Madalina Furis: University of Vermont

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Madalina Furis now at the University of Vermont

Madalina Furis was at the Lab for more than two years and spent her time at the National High Magnetic Field Laboratory (NHMFL) campus here. During that time, her efforts were directed toward researching the properties of electrons in nanostructures using optical spectroscopy. The NHMFL is made up of three centers: the one in Los Alamos, one at Florida State University (Tallahassee) and the other at the University of Florida (Gainesville). Given that these centers work closely together, Furis had opportunities for wide-ranging collaborations that have benefitted her career. “Since we weren’t located behind the fence,” said Furis, “we didn’t have the kinds of restrictions other Lab employees have on widely disseminating our research. That also enabled us to work with users from many different areas. I really valued the diversity of those experiences ” After her postdoc position ended in 2006, she joined the University of Vermont’s Physics Department where she is now an associate professor. Her specialties include magneto-optical microscopy studies of electron states in organic semiconductors and the mapping of spin transport in semiconductors using magneto-optical Kerr effect spectroscopy. One of her accomplishments was heading her

university's acquisition of its first magneto-microscopy facility that integrates the latest generation of ultrafast lasers with superconducting magnet technology and top-of-the-line polarization optics into spectroscopy experiments that map electron spin dynamics at micron resolution in high magnetic fields. The facility is being used by faculty in physics, chemistry and engineering to conduct high magnetic field studies of electrons in a variety of materials systems, including semiconductor nanostructures, proteins and polymers.She continues her collaboration with NHMFL by spear-heading the development of high magnetic field optical spectroscopy techniques in the new and unique Florida Helix Magnet at the Tallahassee site of the MagLab, In addition to wanting to acknowledge the support she received from Scott Crooker (Condensed Mater and Magnet Science) and Victor Klimov (Physical Chemistry & Applied Spectroscopy), she is also grateful for her collaborations with Jennifer Hollingsworth and Han Htoon both with the Center for Integrated Nanotechnologies. Among other recognitions, she is a recipient of a National Science Foundation CAREER award and made it on the top ten list of the 2008 "Science Starts Here" series that showcased promising young scientists formely associated with the MagLab. For more information on her work, visit her university website page.

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