

## 2009 EDS J.J. EBERS AWARD WINNER

The 2009 J.J. Ebers Award, the prestigious Electron Devices Society award for outstanding technical contributions to electron devices, was presented to Dr. Baruch Levush of the Naval Research Laboratory (NRL), Washington, D.C., at the IEEE International Electron Devices Meeting (IEDM) in Baltimore, Maryland, on December 7, 2009. This award recognizes Dr. Levush "For contributions to the development of widely applied simulation tools in the vacuum electronics industry".



**Baruch Levush** was born in 1950 in the northern region of Siberia in the city Yakutsk in the former USSR. He received his M.Sc (Physics) de-

gree from Latvian University in Riga, Latvia in 1972. In 1973 he immigrated to Israel where he carried out his Ph.D. work in plasma physics at Tel-Aviv University. Upon completing his Ph.D. research in 1981, he received the Dr. Chaim Weizmann Postdoctoral Fellowship and spent several years as a post-doctoral fellow at the University of Maryland (UMD) - College Park. He joined the Institute for Plasma Research (IPR) at the UMD as a Research Scientist in 1985. After a decade at the IPR, Dr. Levush joined the Naval Research Laboratory (NRL) as the Head of the Theory and

Design Section of the Vacuum Electronics Branch, Electronics Science and Technology Division. In 2003 he became the Head of the Vacuum Electronics Branch.

Dr. Levush's research involves coherent radiation generation using electron beams. Early in his career, he focused on developing theories and computational models of the nonlinear interaction of electromagnetic modes in free electron lasers and gyro-devices. In his current research, he is actively involved in developing theoretical models and computational tools for analyzing the operation of vacuum electron devices and in inventing new concepts for high power amplifiers that operate at frequencies ranging from 1 to 1000 GHz.

In 1997, Dr. Levush became responsible for developing a suite of new design codes for vacuum electron devices under the auspices of the Office of Naval Research. The simulation tools pioneered by his research team have been universally adopted by the vacuum electronics industry, and are used prolifically in support of new vacuum electron device development at the NRL, industry, small business and academia. He is a Fellow of IEEE since 2001 and has received numerous awards, including the Robert L. Woods Award of the U.S. Department of Defense (for his role in the successful development of a 10 kW average power, W-band gyro-klystron) (1999), the NRL Award

of Merit for Group Achievement as part of the 94 GHz Radar Team (2002), the R&D100 Award for MICHELLE, a 3D Charge-Particle-Beam Optics software tool (2006), the IEEE International Vacuum Electronics Conference Award (2007), the NRL's E.O. Hulburt Annual Science Award (NRL's highest civilian honor for scientific achievement) (2007) and the Captain Robert Dexter Conrad Award for scientific achievement (2009).

NRL's Vacuum Electronics Branch is the principal center for vacuum electronics research and development in the U.S. and Dr. Levush frequently provides advisory services to support external research programs in vacuum electronics. He is the co-author of more than 170 journal articles.

Baruch lives in Potomac, Maryland, with his wife Ruth, who he met 32 years ago at Tel Aviv University, from which she received a law degree. Last year, Baruch and Ruth became empty nesters after their third daughter, Karen, left for college to study special education. The oldest daughter, Efrat, is enjoying her graphic design career and the second daughter, Michelle, is finishing her Master's Degree in occupational therapy. Baruch likes to play tennis and he is avid reader of books on world history, politics and history of religion.

*Louis C. Parrillo  
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## 2010 EDS J.J. EBERS AWARD CALL FOR NOMINATIONS

The IEEE Electron Devices Society invites the submission of nominations for the 2010 J.J. Ebers Award. This award is presented annually for outstanding technical contributions to electron devices. The recipient(s) is awarded a certificate and a check for \$5,000, presented in December at the IEEE International Electron Devices Meeting (IEDM).

Nomination forms can be requested from Laura Riello (l.riello@ieee.org), EDS Executive Office, or on-line at [www.ieee.org/eds/](http://www.ieee.org/eds/). The deadline for the submission of nominations for the 2010 award is July 1, 2010.