

Study Shows Growth in Georgia's Independent Invention Activity

Independent patenting activity has grown rapidly in Georgia over the past 30 years, with more than 9,000 patents issued since 1975 to inventors not associated with corporations, universities or similar organizations.

A new study has found that nearly half of the products created by these inventors were in non-consumer areas, mainly in technologies such as medical devices, energy and the environment, and automotive applications. Despite their productivity, the study found that less than a third of the inventors realized commercial success with their patents.

These findings were among the conclusions of the first-ever comprehensive survey of the state's independent inventors. Conducted by Georgia Tech's Enterprise Innovation Institute with support from the U.S. Economic Development Administration (EDA), the findings suggest that the work of independent inventors could provide untapped economic potential for the state.

"There is a significant level of creativity and product development by

individuals living throughout Georgia, and this activity is increasing," says Joy Wilkins, manager of community innovation services at the Enterprise Innovation Institute. "As our survey showed, the needs of the independent inventor community are diverse and largely unmet, although there is a huge appetite for help among the inventors."

The research yielded some interesting demographics about Georgia's independent inventor community. More than half had at least a four-year college degree; more than half were between the ages of 45 and 64; most were male; and approximately one-fourth held management and professional occupations or were self-employed. There also appeared to be a tendency for independent inventors to belong to moderately high to higher-income households.

The study also found that Georgia's independent patenting activity is broad-based, with all but seven of the state's 159 counties home to at least one patent. Although the Atlanta region accounted for more than half of the

inventors participating in the survey, 43 percent hailed from beyond the state's most urbanized region. Outside of Atlanta, the Gainesville region accounted for the second largest share of participants, followed by the Athens and Augusta regions.

Overall, reported experiences by inventors revealed that approximately one-third of inventors achieved some level of commercial success through independent production and sales, licensing, and/or sale of a patent. Although more than half (60 percent) reported they'd not achieved success at the time of the survey, approximately 32 percent of the inventors said they did experience some commercial success for at least one of their inventions.

The Georgia Tech researchers suggest that economic developers in Georgia consider independent inventors in strategies for economic development because collectively these inventors account for a larger share of patents than those owned by a single corporation or entity, including major research

universities. The numbers bear out the dramatic increase in patents in Georgia: since 1975, independent inventors in Georgia received 9,042 patents – 1,759 from 1975 to 1985; 2,870 from 1986 to 1995; and 4,413 from 1996 to March 2006.

That economic potential is what motivated support from the EDA.

"EDA's investment in this research of inventors in Georgia – and the subsequent identification of ways to support invention commercialization – supports job creation and private investment throughout the state," says Phil Paradice, EDA's Atlanta regional director. "The project, which earned EDA's Planning Performance Award for its collaborative efforts with state, local and federal entities, is consistent with our partners' comprehensive economic development strategies."

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Fast AFM Probes Measure Multiple Properties of Biomolecules or Materials

Photo: Gary Meek

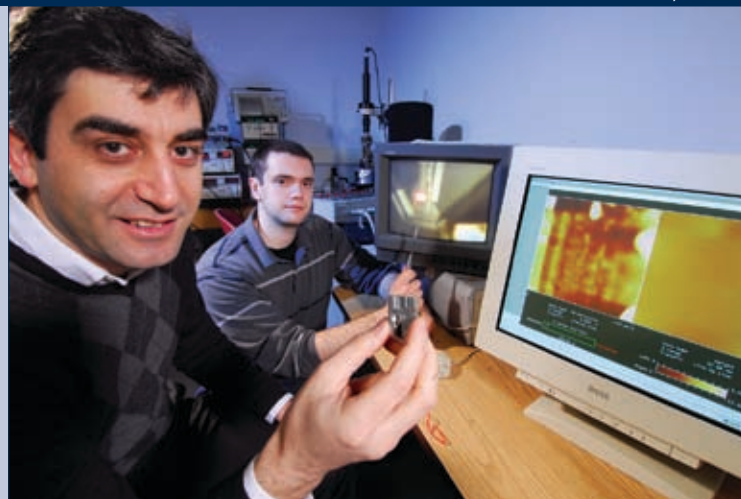
New research demonstrates that novel probe technology based on flexible membranes can replace conventional atomic force microscopy (AFM) cantilevers for applications such as fast topographic imaging, quantitative material characterization and single-molecule mechanics measurements.

In addition to the standard AFM topography scan, these novel probes simultaneously measure material properties including adhesion, stiffness, elasticity and viscosity.

"Our probes attach directly to AFM

systems currently on the market and can collect topography measurements at least 50 times faster than traditional cantilevers because they use electrostatic forces between the membrane and an electrode to move the tip," says Levent Degertekin, a professor in the George W. Woodruff School of Mechanical Engineering at Georgia Tech. The research team also includes Guclu Onaran and Hamdi Torun, graduate students in the Georgia Tech School of Electrical and Computer Engineering.

Details of the novel force-sensing integrated readout and active tip (FIRAT)



Professor Levent Degertekin (front) and graduate student Guclu Onaran display the adapted AFM holder.