

March 2006

Status Report on the SURA Minority Serving Institutions Program

In order to have time to provide effective leadership and promotion of the SURA Minority Serving Institutions (MSI) program David Ernst will take a sabbatical from his teaching and related duties at Vanderbilt University, beginning in June 2006, to direct the MSI program. SURA will provide financial and staff support.

Background: At the end of 2004 David Ernst (SURA Trustee from Vanderbilt) suggested that SURA consider an initiative to increase minority representation in science at the PhD level, particularly in physics, by building a consortium of research universities, including Minority Serving Institutions (MSI's) with significant research programs at the PhD level, and other MSI's with the primary goals of (1) to build bridge programs to transition students more effectively into PhD programs, and (2) to build capacity at MSI's to increase the number and quality of bachelor degree recipients in physics from these institutions. MSI's include both Historically Black Colleges and Universities (HBCU's) and Hispanic Serving Institutions (HSI's). Dr. Ernst's proposal was based on Vanderbilt's experience in working with Fisk to enhance the production of minority PhD's by phasing Fisk students into the Vanderbilt physics PhD program.

An exploratory MSI workshop was organized by SURA at the end of April, 2005 at Vanderbilt co-hosted by Vanderbilt and Fisk with attendance from half a dozen MSI's plus Vanderbilt, Louisiana State University and the University of Tennessee-Knoxville. Two basic programmatic approaches emerged from the workshop:

- **Educational Enhancement:** Forming a group of universities including MSI's that offer at least a bachelors degree in physics and have the group construct a mutually supportive system that would provide students with a variety of pathways to the PhD.
- **Research Enhancement:** Developing joint, multi-university research projects that can strengthen the capability and the capacity of MSI's to conduct significant research in support of their undergraduate and graduate programs.

Following the April workshop Dr. Ernst drafted a Request for Proposals (RFP) and SURA distributed it widely to all MSI's in the SURA region and to physics chairs at SURA member universities and at selected other institutions.

The RFP elicited positive responses from several majority universities and from additional MSI's interested in being part of the SURA initiative. A follow up meeting was held at the SURA corporate office on August 4, 2005 with significant representation from both majority and MSI's. Combining attendance from the two meetings these institutions have already shown an interest in being involved in the SURA MSI program:

- **MSI's:** Fisk, Grambling, Hampton, North Carolina A&T, Prairie View A&M, Tennessee State, Texas Southern, Texas-Brownsville, Texas A&M-Kingsville, and Xavier of Louisiana.

- Majority universities: Auburn, Baylor, Florida, Georgia State, George Washington, Louisiana State University, Louisiana Tech, Notre Dame, South Carolina, Tennessee-Knoxville and Vanderbilt.

Representatives of the Department of Energy also participated in both meetings.

Initial planned follow up actions have included:

- An effort to foster collaborative nano-science research at the Spallation Neutron Source at the Oak Ridge National Laboratory involving the University of Tennessee-Knoxville and Vanderbilt together with MSI's, including Fisk, North Carolina A&T and Tennessee State.
- An initiative in grid computing involving Florida, LSU, and Vanderbilt together with North Carolina A&T, Fisk, Texas A&M Kingsville, and Texas Southern.

This latter project has led to a broader interest in grid-computing tied in with the SURA IT grid initiative – that can significantly involve MSI's – with the assistance of members of the SURA IT Committee.

A broad educational project that would incorporate distance learning, multi-year REU's, pro-active mentoring, faculty exchanges, and other community building activities will be the center piece of the project. The goal will be to identify talented students at MSI's and then build ties between them and their mentors with faculty at PhD granting institutions such that the student will be better able to transition successfully into a PhD program.

The SURA MSI initiative has helped stimulate a North Carolina A&T State University proposal to the National Oceanographic and Atmospheric Administration (NOAA) for five year support of an Interdisciplinary Scientific Environmental Technology Cooperative Research and Education Center. The proposal is in response to a NOAA RFP for a minority oriented center to address the NOAA goal of “Understanding of climate variability and change to enhance society's ability to plan, protect and restore coastal ecosystems, and serve society's needs for weather information.” The proposal involves faculty from six other minority-serving universities – in addition to NC A&T – two majority universities and industrial, state and federal partners. It has received favorable initial consideration by NOAA. SURA has recently signed on as a partner and will particularly offer support in the IT arena, based on its IT experience and expertise.

Dr. Ernst is providing leadership for this SURA initiative with support from the SURA corporate office. In order to have time to fulfill his leadership role Dr, Ernst has proposed to take a sabbatical from Vanderbilt. In November 2005 the SURA Board of Trustees approved SURA support for this sabbatical. Dr. Ernst plans to commit half his time to the leadership of the MSI program from June 1, 2006 through May 31, 2007

All universities, including all MSI's, are invited to participate in the SURA MSI initiative at any time, whether members of SURA or not.