

picked me. I love lattices.”

In college he began by proving simple lattice theories, then studying their quantum aspects. He wrote his junior and senior theses on lattices, but knew by his junior year that he “was definitely hooked at that point.”

His undergraduate work proved outstanding, according to Farley’s favorite mentor, Harvard neuroscience professor and administrator Dr. S. Allen Counter.

“Jonathan stands out because he is brilliant,” Counter says. “He has a great depth of field in mathematics, won numerous awards and solved math equations that have never been solved.”

Those problems include one posed by MIT Professor Richard P. Stanley at a 1981 conference — solved in 2003 — and another presented in 1964 by George Grätzer; Farley solved that one in 1998.

Three years ago, Farley, along with Lennox Farrell and Stefan Schmidt, a fellow lattice theorist, formed Phoenix Mathematics Inc., which incorporates reflexive and lattice theories in homeland security research. Lockheed Martin just recruited the company to work on border security, and a military research entity recently contacted the firm about possible work.

“We will do the fundamental math research and provide tools for the main experts, who will fine-tune it for the people who actually make the decisions about border patrol,” Farley explains.

“One thing we are definitely not doing: We’re not coming up with anything that’s going to stop terrorists or catch Osama Bin Laden. We’re creating tools that enable decisionmakers to make more logical decisions rather than relying on intuition or guess work.”

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## DR. OLUFUNMILAYO OLOPADE BREAST CANCER RESEARCHER

Dr. Olufunmilayo “Funmi” Olopade, an internationally acclaimed researcher of the genetic and environmental factors that affect breast cancer in Black women, multi-tasking is a necessity, even when she’s on vacation.

In mid-April, Olopade found time to tour the Great Wall of China a few days before starting a two-week visiting professorship at China Medical University in Shenyang.

As her colleagues enjoyed the view, Olopade endured a scratchy cellphone connection so she could answer questions about her research from a writer from the United States. It would have been easy for Olopade to brush the caller off, but that’s not her style.

“She tries to do as much as is humanly possible and

then some,” says Dawn Elliott, a clinical research associate at the University of Chicago Hospitals Cancer Risk Clinic, where Olopade serves as the director and a professor of medicine. “She loves her work.”

Olopade’s passionate study of the molecular genetics of breast cancer in African and African American women caught the attention of the John D. and Catherine T. MacArthur Foundation, which last year awarded her one of its “genius” grants. The \$500,000 gift was an acknowledgement of how the 49-year-old physician-scientist uses her research to develop innovative clinical practices in the United States and in Africa.

“Our work on women of color and breast cancer has



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“GENIUS”