

News Release

PAYAM HEYDARI, NAMED 2017 IEEE FELLOW



Piscataway, New Jersey, USA, January 2017: Payam Heydari, Professor of Electrical Engineering, from Irvine, CA, USA has been named an IEEE Fellow. Professor Heydari is being recognized for **contributions to silicon-based millimeter-wave integrated circuits and systems**. He was one of the first engineering scientists who studied and designed millimeter-wave circuits in nanoscale silicon technologies. His pioneering research on silicon-based millimeter-wave integrated circuits led to the world's first radar-on-chip and the first fully integrated

transceivers operating at 100 GHz and above.

The IEEE Grade of Fellow is conferred by the IEEE Board of Directors upon a person with an outstanding record of accomplishments in any of the IEEE fields of interest. The total number selected in any one year cannot exceed one-tenth of one-percent of the total voting membership. IEEE Fellow is the highest grade of membership and is recognized by the technical community as a prestigious honor and an important career achievement.

Dr. Heydari's pioneering research on the design and development of new circuit techniques and system architectures allowed the silicon technology to be used for speeds/frequencies, once only achieved by III-V semiconductors. Integration of millimeter-wave (mm-wave) front-ends and analog/digital back-ends on a single silicon die has created new applications in the areas of wireless communications, imaging, and sensing. Emerging applications such as gigabit-per-second wireless access to address ever-increasing public need for broad bandwidths have drawn public/commercial attention primarily due to silicon integration of high-frequency and mm-wave integrated circuits. In this regard, his extraordinary contributions in pushing the silicon ICs' operation frequencies towards mm-wave and sub-terahertz range has led to the development of integrated systems that have transformed point-to-point wireless communications to achieve multi-gigabit-per-second, highly integrated short-range automotive radars, and passive/active imaging systems. He has introduced ground-breaking circuit- and system-level techniques that led to high-performance and highly complex integrated systems capable of operating at frequencies close to maximum operation frequency of a silicon device.

Payam Heydari received his B.S. and M.S. degrees (Honors) in Electrical Engineering from Sharif University of Technology in 1992 and 1995, respectively. He received his Ph.D. degree from the University of Southern California in 2001. He is currently a Full Professor of Electrical Engineering at the University of California, Irvine. His research covers the design of terahertz, millimeter-wave, RF,

and analog integrated circuits. He is the (co)-author of two books, one book chapter, and more than 120 journal and conference papers. He has given Keynote Speech to *IEEE GlobalSIP 2013 Symposium on Millimeter Wave Imaging and Communications* and served as Invited Distinguished Speaker to the 2014 *IEEE Midwest Symposium on Circuits and Systems*. He was the Distinguished Lecturer of IEEE Solid-State Circuits Society (SSCS). Dr. Heydari is recipient of the Distinguished Engineering Educator Award from Orange County Engineering Council. The Office of Technology Alliances at UCI has named Dr. Heydari one of 10 Outstanding Innovators at the university. He is the co-recipient of the 2009 Business Plan Competition First Place Prize Award and Best Concept Paper Award both from Paul Merage School of Business at UC-Irvine. He is the recipient of the 2010 Faculty of the Year Award from UC-Irvine's Engineering Student Council (ECS), the 2009 School of Engineering Fariborz Maseeh Best Faculty Research Award, the 2007 *IEEE Circuits and Systems Society Guillemin-Cauer Award*, the 2005 *IEEE Circuits and Systems Society Darlington Award*, the 2005 National Science Foundation (NSF) CAREER Award, the 2005 Henry Samueli School of Engineering Teaching Excellence Award, the Best Paper Award at the 2000 *IEEE Int'l Conference on Computer Design (ICCD)*. He was recognized as the 2004 Outstanding Faculty in the EECS Department of the University of California, Irvine. His research on novel low-power multi-purpose multi-antenna RF front-ends received the Low-Power Design Contest Award at the 2008 *IEEE Int'l Symposium on Low-Power Electronics and Design (ISLPED)*.

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