Meet the Newly Elected Members of the IEEE Photonics Society Board of Governors 2015—2017

BENJAMIN J. EGGLETON (M'03-SM'07-F'10) is an ARC Laureate Fellow and Professor of Physics at the University of Sydney, Director of the ARC Centre for Ultrahigh bandwidth Devices for Optical Systems (CUDOS), and Director of the Institute of Photonics and Optical Science (IPOS) at the University of Sydney. He is a Fellow of the Optical Society of America, IEEE Photonics and the Australian Academy of Technological Sciences and Engineering (ATSE).

KAZUO HAGIMOTO (M'84-SM'07-F'08) is the president and CEO of NTT Electronics Corporation. He is a member of the board of IEEE Tokyo section and the chair of Communications Society Japan chapter. He is a fellow of IEEE and the IEICE of Japan, and a member of OSA. He has served as a program co-chair of OSA Optical Amplifier topical meeting OAA’93 in Yokohama, Japan, the general chair of APCC2008, IEEE ICC2011 TPC chair in Kyoto, and IEEE HTC2013 in Sendai Japan. He was served as a Director, General Affairs of IEICE in 2006-2007 and the president of IEICE Communications Society.

CHRISTINA LIM (S’97-M’00-SM’04) is a Professor and the Director of the Photonics and Electronics Research Laboratory at the Department of Electrical and Electronic Engineering, the University of Melbourne, Australia. In 2008, she was the Technical Program co-Chair of the IEEE International Topical Meeting on Microwave Photonics (MWP) jointly held with the Asia-Pacific Microwave Photonics Conference (APMP). She also served as the co-Chair of MWP and APMP conferences in 2012 and as the Technical Program co-Chair for APMP in 2013. She is currently an Associate Editor for the IEEE Photonics Technology Letters and for the IEEE Photonics Society Newsletter. She was a Guest Editor of Optics Express Special Focus on Microwave Photonics (2013) and IEEE Journal on Selected Areas in Communications Special Issue on Emerging Technologies in Communications (2012).

PASCALE NOUCHI (M’02) is the manager of the Waves and Signal Processing Laboratory within THALES Research & Technology, France, the main multidisciplinary research unit of THALES group. She has been serving as Member of the Technical Program Committee of the European Conference on Optical Communication (ECOC) since 2009 and she served as Chair of the Technical Program Committee of ECOC 2014. Since 2006, she has been defending the interest of photonics in the Photonics 21 lobbying association (involving all major European stakeholders from industry and academia across all fields of photonics) towards the European authorities. Since its creation in 2009, she is a jury member for the Jean-Jerphagnon prize, awarded each year in recognition of innovative work in the field of Photonics. She is also a member of the SFO (French Society of Optics) and, since 2014 she is co-chairing one of its topical groups on Microwave Photonics.
Benjamin J. Eggleton (M’03-SM’07-F’10) is an ARC Laureate Fellow and Professor of Physics at the University of Sydney, Director of the ARC Centre for Ultrahigh bandwidth Devices for Optical Systems (CUDOS), and Director of the Institute of Photonics and Optical Science (IPOS) at the University of Sydney. He is a Fellow of the Optical Society of America, IEEE Photonics and the Australian Academy of Technological Sciences and Engineering (ATSE).

Eggleton supports the Photonics Society and the technical community through his leadership of major international conferences, his numerous Editorial roles, refereeing of journal papers and conference papers and his commitment to science and technology impacting society.

Eggleton served as Associate Editor for IEEE Photonic Technology Letters (2003–2007). He served on the council of the Australian Optical Society from 2004 and as President from 2008-2010. Eggleton is Editor-in-Chief for Optics Communications one of the premiere international optics journals since 2007). In 2002-2003 Eggleton was an IEEE LEOS Distinguished Lecturer.

Eggleton has been invited to chair major international conferences in Australia and overseas, including Chair of OECC/ACOFT conference to be held in Melbourne, Australia in 2014, Program Chair for the IQEC-CLEO conference held in Sydney in 2012, General Chair for the International Photonic & Electromagnetic Crystal Structures (PECs) Meeting held in Sydney in 2009 (~ 300 people), General Chair for the Optoelectronics Communications Conference (Oecc), the premiere photonics conference for the Asia-Pacific region, held in Sydney in 2008 (~500 people). In 2007 he was General Chair for the OSA Topical Meeting on Bragg gratings, Photosensitivity and Poling (BGPP) held in Quebec City (200 people). In 2005 he was Chair for the combined Australian Conference on Fibre Technology (ACOFT) and the BGPP conference and the co-located Photonic Crystal workshop, held in Sydney (250 people). In 2003 he was Chair of the IEEE LEOS Topical meeting on Photonic crystals and holey fibres, held in Vancouver (150 people).

Statement:
I would like to see the Photonics Society invest in more programs that stimulate and encourage young researchers to be more entrepreneurial. I view photonics as enabling science that has transformed society already and has the potential to change the world in many different ways. The challenge is to translate the amazing research being done in Universities into real world products and to foster better collaboration between academia and industry. The Society can assist. We need to invest in the future of our society and the Photonic society by expanding and enhancing our student chapters and by encouraging our students to be more entrepreneurial.

My research sits at the interface of science and technology and physics and engineering. I am based in a School of Physics but spend most of my time to talking to engineers and would probably be based in an Engineering department if I was in North America. My background and experience working at Lucent Technologies means that I have a deep understanding of science
and business and the challenges involved in commercializing photonics technologies. I have plenty of experience with industry engagement and commercialization and understand how challenging this is for University researchers.

I am strongly committed to outreach and communicating the importance of science to the wider community. I have a high profile in the media and am regularly contacted for background opinions and direct quotes for newspaper and magazine articles, and have been interviewed on both radio and television, particularly in the context of the deployment of the Australian National Broadband Network (NBN).

**Background:**

Eggleton obtained the Bachelor’s degree (with honors) in Science and the PhD degree in Physics from the University of Sydney, Sydney, NSW, Australia, in 1992 and 1996, respectively. In 1996, he joined Bell Laboratories, Lucent Technologies as a Postdoctoral Member of Staff, and was then transferred to the Department of Optical Fiber Research. In 2000, he was promoted to Research Director within the Specialty Fiber Business Division of Bell Laboratories, where he was engaged in forward-looking research supporting Lucent Technologies business in optical fibre devices.

He is the author or co-author of more than 370 journal publications and over 100 invited presentations with 12,000 citations and an h-index of 53. He has received numerous prizes for his research achievements, including the 2011 Walter Boas Medal from the Australian Institute of Physics, the 2011 Eureka Prize for Leadership in Science, the 2007 Pawsey Medal from the Australian Academy of Science, the 2004 Malcolm McIntosh Prize for Physical Scientist of the Year, the 2003 International Commission on Optics (ICO) Prize and the 1998 Adolph Lomb Medal from the Optical Society of America, the Distinguished Lecturer Award from the IEEE/Lasers and Electro-Optics Society, and the R&D100 Award.
**Kazuo Hagimoto** (M’84-SM’07-F’08) is the president and CEO of NTT Electronics Corporation. He is a member of the board of IEEE Tokyo section and the chair of Communications Society Japan chapter.

**Statement:** Since I joined the NTT Electrical Communications Laboratories, Yokosuka, Japan in 1980, I have been involved various R&D projects of fiber-optic transmission systems ranging from 1Gbit/s to 1 Peta-bit/s. I have fortunately faced several breakthroughs beyond my expectation. Among them, Erbium-doped fiber amplifier is special. I developed first 10Gbit/s system in 1989 by exploring the potential to be developed of EDFA and also academic community through OSA topical meeting on Optical amplifiers and their applications. Recently, digital signal processing effectively successfully aided to develop 100G digital coherent based WDM systems to enhance the EDFA capability. For the past three decades, I have spent valuable period to present and share excellent ideas and results in many international conferences such as OFC during the term when a chain of novel technologies have contributed to continuous evolution of commercial fiber-optic systems. That is why their exponential growth trend has been made and one of dramatic innovations in the communications field is recognized. Every new fiber-optic system is supported by novel and different ideas and components. After such continuous efforts for several decades, fiber-optic systems have been covering the globe to connect always and everywhere with broad bandwidth. I am sure our industry is expecting even greater capacity, more device compactness, and lower power consumption.

I would encourage and create opportunity for collaboration of not only photonics but also its adjacent fields such as communications, biophotonics and photonic sensors to continue our innovation in IEEE Photonics Society. With my extensive background in research and experience in the photonics industry including the formation of academic communities in Japan to promote “integration” of element technologies for leading 10G, 40G, 100G and higher data rate transmission, I will be able to provide leadership to the IEEE Photonic Society and benefit to its members. I strongly believe that by focusing programs and activities of closer partnership between academia and the industry, we can bring new education and carrier opportunities particularly to young members of the Society.
**Background:** In NTT, he had led commercial project of long-haul trunk transmission systems from the viewpoints of research, engineering, and operation. In addition, he spent four years to manage cutting edge technologies of NTT laboratories as a laboratory head. He is currently the president and CEO of NTT Electronics Corporation which provides optical components and HD/4K/8K Codec device. He is a fellow of IEEE and the IEICE of Japan, and a member of OSA. He has served as a program co-chair of OSA Optical Amplifier topical meeting OAA’93 in Yokohama, Japan, the general chair of APCC2008, IEEE ICC2011 TPC chair in Kyoto, and IEEE HTC2013 in Sendai Japan. He was served as a Director, General Affairs of IEICE in 2006-2007 and the president of IEICE Communications Society. He developed high capacity fiber-optic systems and related devices such as EDFA. His IEEE fellow citation is “for contributions to very large capacity optical transmission systems.” He has been elected IEEE fellow in 2008. He received the Sakurai Memorial Prize from the Optoelectronic Industry and Technology Development Association in 1989, the Oliver Lodge premium from the IEE in 1991, the Kenjiro Takayanagi memorial award in 1994, the achievement award from the Institute of Electronics, Information and Communication of Engineers of Japan (IEICE) in 1994 and 2006, and Distinguished Achievement and Contributions Award of IEICE in 2013.
Christina Lim (S’97-M’00-SM’04) is a Professor and the Director of the Photonics and Electronics Research Laboratory at the Department of Electrical and Electronic Engineering, the University of Melbourne, Australia. In 2008, she was the Technical Program co-Chair of the IEEE International Topical Meeting on Microwave Photonics (MWP) jointly held with the Asia-Pacific Microwave Photonics Conference (APMP). She also served as the co-Chair of MWP and APMP conferences in 2012 and as the Technical Program co-Chair for APMP in 2013. She is a member of the MWP conference steering committee and also a member of the IEEE Microwave Theory and Technique Subcommittee 3 (MTT3). She has organized workshop for the International Conference on Communications conference (ICC) and she has served on Technical Program Committees of numerous conferences including Optical Fiber Communication Conference (OFC), European Communication on Optical Communication (ECOC), IEEE Photonics Society Annual Meeting. She is currently an Associate Editor for the IEEE Photonics Technology Letters and for the IEEE Photonics Society Newsletter. She was a Guest Editor of Optics Express Special Focus on Microwave Photonics (2013) and IEEE Journal on Selected Areas in Communications Special Issue on Emerging Technologies in Communications (2012).

Statement:
Photonics first caught my attention when I did my research internship looking at how to stabilize interferometers and exciting opportunities inspired me to take up postgraduate studies shortly thereafter. By becoming a member of IEEE Lasers and Electro-Optics Society (LEOS) in 1997 and to present my first research paper at the Optical Fiber Communication Conference (1998) was definitely a highlight in my personal journey into the Photonics world. This introduction launched me into the exciting world of conferences, workshops, meetings and personal networks organized or jointly sponsored by the IEEE Photonics Society (PS). PS became a magnet for me, drawing me into the IEEE world of volunteers and its culture. I was extremely fortunate to be recognized through the IEEE LEOS Graduate Fellowship in 1999. Since then, I have actively attended IEEE PS organized conferences, published in IEEE journals, established research contacts, research collaborations and networking via various society activities. Today, IEEE PS activities are a significant part of my professional life. Looking back, I have benefitted tremendously from all these activities and I feel that the society has groomed me to what I am today. It is a real privilege and a great honour to be able to contribute to the PS. I am passionate and excited being part of the leadership team to influence, shape and maintain preeminent position of the IEEE PS.

The IEEE Photonics Society has a longstanding history and reputation in nurturing the photonic community whether it’s the academia or industry, uniting the global network of photonic scientists and engineers. Over the last two decades, photonics have evolved and increasingly penetrating into other fields. Its applications have rapidly changed our quality of life and it is no longer just a standalone research field. If I were elected, I would strongly advocate and promote cross-disciplinary interactions between the photonics society with other societies by jointly organizing multi-disciplinary symposia/workshops and special issue journals targeted towards these multi- and cross-disciplinary topics. I also strongly believe
that the future lies on the next generation of photonics scientists and engineers. IEEE PS needs to play an increasingly bigger role through making teaching and education materials available for college and school educators to introduce the concepts and exciting frontiers in Photonics to future students and graduates. By playing a key leadership in influencing and inspiring our potential membership base, IEEE PS will be the eminent society in our field. IEEE PS should focus on increasing the participation by the younger generation of graduate students, postdoctoral fellows, junior academics and junior industry personnel by increasing the outreach programs via student branches, more incentives such as best student paper awards, lower registration fees, fellowships and grants, facilitating networking sessions at conferences, and mentoring schemes. Most importantly the society has to continue to promote and facilitate the exchange of scientific information in high quality conferences and bridging the gap between academia and industry to enable the photonic community to advance as a whole. IEEE PS should seek to ensure its coverage and focus spans across the globe by directing more effort in increasing its membership and participation to regions of growth in the Middle-East and South-East Asia. From investing in schemes to inspire and influence younger audience to investing in outreach schemes to make chapters alive and well, I see exciting possibilities for the IEEE PS and seeking your strong support for my election to the board of governors to shape and contribute to our IEEE PS.

Background:
Christina Lim received her B. Eng. and Ph.D. degrees from the University of Melbourne, Australia, in 1995 and 2000, respectively. She joined the Department of Electrical and Electronic Engineering at the University of Melbourne as a Research Fellow (1999), Senior Research Fellow (2001) and Principal Research Fellow (2007). She is now a Professor in the same Department. Her research interests are in the area of microwave photonics, fiber-wireless, high-speed instrumentation and optical telecommunications. She has published over 250 scientific journals and conference papers, 5 book chapters, and with more than 45 invited papers at leading conferences and journals. She has won multiple fellowships from the Australian Research Council and she was one recipients of the inaugural IEEE Photonic Society Graduate Student Fellowship (1999). She is currently the IEEE Student Counsellor for the University of Melbourne IEEE Student Branch.
PASCALE NOUCHI (M’02) is the manager of the Waves and Signal Processing Laboratory within THALES Research & Technology, France, the main multidisciplinary research unit of THALES group. She has been serving as Member of the Technical Program Committee of the European Conference on Optical Communication (ECOC) since 2009 and she is Chair of the Technical Program Committee of ECOC2014. Since 2006, she has been defending the interest of photonics in the Photonics 21 lobbying association (involving all major European stakeholders from industry and academia across all fields of photonics) towards the European authorities. Since its creation in 2009, she is a jury member for the Jean-Jerphagnon prize, awarded each year in recognition of innovative work in the field of Photonics. She is also a member of the SFO (French Society of Optics) and, since 2014, she is co-chairing one of its topical groups on Microwave Photonics.

**Statement:**
I have very strong memories of my first conference as a graduate student, CLEO, back in 1991. I found it a unique and exciting experience to discover new fields and exchanging research ideas. From that moment on and after many conferences (CLEO, OFC, ECOC, MWP ...), I never lost that excitement of being challenged by the newest findings or novel concepts, and interacting with the scientific community. I believe that one of the main missions of the Photonics Society is to ensure that we offer and keep the high quality conferences and leading journals, in a continuously changing environment (developments in digital media and communication, demands for open access, webinars, MOOCs, ...).

Photonics is now widely acknowledged as a Key Enabling Technology, which can generate new products, processes and services, as well as economic growth and employment. The disruptive potential of photonics will make an essential contribution to the development of products and solutions to address the main societal challenges. Both academia and industries have a key role to play together. As an IEEE member from the industry, I am especially interested and committed to fostering partnerships between academia and industry. How can the Photonics Society help in bridging the gap between fundamental science and products, in transforming fundamental knowledge into innovation?

Photonics is a pervasive technology that is increasingly penetrating others fields of science. I believe the Photonics Society has a key role to play to promote crossed-discipline interactions with other fields (biotechnology/medical, material science, ...), and to develop a closer interaction with other societies. Last, but not least, the future belongs to the younger generations. We need to continue to strengthen our activities to reach out to young professionals, by giving them the opportunity to be even more active within the organization. We also need to encourage and support young people to pursue studies and careers in photonics through dedicated actions.

**Background:**
Pascale Nouchi received her Ph. D. degree in Optical Sciences from the University of Southern California, Los Angeles, in 1992, after an engineering degree in Physics and Chemistry (Ecole Superieure de Physique Chimie Industrielles, Paris, France) in 1988. She
then joined the Fiber Optics R&D Department of Alcatel (France), where she has been involved in the design and development of new optical fibers, leading the corresponding group since 1996. In 2004, she joined Draka co-heading the Optical Fiber Product R&D group (France), in charge of the development of novel fibers. Over those years, she has successfully transferred to development and production a large number of innovative optical fibers, leading to the creation of entire new business lines. In 2009, she joined Thales Research & Technology (France), to manage the Waves and Signal Processing Laboratory. The main mission is to identify and evaluate the next disruptive technologies for further transfer to the operational divisions. Her current research interests include the development of innovative lasers, fiber sensors and lidars, microwave photonics, optical signal processing and nonlinear optics, optical free space communications. She has authored or co-authored more than 100 papers (including invited papers and contribution to textbooks) and 30 patents.