

# UMass Lowell Electrical and Computer Engineering Department

November 28, 2005

## Contents

**Introduction**

**Research News**

**Publications/  
Conferences/Books**

**Faculty News**

**Student News**

**Calendar of Important Dates**

**Miscellaneous**

## Introduction

The ECE has a new newsletter! As evident from this first edition, we have adopted a new format. The ECE newsletter will be issued biweekly and will communicate news on ECE events and achievements for students, faculty and staff. We welcome any suggestions that will improve our newsletter.

There have been many changes in the department since the last newsletter. Prof. Craig Armiento is the new Department Head. There are also changes in several key administrative positions: Prof. George Cheney, is Associate Chair; Prof. Anh Tran is Graduate Coordinator and Prof Kanti Prasad is Transfer Coordinator.

An electronic copy of the newsletter can be found at:  
<http://faculty.uml.edu/aakyurtlu/nov28.pdf>

## Research News

### GRANTS:

C. Armiento, Co-PI, "MEMS Spatial Light Modulators with Integrated Control Photo-Sensors for Wave-Front Metrology and Correction", Air Force Research Laboratory/SNHC, \$441,000.

A. Akyurtlu, PI, "Investigation and Application of Metamaterials in the Visible Regime," Air Force Office of Scientific Research (AFOSR), \$374,758.

### PATENTS:

November 1, 2005 a patent # 6,961,449 "Method of Correlation of Images in Biometric Applications" was granted to Professors Sam Mil'shtein and Joel Therrien. The patent is offering a novel algorithm and is a result of continued research, where image processing is taking into account physical conditions of a biological object.

## Publications/Conferences/Books

### PUBLICATIONS

#### Prof. Hu:

T. Hu, R. Goebel, A. R. Teel and Z. Lin, "Conjugate Lyapunov functions for saturated linear systems," *Automatica*, 41(11), pp.1949-1956, 2005.

T. Hu, A.R. Teel and Z. Lin, "Lyapunov characterization of forced oscillations," *Automatica*, 41(10), pp.1723-1735, 2005.

#### Prof. Akyurtlu:

A. Semichaevsky, A. Akyurtlu, D. Kern, and D. H. Werner, "Novel BI-FDTD Approach for the Analysis of Chiral Cylinders," *IEEE Transactions on Antennas and Propagation*, accepted November 2005.

### CONFERENCES

#### Prof. Luo:

Yan Luo, "SpliceNP: A TCP Splicer using Network Processors" *ACM Symposium on Architectures for Networking and Communications*

Systems, Princeton, NJ, Oct 27-28, 2005. Prof. Luo was awarded a ACM travel grant for this presentation.

Prof. Mahmoud:

M. Mahmoud, "Stability Analysis Of Hybrid Gene Regulatory Network Models With Intercellular Diverse Slow and Fast Dynamics," 8<sup>th</sup> IASTED International Conference on Intelligent Systems and Control ISC October 31-November 3, 2005, Boston, MA, USA. (Served as a session Chair).

M. Mahmoud, "Stochastic Stability Analysis Of Gene Regulatory Networks Using Hybrid Systems Theory," 8<sup>th</sup> IASTED International Conference on Intelligent Systems and Control ISC October 31-November 3, 2005, Boston, MA, USA. (Served as a session Chair).

H.C. Gifford, M. Mahmoud, S.J. Glick, and M.A. King, "Task-Based Requirements for Resampled Data in Nuclear Medicine," Nuclear Science Symposium & Medical Imaging Conference, October 24,2005- October 28, 2005 Puerto Rico.

M. Mahmoud, "Stochastic Modeling of Gene Regulatory Networks," *Sixth International Conference on Systems Biology*, October 19-24, 2005, Boston, MA.

**BOOKS:**

Oliver Ibe, Fundamentals of Applied Probability and Random Processes, Elsevier Pub., 2005.

**Faculty News**

New Faculty:

The Department welcomes Prof.Luo and Prof. Therrien.

Prof. Luo's research interest cover the areas of network processors, low power processors, internet router and web server architectures, parallel and distributed processing, embedded systems, simulation and performance evaluation.



Prof. Therrien's research involves Nanoscale sensors, nano-electromechanical devices, chemical/biological sensors, optoelectronics, Scanning Probe Microscopy for nanomanufacturing, and Nanomanufacturing methods for electronic devices

**Student News**

*IEEE PIZZA PARTY*  
*Day: Wednesday December 7, 2005*  
*Time: 12:30 - 2:30PM*  
*Place: IEEE Lounge*

IEEE UMass Lowell chapter is sponsoring a pizza party for ECE students as part of its campaign to promote and to attract more students to join the IEEE. All ECE students who are not members are invited to join the society of IEEE to experience the professional life of engineers and to participate in several social and scientific events and trips. New members will receive a 50% reduction in their membership dues. Students are requested to fill a *hard-copy* application, attach it with a \$15.00 (half the annual dues) and the ECE department will top up the other \$15.00.

**Calendar of Important Dates**

**DECEMBER**

**7 Wednesday**

- Last Day for Faculty to Administer Quizzes and Examinations Prior to Final Examination Period

**14 Wednesday**

- Last Day of Fall Semester Classes
- Last Day for Faculty to File Grades for Incompletes and Change of Course Grades for Spring Semester (2005) courses

**15 Thursday**

- Reading Day

**16 Friday**

- Fall Semester Examinations Begin

**22 Thursday**

- Fall Semester Examinations End 6:00 P.M.
- Residence halls close at 6:00 P.M.

**Miscellaneous**

If you would like to send out any news on student activities, research, or other newsworthy events, please contact the newsletter editor at [Alkim\\_Akyurtlu@uml.edu](mailto:Alkim_Akyurtlu@uml.edu)

Also, please send comments to the newsletter editor at [Alkim\\_Akyurtlu@uml.edu](mailto:Alkim_Akyurtlu@uml.edu)