

Meet the Newly Elected Members of the Board of Governors 2017–2019



GABRIELLA CINCOTTI (M'03–SM'06) is Professor of Photonics in the Department of Engineering at University Roma Tre, Rome Italy, performing research on passive devices for Optical Communications and Biophotonics.



TETSUYA KAWANISHI (M'06-SM'06-F'13) is a Professor at Department of Electronic and Physical Systems, Faculty of Science and Engineering, Waseda University, and the Research Executive Director of Network System Research Institute, National Institute of Information and Communications Technology (NICT).



BENJAMIN G. LEE (S'04-GSM'05-M'09-SM'14) is a Research Staff Member at IBM's T. J. Watson Research Center in Yorktown Heights, New York. He has been a member of the IEEE, the IEEE Photonics Society, and the OSA for more than 10 years each, and he became a Senior Member of IEEE in 2014.



DAN M. MAROM (S'97-M'00-SM'07) is an Associate Professor in the Applied Physics Department at The Hebrew University of Jerusalem, Israel, heading the Photonic Devices Group. Prof. Marom is a Senior Member of the IEEE Photonics Society and a Fellow of the Optical Society of America.



Gabriella Cincotti (M'03–SM'06) is Professor of Photonics in the Department of Engineering at University Roma Tre, Rome Italy, performing research on passive devices for Optical Communications and Biophotonics. She is an Associate Editor for *Optica* since 2015, and has been Topical Editor of *Optics Letters* (2008-2014). She has been Guest Editor of the special issues 'Optical Signal Processing' of the *Journal of Lightwave Technology* 2006, 'ECOC' of *Optics Express* 2011, and 'Next Generation Access Networks' of *Optical Fiber Technology* 2015. She has been a co-Chair of the LEOS Summer Topical Meeting 'Optical Code Division Multiple Access: Applications and Devices' in 2009. Currently, she serves as a technical program committee member of the Optical Fiber Conference (OFC), the International Conference on Transparent Optical Networks (ICTON), the International Conference on Optical Network Design and Modeling (ONDM), and the Conference on Next-Generation Optical Communication: Components, Sub-Systems and Systems, Photonics West. She is an Optical Society of America (OSA) Fellow.

Statement: Photonics is a Key Enabling Technology pervasive in modern life, that has a direct impact at all society levels, and plays an essential role for the development of products and services to address the main societal challenges. I believe that this impact will be even wider in the next decade, driven by new technological innovations in many different sectors. The Photonic Society can give a fundamental contribution in this evolution, fostering partnerships between academia and industry, and becoming a unique platform to define, drive, and realize innovations. Since photonics is increasingly penetrating into many different fields, the Photonics Society should promote and support crossed-discipline interactions and develop a closer interaction with other societies. It is necessary to extend the topics covered by photonics conferences and journals, offering publication venues in new multidisciplinary research areas, while keeping excellence of publications. The Photonic Society should invest in more programs and enrich its activities to enforce the interactions and collaborations between academia and industry. In addition, the Photonics Society should favour early involvement of students in its Chapters and spread of membership among women in engineering, organize events and training material on new strategic topics and lead standardization activities in emerging applications and technologies.

Background: Gabriella Cincotti is Professor at University Roma Tre, where is in charge of the courses of 'Photonics' for the BS in Electronic Engineering, 'Optical Communications' for the MS in Telecommunications, 'Biophotonics' for the MS in Bioengineering, and 'Optical networks' for the PhD course in Applied Electronics. Since 2004, she leads the Photonics Lab and focus her main research activities on photonic devices for wavelength division multiplexing (WDM), optical code division multiple access (CDMA), and Orthogonal Frequency Division Multiplexing (OFDM) in optical communication systems. Recently, she has moved part of her research interests toward passive devices for Biophotonics. She has published about one hundred papers in scientific peer-reviewed journals, three chapters in scientific books, about two hundred international conference proceedings, with more than fifty invited papers at leading conferences and journals. She supports Photonics Society and other learned societies, through peer-review of journal and conference papers, special-issue publications, journal editing, as well as conferences and workshops organization.



Tetsuya Kawanishi (M'06-SM'06-F'13) is a Professor at Department of Electronic and Physical Systems, Faculty of Science and Engineering, Waseda University, and the Research Executive Director of Network System Research Institute, National Institute of Information and Communications Technology (NICT). He served on Photonics Technology Letter as an associate editor from 2008 to 2011, and on the Microwave Photonics sub-committee of the Photonics Society as a committee member. He also served as members or chairs of committees of the Optical Fiber Communication Conference (OFC), the Conference on Lasers and Electro-Optics (CLEO), OptoElectronics Communications Conference (OECC), the IEEE International Symposium on the Microwave Photonics (MWP), Asia-Pacific Microwave Photonics Conference (APMP), and Asia Communications and Photonics Conference (ACP). He was the general chair of MWP/APMP 2014 in Sapporo, Japan, and a TPC co-chair of ACP 2014. He also served for international standardization in IEEE 802 and also in non-IEEE standardization bodies, such as International Telecommunication Union (ITU), International Electrotechnical Commission (IEC) and Asia-Pacific Telecommunity (APT). Now, he is the chair of Task Group on Fixed Wireless Systems (TG-FWS) in APT Wireless Group (AWG).

Statement: Photonics is now indispensable for us to enhance the quality of lives by high-speed optical telecommunications, low-power consumption LED lighting, optical data storage discs, etc. Photonics always works together with electronics, mechanics, etc., in the systems for such applications, which rely on interfaces between photonics and other technologies. The Photonics Society has important roles to make bridges over the interfaces or borders, by high-level international conferences, scientific journals and standardization. As a member of the Board of Governors, my focus will be to provide opportunities to make interactions with different technical and scientific fields. With my experience in industry, government and academia, I would promote strong partnership between them in order to bring technologies emerging from basic science into real applications through industry. In addition, international standardization would have very important functions to make connections between researchers and users of photonics. However, researchers from academia may encounter some difficulties to join international standardization activities. I would like to support activities to connect academia and industry for international standardization in IEEE and also in non-IEEE organizations. The Photonics Society would play very significant roles to make connections between different technical fields through such activities. For example, collaboration with wireless technology would be indispensable for 5G mobile communication systems which should be based on high-speed wired photonic networks and high-performance radio links. Such systems would have many interfaces between photonic and radio signals. That implies standardization based on photonics and radio technologies would be very important to make cost effective systems. I will also focus on collaboration with organizations in newly industrialized economies, to enhance activities related to applications for people in developing countries as well as industrialized countries. Technologies developed for such applications would be useful to improve the quality of lives of the people in the world. In addition, such activities would produce seeds for new trends in science and engineering in photonics. I am sure that the Society can provide opportunities to make useful interactions between the researchers and users of photonics.

Background: Tetsuya Kawanishi received the B.E., M.E., and Ph.D. degrees in electronics from Kyoto University, Kyoto, Japan, in 1992, 1994, and 1997, respectively. From 1994 to 1995, he was with the Production Engineering Laboratory of Panasonic. During 1997, he was with the Venture Business Laboratory, Kyoto University, where he was engaged in research on electromagnetic scattering and on near-field optics. In 1998, he joined the Communications Research Laboratory, Ministry of Posts and Telecommunications (now the National Institute of Information and Communications Technology, NICT), Tokyo, Japan, where he was the Director of Lightwave Devices Laboratory of NICT. During 2004, he was a Visiting Scholar in the Department of Electrical and Computer Engineering, University of California at San Diego. From 2015, he is a professor of Faculty of Science and Technology, Waseda University, Tokyo, Japan. His current research interests include high-speed optical modulators and RF photonics.



Benjamin G. Lee (S'04, GS'05, M'09, SM'14) is a Research Staff Member at IBM's T. J. Watson Research Center in Yorktown Heights, New York. He has been a member of the IEEE, the IEEE Photonics Society, and the OSA for more than 10 years each, and he became a Senior Member of IEEE in 2014. He served a three-year term as the Associate Vice President of Membership for Young Professionals for the Photonics Society, where he helped guide the transformation of the recent-graduate outreach effort from the former *Graduates of the Last Decade (GOLD)* program to the new *Young Professionals* program. During this appointment, he worked to make the Photonics Society better equipped to help graduate members more seamlessly transition into the workforce and become the next generation of leaders in photonics. He participates in the Member Advisory Network and the Young Professionals program of the Optical Society (OSA) as well.

Dr. Lee has served on technical program committees for several conferences including the Optical Fiber Communications conference (2015-2016), the Optical Interconnects Conference (2015-2016), the Photonics in Switching Conference (2012-2014), and the International Symposium on Networks-on-Chip (2010-2013). He served as Program Co-Chair for the Optical Interconnects Conference in 2016, and now serves as General Co-Chair for the 2017 Optical Interconnects Conference as well as a Sub-Committee Chair for the 2017 Optical Fiber Communications Conference. He is also an Industry Liaison to the Semiconductor Research Corporation, Global Research Collaboration.

Statement: I would be delighted to serve on the IEEE Photonics Society Board of Governors. As a member, my most important task would be to uphold the technical excellence and strong reputation of the Photonics Society's journal and conference publications. A strong publication portfolio provides the greatest opportunity for the society to fulfill its mission statement by attracting reports of the latest advancements from the best thinkers around the globe and facilitating the sharing of ideas at the world's top optics conferences. Foremost, we need to ensure that the impact of publishing with the IEEE Photonics Society is the highest available and that it continues to be elevated. As the community adjusts to a changing publication culture brought about by open access models, multimedia content, social media, and archival pre-print sites, the society must find ways to embrace these technological transformations without sacrificing scientific eminence.

In other matters, as a Board of Governors member, I would seek to provide more volunteer positions for students and recent graduates so that they might have opportunities to learn about various society programs while making valuable contacts that will benefit them throughout their career. I would further seek to develop bridges between the Photonics Society and other key societies fostering enhanced interaction between the photonics community and other complimentary fields. Today, interdisciplinary research is more critical than ever to furthering scientific advancements, and increased interaction between a diversity of disciplines can play an important role in generating new places where photonics can have a positive impact. Thank you for your consideration, and I would appreciate your vote.

Background: Benjamin G. Lee received the B.S. degree in electrical engineering from Oklahoma State University (Stillwater, OK) in 2004. There, he worked on terahertz time-domain spectroscopy as an Undergraduate Research Assistant in the Ultrafast Terahertz Optoelectronic Laboratory from 2003 to 2004. He received the M.S. and Ph.D. degrees in electrical engineering from Columbia University (New York, NY) in 2006 and 2009, respectively, while working in the Lightwave Research Lab as a Graduate Research Assistant focused on silicon photonic switching devices and architectures. He joined IBM Research in 2009, initially as a Postdoctoral Researcher, where he has since investigated optical systems for high-performance computing and datacenters, including both multimode and single-mode short-reach interconnects and photonic integrated switch fabrics. Overall, his research has produced more than 125 peer-reviewed journal and conference publications, including 12 post-deadline conference papers. He has filed 14 patent applications and holds 7 issued patents. Additionally, he serves as Assistant Adjunct Professor of Electrical Engineering at Columbia University.



Dan M. Marom (S'99-M'01-SM'08) is an Associate Professor in the Applied Physics Department at The Hebrew University of Jerusalem, Israel, heading the Photonic Devices Group. Prof. Marom is a Senior Member of the IEEE Photonics Society and a Fellow of the Optical Society of America. He was awarded the IEEE Photonics Society Distinguished Lecturer Award for 2014 and renewed for 2015, and has lectured at Society Chapters worldwide on the topic of switching technologies for spatially and spectrally flexible optical networks. Since 2013 he serves as one of the two Senior Editors for Photonics Technology Letters, handling all photonic devices related submissions. Past Photonics Society services include active roles as Conference Chair (Optical MEMS and Nanophotonics-OMN), Co-Chair (Photonics in Switching-PS), Program Committee Chair/Sub-Committee Chair/Member on multiple occasions (OFC, LEOS/IPS, CLEO, PS, OMN and workshop organizer within these conferences), Associate Editor for PTL (2008-2013), IEEE Photonics Society Young Investigator Award Committee Member (2013-2015), and peer-reviewer to the Society's journals.

Statement: As a long-time IEEE Photonics Society (IPS) member, I have had a very rewarding member experience throughout my career and benefitted from the Society's activities in knowledge dissemination through conferences, journals, newsletters, and more. As an elected member of the Board of Governors, I will strive to increase membership value, headcount, and diversity. This will be achieved by the actions listed below that I will promote to strengthen the IPS in the years ahead.

IPS membership value is already innumerable, whether to students, early-stage professionals, or to seasoned veterans, and yet can be further refined. Students need to be inspired by science and scientists. As a travelling Distinguished Lecturer to eleven destinations worldwide, I've witnessed firsthand the positive impact of outreach activities on young inquisitive minds, especially in under-represented regions where students and members have limited travel resources. I will encourage extending local IPS chapter activities, as the most effective route for student impact. Chapter activities expose students to the latest research findings, but should also serve as an empowering event, allowing students to present their own work. Personal interaction with prominent Society members can serve as a memorable, possibly life-altering event, for student members. I will promote social mixing events at conferences between attending student members and present IPS officials, keynote and invited speakers, award recipients, etc. Early-stage professionals trying to establish themselves in the community can also benefit from greater visibility. Our practice of early publishing at conferences followed by a peer-reviewed, full journal reporting appropriately addresses both rapid dissemination and thorough and verifiable reporting, yet dilutes the citation metrics when peers reference either the conference or journal publications. We should initiate a linking mechanism between conference papers and subsequent journal publications, so that citations to the conference paper are automatically transferred to the journal publication, when available, for consolidation. This would improve the quality of conference submissions, as the practice of reserving the best results for high impact journals would no longer be necessary, and increase our journal's Impact Factor, as all citations are properly acknowledged. Excelling IPS members, whether academic or industrial, receive recognition by way of Awards. The impact of such Awards will be compounded if recipients contributes an article to the IPS newsletter. Such recognition can also be bestowed to well-established or long-standing members who can be invited to contribute an article, or a profile segment, to his/her contribution, field, or region.

Increasing membership value serves our society, but further assists in photonics outreach to the community at large. Through special events, such as regional workshops and especially geared towards underserved populations and countries, the societal benefits photonics brings as well as the varied technical fields enabled by photonics will engage a wider, more diverse audience, and influence new generations of capable women and men to pursue science and technology as a rewarding career path.

Background: Dan received the B.Sc. Degree in Mechanical Engineering and M.Sc. Degree in Electrical Engineering, from Tel-Aviv University, Israel, in 1989 and 1995, and was awarded a Ph.D. in Electrical Engineering from the University of California, San Diego (UCSD), in 2000. He received the LEOS Best Student Paper award 1999, and was a John Hertz Foundation Graduate Fellow at UCSD (1996-2000). From 2000 until 2005, he was a Member of the Technical Staff at Bell Laboratories, Lucent Technologies, where he demonstrated the first Wavelength-Selective Switch that enables today's transparent optical networking. Since 2005 he has been with the Applied Physics Department, The Hebrew University of Jerusalem, Israel.