

# New micro gyro technology for DARPA to be developed

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The Georgia Institute of Technology, in partnership with Northrop Grumman Corporation, has been selected to develop a new type of Microelectromechanical Systems (MEMS) gyroscope technology for the Defense Advanced Research Projects Agency (DARPA)'s Microscale Rate Integrating Gyroscope program.

The technology, developed by Georgia Tech and Northrop Grumman during the initial 12-month award period, will form the basis for a micro resonator gyro capable of achieving navigation grade performance. Utilizing a new MEMS fabrication process, the Georgia Tech-Northrop Grumman team will produce a proof-of-concept micro gyro that can perform as well as current silicon MEMS devices in a smaller size, lighter weight and lower power package.

DARPA's Microscale Rate Integrating Gyroscope program seeks to develop miniature navigation grade gyros for use in personal navigation, [unmanned vehicle](#) navigation, GPS denied/challenged locations, and other size and power constrained applications requiring precision navigation. Georgia Tech, in partnership with Northrop Grumman, was awarded a research and development contract for the preliminary design, development and testing of micro-resonator devices.

"The [Northrop Grumman](#) and Georgia Tech team will advance the frontier of micro- and nano-fabrication, enabling the extreme miniaturization of highly stable navigation devices, with small energy dissipation," said Farrokh Ayazi, a professor in the School of Electrical

and Computer Engineering at Georgia Tech. Ayazi is a principal investigator for this project and serves as co-director for the school's Center for MEMS and Microsystems Technology.

Provided by Georgia Institute of Technology

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