Candidature Statement of Krzysztof Walkowiak
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It would be an honor and privilege to serve as a Secretary of the Optical Networking Technical Committee (ONTC) of the IEEE Communications Society. I have been actively engaged in optical network research since the start of my PhD in 1997. Through my academic career, ONTC has been a very good opportunity for me to learn, meet other researchers and exchange new ideas. Among all the anticipated events at the ICC, Globecom, and OFC conferences, ONTC meetings have been consistently one of the highlights. Moreover, these meetings have provided a platform for enhanced visibility, collaboration, and networking opportunities, all of which are vital in the academic career. Now, I believe it is the time for me to contribute more to such a great community by doing some administrative services.

In the current era, optical networking technologies play a crucial role in enabling the seamless exchange and processing of data across diverse communication networks, including 5G networks and the backbone infrastructure of the Internet that links powerful data centers. However, recent years have posed challenges for our community. Project funding in the field of optical networks has been on the decline. While the advent of 5G technology provided some relief, even that avenue is narrowing. In recent months, vendors and telecoms have faced formidable challenges, such as reduced revenues and significant layoffs. Yet, these challenges can also serve as opportunities for our research community, as key stakeholders are eager for innovative solutions that can deliver cost-effective and high-quality services. The potential areas that will likely deserve more attention in the near future and can provide new inspiration for research include machine learning applications, the utilization of Large Language Models (LLMs) in networking, quantum communications, digital twins, and cybersecurity.

If elected, I am committed to enhancing the benefits and value of our membership, staying responsive to emerging technical advancements, and working closely with ONTC's officers and members to elevate the committee's visibility, promote teamwork, and expand our community. I will encourage more junior researchers, PhD students, and students to participate in optical networking R&D and engage more industry participation. Your support is invaluable, and together, we can elevate the appeal of ONTC and secure its goals.

Bio

Krzysztof Walkowiak (M'08-SM'15) is a full professor in the Department of Systems and Computer Networks of Wroclaw University of Science and Technology (Wroclaw Tech), Poland. Krzysztof received the Ph.D. and D.Sc. (Habilitation) degrees from Wroclaw Tech, in

2000 and 2008, respectively. He has made many significant contributions in the field of optical networking, particularly in the areas of elastic optical networks, SDM networks, optical network survivability, cognitive optical networks, development of optimization algorithms for optical networks including AI methods, application of machine learning in optical networks, distributed computing systems (cloud computing, P2P). He received several best paper awards including the 2014 Fabio Neri Best Paper Award for paper "*Routing and Spectrum Allocation Algorithms for Elastic Optical Networks with Dedicated Path Protection*" (2014), Best Paper Award of DRCN 2009, for paper "*Survivability of P2P Multicasting*" (2009), and Best Paper Award of RNDM 2015 for paper: "*Comparison of Different Data Center Location Policies in Survivable Elastic Optical Networks*" (2015). He has coauthored over 300 papers, including more than 70 published in JCR (Journal Citation Reports) journals. Since 2021, Krzysztof has been listed in the Stanford-Elsevier World's Top 2% Scientists Ranking as one of the world's most-cited scholars.

Since 2020, Krzysztof has been the Dean of Wroclaw Tech Doctoral School, overseeing nearly 700 doctoral students. In 2019, in response to changes in national legislation, Polish universities began training doctoral students at doctoral schools, and Krzysztof has been actively involved in the organization and development of Wroclaw Tech Doctoral School from its inception, including a one-year role as vice-dean.