

# The Marie V. McDemmond Center for Applied Research

The Enterprise and Empowerment Foundation of Norfolk State University \*

## Grand Entrance to the Technological Transformation of the Hampton Roads Region

The gateway to the RISE Campus™ and the City of Norfolk's vibrant downtown area, the brand new Marie V. McDemmond Center for Applied Research is a State-owned, six-story, approximately 128,000-square-foot structure. Opened in April 2007, this immaculate state-of-the-art facility is the anchor for applied research, graduate-level education and training, and the future home of enterprise formation for the workforce and businesses of the future in science and technology.



The Marie V. McDemmond Center for Applied Research is home to advanced research in Computational Science, Engineering, and Materials Science and the future home of NSU's advanced research in Information Assurance, as well as its enterprise and skills development initiatives. Researchers based in the new facility now have access to next-generation laboratories supporting work in modeling and simulation, photonics, nanotechnology, crystal growth, device fabrication, and sensors development. Additionally, a state of the art Class 100/1000 Cleanroom is available in the facility for education and high end research.

The thematic research taking place in the Marie V. McDemmond Center for Applied Research can be broadly described as in the area of homeland security and national defense. The McDemmond Center will serve as the anchor for subsequent applied research themes on the RISE Campus™. NSU's Advanced Materials, Computational Science, and Advanced Technology (e.g. Devices and Engineering Systems) clusters serve as key elements of the overall research portfolio of the RISE Campus™.

The Marie V. McDemmond Center for Applied Research incorporates one of NSU's most successful Centers of Excellence: The Center for Materials Research (CMR). CMR conducts cutting-edge research in the areas of crystal growth and nanotechnology, polymer processing and thin film deposition, nonlinear optics and laser design, optical spectroscopy and magnetic resonance. CMR researchers focus on problems of fundamental and practical importance in photonics and spin electronics; specifically, in random medium lasers, nanomaterials, transparent gain ceramics, optical composites, photovoltaic polymers, and spin-polarized transport phenomena.



With the advent of the **Marie V. McDemmond Center for Applied Research**, our engineering research program now has access to a state-of-the-art Class 100/1000 cleanroom facility with various capabilities that make it unique in the Hampton Roads region.

Researchers working in the **Marie V. McDemmond Center for Applied Research** facility are connected to the world via the Enterprise and Empowerment Foundation's **RISE SuperNode<sup>SM</sup>**, a private synchronous optical network (SONET) with ultra-high capacity, fault-tolerant design, supporting speeds from 1.5 megabits per second (DS-1) up through multiple 10 Gbps (10,000 megabits per second) Lightwave networks. The **RISE SuperNode<sup>SM</sup>** provides Internet connectivity across the University's entire enterprise.

The **Marie V. McDemmond Center for Applied Research** is the new home of NSU's Division of **Research and Technology**, which includes:

- ◆ State-of-the-Art Data Center
- ◆ Office of Information Technology (academic and administrative computing)
- ◆ Research contracting and technology transfer management
- ◆ RISE Campus Administration

These are truly exciting times at Norfolk State University and its **Enterprise and Empowerment Foundation<sup>\*</sup>**. The applied research and supporting activities in the **Marie V. McDemmond Center for Applied Research** are expected to lead to technological breakthroughs and innovations that will spur continued economic growth in the Hampton Roads region as well as contribute to the strengthening of the of the nation's on-going military and homeland security efforts.

For more information on the **Marie V. McDemmond Center for Applied Research**, please contact:

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**\* The mission of the Enterprise and Empowerment Foundation of Norfolk State University** is to provide brands and services that promote applied research and technological innovations that, in turn, contribute positively to the economic strength of the Hampton Roads region. The Foundation is the organizational power behind **E<sup>2</sup>F Real Estate<sup>TM</sup>**, **E<sup>2</sup>F Research<sup>TM</sup>**, the **Marie V. McDemmond Center for Applied Research**, the **RISE Campus<sup>TM</sup>**, and the **RISE SuperNode<sup>SM</sup>**.

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