

Speaker Profile



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Name

Yong-Kweon Kim

Title

Professor, Dr. Eng.

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Education

Dr. Yong-Kweon Kim received his B.S. and M.S. degrees in electrical engineering from Seoul National University in 1983 and 1985, respectively, and the Dr. Eng. degree from the University of Tokyo in 1990.

Fields of study

Design, fabrication, measurement and application of MEMS, especially in RF, optics, storage devices, inertial sensors and biotechnology.

In RF MEMS, micro contact switches, micro phase shifters using micro RF MEMS switches, micro tunable filters using variable capacitors and movable antenna for millimeter wave devices have been researched.

Micro mirror array (50x50) for large display, micro mirror array (10x10) for adaptive optics, micro optical switches (4x4) for optical cross connect, micro silicon Fresnel lens for IR detection, micro light array (4x10) using micro mirror array for holographic memory devices, 2 dimensionally rotating micro silicon scanner have been developed for optical MEMS.

Micro XY stage (5mm x 5mm) of scanning probe microscopes for storage devices, micro vacuum-packaged polysilicon gyroscopes for few degrees per hour, and micro silicon gyroscopes operated in the atmosphere pressure for automotive and control grade have been also researched.

Micro EHD (electrohydrodynamic) pumps, micro cell manipulator using DEP (dielectrophoretic) force, biological cell micro electro-fusion devices, micro BAC (bead affinity chromatography) chip for protein concentration, biochip fabrication equipment using micro mirror array for peptide synthesis, 2 dimensional CE (capillary electrophoresis) chip have been developed since 1992.

Experience

In 1990, he joined the Central Research Laboratory of Hitachi Ltd. in Tokyo as a researcher and worked on micro actuators of hard disk drives for magnetic data storages.

In 1992, he joined the Department of Electrical Engineering, Seoul National University, where he is currently a professor in the School of Electrical Engineering & Computer Science.