



PETER B. LUH, US

Peter B. Luh (S'76-M'80-SM'91-F'95) received his B.S. from National Taiwan University, M.S. from M.I.T., and Ph.D. from Harvard. He has been with Electrical and Computer Engineering, University of Connecticut since 1980, and currently is the SNET Professor of Communications & Information Technologies. He is also a member of the Chair Professors Group in the Department of Automation, Tsinghua University, Beijing, since 2001. He is a Fellow of IEEE. His research interests include Intelligent Manufacturing Systems – planning, scheduling, and coordination of design, manufacturing, and service activities; and Smart, Green and Safe Buildings – optimized energy management, HVAC fault detection and diagnosis, emergency crowd guidance, and eco communities. He received the 1996 King-Sun Fu Memorial Best Transactions Paper Award for *IEEE Trans. on Robotics and Automation*; and 2013 IEEE Robotics and Automation Society Pioneer Award for his pioneering contributions to the development of near-optimal and efficient planning, scheduling, and coordination methodologies for manufacturing and power systems.

IEEE Activities:

COMMITTEES/BOARDS: Member of IEEE Technical Activities Board Periodicals Committee, 2011-2013.

STUDENT BRANCHES: IEEE University of Connecticut Student Branch advisor (1981-87).

SOCIETY: Robotics and Automation Society: Senior Advisor to the RAS President on Automation and Chair of the Ad Hoc Committee on Automation (2012-present); Vice President for Publication Activities (2008-2011); the founding Editor-in-Chief of the *IEEE Transactions on Automation Science and Engineering* (2003-2007); *IEEE Transactions on Robotics and Automation* (Associate Editor (1990-1994), Editor (1995-1999), Editor-in-Chief (1999-2003)); *IEEE Robotics and Automation Magazine*, Editor (1996-1999); Distinguished Lecturer, 2006-2007; IEEE Robotics and Automation Technical Field Award Committee (2003-2005); Administrative Committee (1992-1997).

CONFERENCES: IEEE Conference on Decision and Control, Finance Chair (1989 and 92); IEEE International Conference on Robotics and Automation Video Proceedings Committee (Founding Chair 1991; chair 1992 and 98, and member of the Committee 1993, 94, 95, 96, 99, 00, 02 and 03); IEEE International Conference on Robotics and Automation Program Vice Chair 1993, Chair for Tutorials and Workshops 1996, and co-Finance Chair 2013; IEEE Conference on Automation Science and Engineering, Founding Chair of the Steering Committee (2006-2011) and member (2006-present).

OTHER: *IEEE Transactions on Haptics*, Chair of the Management Committee (2007-2011); *IEEE Systems Journal*, Member of the Editorial Advisory Board (2006-present).

Qualifications: Peter is a visionary leader, dedicated worker, an established researcher in the Automation areas, and works well with people with different backgrounds. He has made major contributions to the Robotics and Automation Society in terms of publications and conferences (see IEEE Activities above and Major Accomplishments below), as well as in strengthening automation areas within the Society. If elected, he will dedicate his effort for the further advancements of the Society in terms of footprint, impact, professional leadership, and member benefits. He is well qualified to be elected as an AdCom member.

Major Accomplishments:

(1) Peter and several enthusiastic and dedicated RAS leaders successfully planned and lunched the legendary ICRA Video Proceedings Series in 1991 with Peter serving as the Founding Chair of the Video Proceedings Committee. The series was visionary and timely at that time for robotics and automation, and video segments have been widely used in classrooms, promotion activities, and other occasions. Peter then served as a member and led the Committee for several subsequent ICRAs. (2) During Peter's term as the Editor-in-Chief of *IEEE Transactions on Robotics and Automation* (1999-2003), the review cycle was significantly reduced, and we also saw major increases in paper submissions and Impact Factors. (3) Peter and several visionary RAS leaders

successfully planned and lunched the *IEEE Transactions on Automation Science and Engineering* with Peter serving as the Founding Editor-in-Chief (2003-2007). The Transactions passed the IEEE TAB and FAB review in 2006, and now it is an established and respected member of the RAS publications and of the automation community in general. (4) The team also created the companion IEEE Conference on Automation Science and Engineering, and Peter served as the Founding Chair of its Steering Committee from 2006 to 2011. Now IEEE CASE is a major conference on Automation. (5) During Peter's two terms as the RAS VP for Publication Activities (2008-11), RAS' three major publications *T-RO*, *T-ASE* and *Robotics and Automation Magazine* advanced in a major way in terms of submissions, publications, impacts, and cycle-time reduction. The finance of *T-ASE* was stabilized. The new publication *IEEE Transactions on Haptics* was also successfully launched in collaboration with Computer Society and Consumer Electronics Society with Peter serving as the Founding Chair of Management Committee.

Position Statement: IEEE Robotics and Automation Society has come a long way. We now have great publications with high impacts, well run and well attended conferences, and vibrant Technical Committees leading various areas of research and development. We are in a very strong financial position, witnessed amazing growth in membership over the past few years, and are also making great impact on relevant industries. There are, nevertheless, emerging issues that we have to plan ahead and make prudent strategic as well as tactical decisions. For example, many publications (including IEEE's) are becoming electronic only, and open access of the "authors pay model" is gaining momentum. This may fundamentally change the landscape of publications, and will have major financial implications on the Society. We also need to judiciously explore new publication opportunities in key emerging areas of major impact, either by ourselves or in collaboration with sister societies within or outside IEEE. As another example, we observed the emergencies of several areas including 1) advancements in the intersections of robotics and automation driven by the increasing needs of sophisticated and customized products made of soft/irregular materials requires; 2) sustainable and green production and energy smart buildings stimulated by our over-dependent on oil and environmental and global warming concerns; 3) additive manufacturing (or 3D printing) which is a revolution with the potential to eliminate the concept of complexity in manufacturing processes. How to further increase our footprints in these areas with vision, strategic thinking, and an open mind will be of critical importance for the future growth of the Society and the impact to the fields. We also need to push IEEE to change its financial rules regarding how to utilize societies' surplus so that we can make prudent and timely decisions, as opposed to rushing to spend the money toward the end of a year. If elected, I will be dedicated to the critical issues identified above and beyond, and work with RAS members and leaders in a collegial and friendly manner for the further growth and impacts of the Society. With my knowledge of the Society and IEEE and working experience and track record in different areas, I will be an effective and valuable member of RAS AdCom.