

## **Stony Brook News**

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**For Immediate Release**

### **NSF Funds Wireless Communications Project at Stony Brook University**

Electrical engineering professors Petar M. Djuric and Sangjin Hong receive \$356,000 to implement signal processing to solve new technical problems in wireless communication systems.

STONY BROOK, NY - August 19, 2002 The NSF has awarded \$356,000 to Stony Brook professors Petar M. Djuric and Sangjin Hong to solve wireless communications problems using new methods in signal processing. Signal processing plays a significant role in current wireless communication systems and this role will only increase in the future. The success in implementing future communication systems will strongly depend on the ability of the signal processing methods to resolve new technical problems that will emerge with them. In the core of the new technologies will be sequential signal processing algorithms with abilities to capture fast-changing characteristics of transmission channels very quickly and to exploit known system information optimally. Future systems will require much lower bit error rates, capacity to handle high data rates, and capability to meet the needs of high mobility users - all increasing the demands on the signal processing capabilities.

Professors Djuric and Hong propose to utilize a methodology for signal processing that can meet these challenges that use special filters. It has been shown that these filters outperform the standard filter currently used in many communication applications. Their proposed solution incorporates hardware, software and very large scale integration architecture.

This important research program comes at a critical time for Stony Brook's newly unveiled Center of Excellence in the Wireless Internet and Information Technology proclaimed by Governor Pataki on August 2, 2002 at a special press conference at Stony Brook University. The industry-driven Center represents a total investment of \$230M from state, federal and private sources and is expected to create thousands of high tech jobs throughout New York State.