

Outstanding Career Award Winner 2016 Prof.Dr.-Ing. Heinrich Daembkes

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Heinrich Daembkes is working with Airbus Defence and Space in the Electronics Engineering unit. His special interests are in the domains of high frequency systems, systems engineering of complex safety critical systems and networked automated systems.

After studying electrical engineering at the Technical University in Aachen, Germany, and a PhD degree from Duisburg University in 1984 on GaAs-based FETs and HEMTs he worked for many years in the R&D of high speed devices, circuits and subsystems in the Daimler group. In this period he performed with his team research on various III-V compound semiconductors (InP HBT-based optoelectronic receiver ICs, followed by GaAs and SiGe-based technologies and ICs). His group was known as one of the world-wide recognized centers for semiconductor research regarding hetero materials. In parallel to the development of advanced millimeter wave PHEMT MMIC technologies, he fostered the development of appropriately industrialized components for automotive radar applications. He holds about 20 patents, and is author / co-author of more than 150 articles, roadmaps and white papers. Further he is editor / co-editor of 4 books.

In 1995 he also became professor at the University of Ulm and in 1996 he became a co-founder and CEO of United Monolithic Semiconductors (UMS), a joint venture between Thales and EADS on GaAs-based MMICs, which is a successful commercial enterprise since then. This step was very important to maintain the position of Europe for high frequency devices and MMICs and to ensure the European non-dependence for these important material systems. Under his leadership the GaAs capabilities in Europe were further developed and even more important driven towards high standard industrialization. He and his team have pushed the III-V compounds further to its physical limits and started the implementation of real volume production capabilities. The today's situation

in Europe having an independent GaAs (and GaN) volume manufacturer is mainly based on his enthusiasm and determination.

Since 2003 he has been with Airbus Defence and Space, where he was head of system and software engineering. His responsibility included development of complete systems in the domains radar systems, electronic warfare (RF and optoelectronic) systems, and avionics systems. Since 2013 his is in his present advisor position.

From 2008 to 2012 Heinrich Daembkes represented EADS/Airbus in the European Aeronautic, Space, and Defence Organisation, where he served as chairman of the Security R&T committee. Since its very beginning Prof. Daembkes is a member of the European Microwave Association EuMA, where he served for several years in the Board of Directors, also serving as industry liaison officer. He is also active in other microwave organizations including the IEEE and VDE/ITG. Since its foundation in 2006 he is representing Airbus Deutschland GmbH (ex EADS) as member in ARTEMIS Industrial Association, where – from 2008 until 2012 - he was member of the Association Steering Board. Since January 2013 he is President of the Association and in this position also member of the ECSEL Governing Board - all with the same aim to strengthen the European microwave capabilities and to help Europe maintaining its position in development and production of micro-/millimeter-wave components and systems.