Daniel L. Lau, Associate Professor

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Research Areas

Image/signal processing, digital communications, and 3D photogrammetry.

Professional Preparation

Year	Degree	Institution
1999	Ph.D. (Electrical Engineering)	Department of Electrical and Computer Engineering University of Delaware, Newark, Delaware
1995	B.S. (Electrical Engineering)	Department of Electrical Engineering Purdue University, West Lafayette, Indiana

Appointments

Date	Title	Organization
2007-	Associate Professor	Department of Electrical and Computer Engineering University of Kentucky, Lexington, Kentucky
2001-2007	Assistant Professor	Department of Electrical and Computer Engineering University of Kentucky, Lexington, Kentucky
2000-2001	DSP Engineer	Aware Inc, Bedford, Massachusettes
1999-2000	Visiting Assistant Professor	Department of Electrical and Computer Engineering University of Delaware, Newark, Delaware

Selected Publications

1. **D. L. Lau** and G. R. Arce, *Modern Digital Halftoning, 2nd ed.*, CRC Press, Taylor and Francis Group, Boca Raton, FL USA, 2008.
2. **D. L. Lau** and G. R. Arce, *Modern Digital Halftoning*, Marcel Dekker Inc, New York, NY USA, 2001.
3. Y. Wang, **D. L. Lau**, and L. G. Hassebrook, "Non-contact, depth-detailed 3-D fingerprinting," *SPIE Newsroom*, DOI: 10.1117/2.1200912.002552, December 31, 2009 <http://spie.org/x38623.xml?highlight=x2410&ArticleID=x38623>.
4. K. Liu, Y. Wang, **D. L. Lau**, L. G. Hassebrook, and Q. Hao , "Towards gesture-controlled computers with real-time structured light," *SPIE Newsroom*, 10.1117/2.1201005.002941, May 11, 2010 <http://spie.org/x40434.xml?ArticleID=x40434>.
5. **D. L. Lau**, G. R. Arce, and N. C. Gallagher, "Green-Noise Digital Halftoning," *Proceedings of the IEEE*, vol. 86, no. 12, December 1998, pp. 2424-2444.
6. **D. L. Lau** and R. Ulichney, "Blue-Noise Halftoning for Hexagonal Grids," *IEEE Transactions on Image Processing*, vol. 15, no. 5, May 2006, pp. 1270-1284.
7. **D. L. Lau** and T. Smith, "Model-based error diffusion for high fidelity lenticular screening," *Optics Express*, vol. 14, no. 8, April 2006, pp. 3214-3224.

8. P. Bargagna-Mohan, R. R. Paranthan, A. Hamza, N. Dimova, B. Trucchi, C. Srinivasan, G. I. Elliott, C. G. Zhan, **D. L. Lau**, H. Zhu, K. Kasahara, M. Inagaki, F. Cambi, and R. Mohan, "Protein Synthesis and Degradation: Withaferin A Targets Intermediate Filaments Glial Fibrillary Acidic Protein and Vimentin in a Model of Retinal Gliosis," *Journal of Biological Chemistry*, 2010 285: 7657-7669. January 4, 2010, doi:10.1074/jbc.M109.093765

9. K. Liu, Y. Wang, **D. L. Lau**, Q. Hao and L. G. Hassebrook, "Lookup Table Based High-speed and High-quality Structured Light Illumination 3-D Reconstruction," *Optics Express*, vol. 18, no. 5, March 1, 2010, pp. 5229-5244, DOI: 10.1364/OE.18.005229.

10. Y. Wang, L. G. Hassebrook, and **D. L. Lau**, "Data Acquisition and Processing of 3-D Fingerprints," *IEEE Transactions on Information Forensics and Security*, vol. 5, no. 4, December 2010, pp. 750-760, DOI: 10.1109/TIFS.2010.2062177.

11. Y. Wang, K. Liu, Q. Hao, X. Wang, **D. L. Lau**, and L. G. Hassebrook, "Robust Active Stereo Vision Using Kullback-Leibler Divergence," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, July 30, 2011, DOI: 10.1109/TPAMI.2011.162.

12. R. R. Paranthan, P. Bargagna-Mohan, **D. L. Lau**, R. Mohan, "A Robust Model to Simultaneously Induce Corneal Neovascularization and Retinal Gliosis in the Mouse Eye," *Molecular Vision*, vol. 17, pp. 1901-1908. June 2011.

13. P. Bargagna-Mohan, R. R. Paranthan, A. Hamza, C. G. Zhan, D. M. Lee, K. B. Kim, **D. L. Lau**, C. Srinivasan, K. Nakayama, K. I. Nakayama, H. Herrmann, and R. Mohan, "Molecular Bases of Disease - Protein Synthesis and Degradation: A corneal anti-fibrotic switch identified in genetic and pharmacological deficiency of vimentin," *Journal of Biological Chemistry*, jbc.M111.297150. November 22, 2011, doi:10.1074/jbc.M111.297150