

November 30, 2007

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Online Version: Click News & Events at www.uml.edu/ECE

Research

GRANTS:

Project Title: Design and Performance Evaluation of High Speed Deep Packet Inspection Systems
Sponsor: FutureWei Technologies, Inc.
Amount: \$143,816
Duration: 10/1/2007-11/30/2008
PI: Yan Luo

Project Title: 3-Dimensional Isotropic Metamaterials Lens
Sponsor: DARPA SBIR
Industry Partner: Triton Systems
Total Amount: \$99,000
UML Amount: \$23,949
Duration: 12/1/2007-7/31/2008
PI (UML): Alkim Akyurtlu

JOURNAL PUBLICATIONS:

T. Hu and A. R. Teel, "Characterization of forced vibration for difference inclusions: A Lyapunov approach," *IEEE Transactions on Circuit and Systems-I*, 54(6), pp.1367-1379, June, 2007.

"Development of Negative Refractive Index Chiral Metamaterials in the Optical Frequency Regime," N. Wongkasem, A. Akyurtlu, K. A. Marx, Q. Dong, J. Li, and W. D. Goodhue, *Special Issue on Optical and THz Antenna Technology, IEEE Transactions on Antennas and Propagation*, Vol.55, No. 11, pp. 3052-3062, November 2007.

S. Mil'shtein, J. Palma, C. Liessner, C. Gil "Light Emission from Semiconductor Triode", *Microelectr. Jour.* **38**, pp.217-219 (2007)

CONFERENCE PRESENTATIONS:

Chris Hayes and Yan Luo, "DPICO: A High Speed Deep Packet Inspection Engine using Compact Finite Automata," *ACM Symposium on Architectures for Networking and Communications Systems*, Orlando, FL, Dec 3-4, 2007

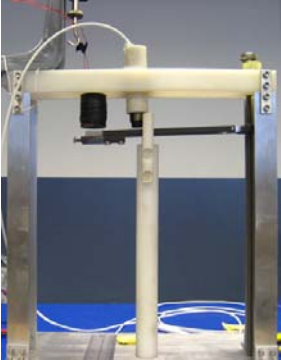
A. Shendye, A. Pillai, and S. Mil'shtein, "Photodetector with Uniform Response in 620 nm to 870 nm Range," *International Semiconductor Device Research Symposium (ISDRS)-2007*, College Park, MD, Dec. 12th, 2007

A. Churi, P. Kurlawala, L. Magaldi, and S. Mil'shtein "Transistor with Moving Gate to Control Electron Flow," *ISDRS-2007*, College Park, MD, Dec. 13th, 2007

RESEARCH HIGHLIGHTS:

Embedded magnetic suspension test rig

Prof. Hu's research team has constructed an embedded mechatronic system (shown below) with the support of the National Science Foundation.



It consists of an electromagnet, an eddy-current displacement sensor, a rotating beam, a power amplifier and a microprocessor. Robust magnetic suspension has been successfully achieved via a nonlinear feedback control algorithm which is implemented by the microprocessor. Team members: Olubukola Isijola, Jessica Piper, Tom Thibodeau, Wenchan Tong, Tzuhao Ye, and Tingshu Hu. Mechanical fixture constructed by Matteo Forgione (ME).

Calendar of Important Dates

December

13 Thursday

Last Day of Fall Semester Classes
Last Day for Faculty to File Grades for Incompletes and Change of Course Grades for Spring Semester (2007) courses

14 Friday

Reading Day

15 Saturday

Fall Semester Examinations Begin

21 Friday

Fall Semester Examinations End
6:00 P.M.

Residence halls close at 6:00 P.M.

22 Saturday

Make-up day for examinations postponed because of Weather.
Winter Recess Begins