This report lists the research and creative activities of the Lamar University Department of Electrical Engineering (LUEE) for 2006. Listings are in alphabetical order with LUEE faculty names in bold while LUEE student names are underscored.
Publications


MSEE Theses Published

Hikmet Cengiz, A Biomimetic Approach to Motion Estimation in a SIMD Architecture, Drs. Myler†, Sayil and Wang.


Merlyn Rudrapati, An Improved Crosstalk Noise Model for On-Chip Interconnects, Drs. Sayil†, Bean and Reddy.

Bingxin Tian, Analysis of Optimal Acknowledgement Frequency Over Asymmetric Space-Internet Links, Drs. Wang†, Bean and Reddy.

Presentations


† Thesis advisor


Submitted Proposals and Research Funding

Bahrim, C. PI, Experimental and theoretical analysis of the interaction between light and dielectric materials, Research Enhancement Grant, Lamar University, $5,000, funded.

Maxum, B. PI and D. Sisk, $5,000 Research in Providing Optics Science to SE Texas Pre-College and Lamar Students, Research Enhancement Grant, Lamar University, $5,000, funded.


Arnold, K., C. Benally, P. Buahame, J. Williams, and B. Maxum, Mobile autonomous robotic system, Texas Space Grant Consortium (TSGC), $1,250, funded.

Daigle, J., C. Brazzil, G. Gattis and M. Martinez, and B. Maxum, Object Avoidance for Mars Rover, Texas Space Grant Consortium (TSGC), $1,050 awarded.

Myler, H. R. PI and B. Wang, Nanoscale Photochemical Artificial Neocortex, Texas Advanced Research Projects Program (ARP), $200,000.

Myler, H. R. PI, Challenge Robotics for Engineering Recruitment and Retention at Lamar University, Texas Technology Workforce Development Grants Program, Texas Engineering and Technology Consortium, Austin, Texas. $95K Phase I, $195K Phase II.


Reddy, G. N. PI, Development of an Advanced Electric Vehicle–Lamar-EV2, Research Enhancement Grant, Lamar University, $5,000, funded.
Reddy, G. N. PI, Bernard Maxum, Saurin Jhaveri, Emilio Kirby, Michael Williams, Toby Wyble, Fuel Cell Electric Vehicle (FCEV) Development Phase I–Lamar–EV1, Green Foundation, Port Arthur, TX, $10,000, funded.

Sayil, S. PI, Modeling the Impact of Cross-Coupling Noise on Wire Delay for Today’s Microchip Technologies, Research Enhancement Grant, Lamar University, $5,000, funded.

Sayil, S. PI, Fundamental Exploration and Modeling of Crosstalk in Multi-line Nanocopper Interconnects, Texas Advanced Research Projects Program (ARP), $64,420.

Sayil, S. PI, Precise Estimation of Crosstalk In Multi-line Nanocopper Interconnects, Texas Space Grant Consortium (TSGC) New Investigations Program, Full Proposal, $10,000.

Wang, R. PI, Development of an Open Source, Reconfigurable Network Research Testbed for Future Internet, NSF NeTS Program, $330,328.


**IEEE Student Papers**

Nicholas Bethard, Technical Comparison of HD-DVD and Blu-Ray Technologies, IEEE Region 5 presenter, East Area 2nd Place, Beaumont Section Place.

Joseph Young, Photonic Crystal Optical Interconnects, IEEE Region 5 1st Place, Region V Presenter, East Area 1st Place, Beaumont Section Place.