEEE Public Visibility Committee, and others. He returned to the IEEE BoD as Division IV director for 2013–2014, representing the MTT-S and the seven other Societies of the Electromagnetics and Radiation Division. Józef served on three major boards of the IEEE—the IEEE Technical Activities, Member and Geographic Activities, and Publication Services and Products boards—as well as the IEEE Awards board. Since completing his MTT-S AdCom term, Józef has been MTT-S Nominations and Appointments committee chair, a member of the MTT-S Awards Committee, the MTT-S liaison to the European Microwave Association (EuMA), and a participant with the MTT-S China and India initiatives.

Figure 2. *The president's table at IMS2008.*

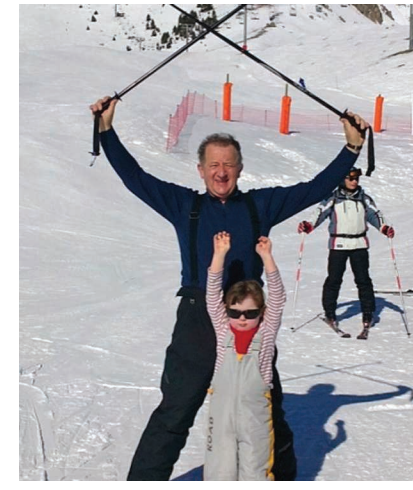

Figure 3. *Józef Modelski skiing in Sestriere, Italy, in 2011 with his granddaughter.*

In addition to the IEEE, Józef has been a member of the Polish Academy of Sciences (PAN) since 2007 and a chair of the PAN Electronics and Telecommunications Committee. He was also chair of the PAN Microwaves and Radiolocation Section. Since 1997, he has been a member of the board of the PAN Space Research Committee, and he is a past chair of the PAN Astronautics and Space Techniques Commission. He is an associate member of the Ukrainian National Academy of Sciences and the Warsaw Scientific Society and has served twice as a chair of scientific councils: for the Research Center of Radio and Television and the Telecommunications Research Institute. He is a member of multiple scientific councils, including the Research Space Center, the Military Communication Institute, and the Nicolaus Copernicus Astronomical Center. Since 2011, he has been president of the Polish National Committee of the International Union of Radio Science, and he was member of the General Assembly of EuMA for 1997–2007.

Another of Józef's passions is conferences, especially his beloved MIKON, of which he was general chair from 1994 to 2006. Since 2004, he has been a chair of Microwave and Radar Week. He has also been a member of numerous technical program and steering committees for conferences in the field of electronics and telecommunications, including the IMS (United States), the European Microwave Conference, and many regional events. He also cochaired the 2007 IEEE International Conference on Smart Technologies, an IEEE Region 8 conference.

Józef is a prolific author of many technical articles and a member of the editorial committees of several international and Polish scientific periodicals (including *IEEE Transactions on Microwave Theory and Techniques*, *Proceedings*

Figure 4. *Józef Modelski on Mont Blanc in 2010.*

Figure 5. *Józef Modelski in Cape Town, South Africa, in 2012.*

of the EuMA, and *Electronics and Telecommunications Quarterly*). Józef has been a consultant to many governmental agencies as well as industry and telecommunication operators. He was a member of the Interministerial Space Coordination Council, an advisory body to the Polish prime minister, and a chair of the Telecommunication Council, an advisory body to the president of the Polish Office of Telecommunications and Posts Regulation. He is presently chair of the Conference Program Committee of the Polish Chamber of Electronic Communications.

Józef has been recognized many times for his achievements, including receiving the Cavalier's Cross of the Order of the Restoration of Poland, the Medal of National Education, the Golden Cross of Merits, the Silver Medal of the Senate of the Republic of Poland, the Minister of Communication Distinction, the IEEE Third Millennium Medal, the MTT-S N. Walter Cox Award, the MTT-S Distinguished Service Award, the EuMA Distinguished Service Award, 10 awards from the Polish Ministry of Science and Higher Education, including the Medal of National Education, and the Medal of the 80th Anniversary of Polish Broadcasting. In 2015, he was honored with an entry into the Graduates' Golden Book of WUT. He has received two doctor honoris causa degrees: one from the Military University of Technology, Warsaw, and another from the Lodz University of Technology.

Figure 6. *(From left) Józef Modelski on a safari with John Vig, IEEE president, in Kenya in 2009.*

Józef's hardworking parents set a high standard for his family as well as his involvement in the local community and his pursuit of excellence. He, his two sisters, and his brother fund a scholarship for gifted students in the primary school he attended. He is a happy father of two daughters and a son and proud grandfather of three. His eldest daughter, Izabela, is a respected doctor. His son, Tomek, followed his father's footsteps into science and became a computer engineer. And his youngest daughter, Marta, just completed a law degree at Warsaw University.

Józef's interests include classical opera and medieval history. He enjoys skiing (Figure 3) and he fondly recalls ascending the highest peak in Europe, Mont Blanc (Figure 4). Other activities include ice skating, playing bridge, and gardening. Józef built a house for his family in Warsaw with extensive gardens. Tending them in his spare time gives him the kind of relaxation and pride that only working with nature can. In family tales, his perfectly green and well-trimmed lawn is already legendary. He takes great pleasure in travel, especially trips that bring him closer to nature, and has been on multiple safaris (Figures 5 and 6).

Józef has been a major contributing force to the MTT-S, and we look forward to his future involvement. See him reflect on his career at https://www.youtube.com/watch?v=cefqR1RbXsk. Congratulations, Józef.