UNH News: UNH spin-out wins NHIRC grant to develop next-generation video compression

UNH spin-out wins NHIRC grant to develop next-generation video compression
Research with new UNH center also has homeland security applications

DURHAM, N.H.—Chaoticom Technologies, the R&D division of the University of New Hampshire’s first spin-out company, has received a $50,000 grant from the N.H. Industrial Research Center (NHIRC) to develop the next generation of video compression technology.

Chaoticom Technologies will match the grant with in-kind support. The Durham-based division is part of Groove Mobile, formerly known as Chaoticom and based in Andover, Mass. It is headed by UNH Math Professor Kevin Short, who discovered cupolets—the new class of nonlinear waveforms in chaotic systems which lies at the heart of the company’s compression technology.

UNH math Professor Marianna Shubov, co-director of UNH’s new Center for Dynamics Research, will collaborate with Short. Besides video compression, they will also investigate new audio compression technologies as well as new tools for signals and security analysis.

“The signals analysis tools have applicability well beyond music and video compression, especially in homeland security applications,” said Short, co-director of the Center for Dynamics Research. “Capabilities such as these have already attracted the interest of Northrop Grumman. It gave the center a $25,000 grant last December and we expect further cooperation with Northrop and other companies in the future.”

Three student researchers are already at work on the project, and the Center for Dynamics Research hopes to add more in the future.

PHOTO CAPTION
Master of Chaos: Kevin Short stands before a trajectory used in chaotic compression, the technology behind UNH’s first spinout company.

Located at UNH, the NHIRC was created in 1991 by the New Hampshire Legislature to provide a mechanism to promote applied and basic scientific, engineering and associated marketing research and technological transfer to support improvements and efficiencies in the New Hampshire industrial and business community. The NHIRC is funded by the State of New Hampshire through its Department of Resources and Economic Development.