Dr. James A. Hutchby
Biographical Sketch

Dr. Hutchby is currently Senior Scientist and formerly Director of Device Sciences with the Semiconductor Research Corporation. In this former position he supported SRC-funded university programs addressing advanced devices and technologies and front end processing issues. These activities comprehend research in both non-classical and bulk, planar CMOS structures and technologies, modeling and simulation, compact modeling, analog and mixed signal, and memory technology programs.

Dr. Hutchby founded and chairs the Emerging Research Device (ERD) Working Group for the International Technology Roadmap for Semiconductors (ITRS). This working group identifies and assesses emerging research devices, nanoarchitectures and related new materials proposed for realizing a new paradigm for information processing to extend and, eventually, to replace CMOS charge-based technology. He is currently a member of the program committee for the Fourth International Nanotechnology Conference on Communication and Cooperation and is a facilitator of the International Planning Working Group on Nanoelectronics.

Prior to joining SRC, Dr. Hutchby was the director of the Center for Semiconductor Research (CSR) with Research Triangle Institute. The CSR conducted research in high efficiency III-V compound semiconductor multi-bandgap solar cells, high efficiency thermoelectric energy converters, high speed III-V compound semiconductor heterojunction bipolar transistors and optoelectronics integrated circuits, and low-cost diamond growth using a new pancake RF plasma deposition process.

Dr. Hutchby has published over 140 contributed and invited papers in scientific journals and conferences. His technical (modeling & simulation and experimental research) work encompassed ion implantation in III-V and II-VI semiconductors, high efficiency multi-junction cascade solar cells, high speed III-V heterojunction bipolar transistors and opto-electronic devices including opto-electronic integrated circuits.

Dr. Hutchby has served as the General Chair and Technical Program Chair of numerous conferences, including the IEEE IEDM, GaAs IC Symposium, and the Workshop on Compound Semiconductor Materials and Devices. He has also served on the program committees in various capacities on the IEEE Cornell Advanced Microelectronics Conference, International GaAs Manufacturing Technology Conference, and the IEEE Photovoltaics Conference. He also was a voting member of the IEEE Electron Device Society's Administrative Committee, and chaired the EDS Technology Committees on III-V compound semiconductor devices and VLSI Technology and Circuits Committee of which he is currently a member. Dr. Hutchby also chaired the IEEE Awards Committee and is currently a member of the IEEE Johnson Storage Technology Award Committee. Dr. Hutchby is chair of the Duke University Electrical and Computer Engineering's Industry Advisory Panel.

Dr. Hutchby is a Fellow of the IEEE and a recipient of the IEEE Third Millennium Medal.

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