

Nomination for BoG Member, starting 2017

Nomination for VP, Membership and Student Activities

Adrian Stoica

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IEEE Member number: 03381605



Contributions to profession:

ADRIAN STOICA (S'92-M'96-SM'06) is a Senior Research Scientist and Supervisor of the Robotics Systems Estimation, Decision, and Control Group at the NASA Jet Propulsion Laboratory (JPL), California Institute of Technology (Caltech), Pasadena, California. He has over 25 years of engineering experience in performing and leading research in intelligent technologies for autonomous systems, the last 20 years at JPL. His main contributions have been in the development of adaptive, learning, and evolvable techniques in support of on-board-decision making by robots and other autonomous systems, and development of new methods in biometrics and human-robot interfaces. Specific contribution includes pioneering work in humanoid learning by imitation, evolvable hardware, survivable self-reconfigurable electronics for extreme environments, shadow biometrics and collaborative brain-computer interfaces. He has also contributed innovative space robotics concepts, for Moon and gas giants (Jupiter and Saturn): envisioning a solar power infrastructure on the Moon, and WindBots as persistent explorers in the gas giants atmospheres. He published over 150 papers in these areas. His research has been supported mainly by NASA, DARPA, Air Force Research Lab, and Office of Naval Research. As Principal Investigator he successfully attracted over \$20M in technology development funding. He has 7 US patents, and served as member of Program Committee for more than 100 conferences. He is or has been in the editorial board of a number of Journals, such as Multiple-Valued Logic (Elsevier), Soft Computing (Springer), IEEE Transactions on Evolutionary Computation, etc. He served as technical advisor various advisory and review boards for the United States Department of Defense, National Science Foundation, the European Commission (Information and Communications Technologies), etc. He is also an Adjunct Professor at the University of Edinburgh (UK). He holds an M.S. Degree from Technical University of Iasi, Romania (1986), and Ph.D. degree in Electrical Engineering from Victoria University, Melbourne, Australia (1996). He is a two times NASA Innovative Advanced Concepts (NIAC) Fellow.

Contributions to the SMC Society and the IEEE:

SOCIETY COMMITTEES: *Systems, Man and Cybernetics Society*, Board of Governors, member-at-large, since 2015. Coordinator, Membership and Student Activities, 2016-present; Member of

the Distinguished Lecturer Committee, Coordinator Human-Machine Systems Sector, 2012-2014; Member of Technical Committees: Human-Computer Interaction, 2011-present, Robotics and Intelligent Sensing, 2010-present. *IEEE Robotics and Automation Society*: Vice Chair, Chapter and International Activities Committee, 2011-2013. IEEE Computational Intelligence Society, Member, Technical Committee on Evolutionary Computation.

CONFERENCES: Conference on Systems, Man and Cybernetics (SMC-2011), Program Chair, 2011. Conference on Adaptive Hardware and Systems, General Chair, 2006, Steering Chair, 2007-2015 (IEEE Tech co-sponsorship). Int. Conference on Human-Machine Systems, Cyborgs and Enhancing Devices, Founder and Chair/Program Chair (2011-2015)

Statement of membership by the candidate: I am and will continue to be a member of IEEE and the SMC Society in good standing for the full term.

Statement of service by the candidate: I am willing to serve as a member of the BoG for the full term. I will be available for duties and responsibilities as the position requires.

Statement of attendance by the candidate: I will attend the annual BoG meetings. I will also actively support, and participate in the SMC annual conference by submitting papers, organizing and participating in special sessions and workshops, panel sessions, and/or tutorials.

Position statement:

As a member of the BOG I will support the Board and Executive and Executive Committee in fulfilling assigned duties and responsibilities as required. I'll take initiative and be pro-active in suggesting improvements; I'll commit my efforts where most needed.

I will act for increased engagement of the members (fostering new technical committees, strengthening current ones, increasing value of local chapters and strengthening the academia-industry link), improve benefits for members (educational offerings, publications and conferences, knowledge sharing and career advancement, mentorship), and growth of the society (outreach and appeal to potential future members, dedicate strong effort to increase membership).

My background is well suited to providing support for the entire SMC community: I understand different cultures, having lived, performing research and being citizen of countries in Europe, Australia and America, and having married in Asia. My research interests cover all three SMC sectors and I have friends and collaborators associated with all three. My contributions and main interests in the recent years have been in human-machine systems, but my early research was in topics in cybernetics (soft computing, computational intelligence, learning), while my NASA daily work for 20 years has a strong systems component - in robotic systems, autonomous systems and infrastructures.