**ECE Chair’s Message**

Welcome ECE Students!

On behalf of the ECE faculty and staff I’d like to welcome our new students – freshmen, transfers and graduate students! As you start your UML career I encourage you to get involved in extracurricular activities offered by the department, college and university. The ECE Department and the College of Engineering offer many opportunities to extend yourself by participating in research, service learning and student groups. Student branches of IEEE and Eta Kappa Nu are among the most active. I assure you that your college experience will be richer if you get involved!

This newsletter and future editions will include profiles of your fellow students who have gotten involved and enriched their educational experience. Our Faculty work on many research projects that can provide opportunities for you to travel and to present your work at professional conferences.

If you have a story about your experience as an ECE student let us know! Have a great semester!

--Professor Martin Margala

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**Prof. Mil’shtein Edits Textbook, Chairs Conference Session**


Professor Mil’shtein also attended the following conferences, giving the presentations listed and chairing a session on “Critical Structures”:

**International Conference on Superlattices, Nanostructures and Nanodevices, Dresden, Germany, July 2012**

- S. Mil’shtein, L. Devaraconda, B. Zanchi, and J. Palma “3D Modeling of Dual Gate FINFET”

**International Conference on Physics of Semiconductors, Zurich, Switzerland, August 2012**

- S. Mil’shtein, L. Devarakonda, “SiC MESFET with Uniform gm”.

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**SEPTMBER 2012**

<table>
<thead>
<tr>
<th>Faculty News</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Mil’shtein edits text, chairs conference session</td>
<td>2</td>
</tr>
<tr>
<td>New ECE Faculty Members</td>
<td>3</td>
</tr>
<tr>
<td>Prof. Lu receives AFOSR grant</td>
<td>3</td>
</tr>
<tr>
<td>Prof. Hu receives NSF grant</td>
<td>3</td>
</tr>
<tr>
<td>Recent ECE publications</td>
<td>4</td>
</tr>
</tbody>
</table>

**Student News**

- AETC students build electrical trike 3
- ECE graduate earns best paper award 3

Got News? Please contact Dr. Michael Geiger, ECE Newsletter Editor, at Michael_Geiger@uml.edu
New ECE Faculty Members

Dr. Chunxiao (Tricia) Chigan joined the department in August of 2012 as an Associate Professor. Prior to joining UML, she was an Associate Professor with the Electrical and Computer Engineering at Michigan Tech. Dr. Chigan has been actively conducting research in the areas of Cyber Security & Information Assurance, Vehicular Ad Hoc Networks, Cognitive Radio Networks & Security, Wireless Ad Hoc and Sensor Networks, and Vehicle-To-Grid (V2G) Communications. Dr. Chigan's research in these areas has been funded by National Science Foundation (NSF), US Army Research Lab, US Army Communications-Electronics Research Development & Engineering Center, and the Innovation Center of EATON Corporation. The total amount of over $1,000,000 federal funding has been granted to her research. Dr. Chigan has published over 50 peer-reviewed papers in major journals and IEEE flagship conferences. Dr. Chigan is active in academic service. She has been serving as the technical program committee member for numerous flagship IEEE conferences including IEEE INFOCOM, IEEE ICC, IEEE GLOBECOM, and IEEE WCNC. In 2009, Dr. Chigan served as the Technical Symposium Co-Chair for the Ad-Hoc, Sensor and Networking Symposium of IEEE GLOBECOM. Currently, she serves as the Associate Editor of IEEE Transactions on Intelligent Transportation Systems. She has also been frequently serving on panels for several NSF programs. Dr. Chigan received her PhD degree in Electrical Engineering from the State University of New York, Stony Brook. She is a recipient of National Science Foundation CAREER Award (2007).

Dr. Theodore Grosch joined the department as a lecturer in 2012. He has earned a Ph.D. (’92), a MS (’89), and a BS (’82) in electrical engineering at The Pennsylvania State University. His doctoral research proved the conservation of noise in linear n-port networks. He worked at Hughes Aircraft, Space and Communications Group in El Segundo CA, at General Electric in King of Prussia, PA, and at M.I.T. Lincoln Laboratory. He worked at two startups, one that focused on developing automotive radar and the other on cellular infrastructure equipment. Prior to joining UMass Lowell, Theodore taught mathematics and statistics at The University of Maryland, Asian Division while on assignment at the missile range on Kwajalein Atoll, Martial Islands.

Frank Tredeau is a Lecturer in the Electrical and Computer Engineering Dept. after spending 30+ years in private industry and as a small business owner. His areas of interest are power electronics, renewable energy, electric cars, battery management systems, circuits and systems and control systems. He has held technical and management positions at many companies including GTE Labs, MASSCOMP, Concurrent Computer Corp., American Power Conversion, UB Networks, Newbridge Networks, Raytheon Company, Celox Networks and as owner / operator of Tredeau Designs, LLC. He recently received his PhD from UMass, Lowell after previously earning his MSEng from the same institute. He got his BSEE at Northeastern U. some time in the last century.
Prof. Xuejun Lu Receives $750k AFOSR Grant

Professor Xuejun Lu recently received a new grant as sole PI from the Air Force Office of Scientific Research (AFOSR). The grant title is “Electrically Switchable Plasmonic Polarizers with High Extinction Ratio and Enhanced Transmission for Adaptive Multi-mode Sensing.” This grant, which covers the period April 15, 2012 to April 14, 2017, provides $749,989 in funding for Prof. Lu’s research.

Prof. Tingshu Hu Receives $372k NSF Grant

Professor Tingshu Hu has received a 3 year grant from the National Science Foundation (NSF). The title of the project is “Control design of power electronic interfaces for optimal performance of renewable energy systems.” The total amount is $372,409.

Please see http://www.uml.edu/News/stories/2011-12/Hu-NSF-grant.aspx for more details about this project.

AETC Students Build Electrical Trike

In the middle of August, AETC undergraduate student Chris Leger and graduate student Josiah Hackendorf finished the design and assembly of an electrical trike with a motor installed in the front wheel. The electrical trike carries much better stability than conventional bikes. It has an option for a second passenger seat to be installed above the rear wheels. The trike has a gearbox which allows its speed to be changed when pedaling.

The next step in the trike’s development is the design of a solar panel, which is expected to have a sun tracing system, above the driver’s head.

ECE Graduate Earns Best Paper Award

Dr. Kemal Kulovic, a recent graduate from Professor Martin Margala’s research group, received the Jake Karrfalt Best Student Paper Award at the 21st IEEE North Atlantic Test Workshop, the top specialized meeting of experts in testing on the East Coast. His paper, which was co-authored with Prof. Margala, is titled “Flexible VITAL Embedded Instruments for Built-in Test of AMS Power SOCs.”
Recent ECE Publications

ECE faculty members and their students recently published the following journal and conference papers:

Professor Samson Mil’shtein


Professor Martin Margala


