

VENKAIAH CHOWDARY KAVURI

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AREAS OF INTEREST

Instrument Design, Clinical Measurements, Diffuse Optical Tomography, Diffuse Coherence Spectroscopy and Image reconstruction.

EDUCATION

University of Pennsylvania, Philadelphia, PA October 2014 - June 2016

Postdoctoral Researcher in Department of Physics and Astronomy

- Advisor: Professor Arjun Yodh.

University of Texas Arlington, Arlington, TX January 2008 - August 2014

Doctor of Philosophy in Biomedical Engineering/Medical Imaging

- Dissertation - Development Of Trans-rectal Ultrasound (TRUS) Coupled Diffuse Optical Tomography (DOT) For Prostate Cancer Imaging.
- Advisor: Professor Hanli Liu.

Jawaharlal Nehru Technological University, Hyderabad, India September 2003 - May 2007

Bachelor of Technology in Biomedical Engineering

- First class with distinction

PROFESSIONAL EXPERIENCE

Masimo Corporation, Irvine, CA. June 2016 - Present

Algorithm Engineer

University of Pennsylvania, Philadelphia, PA . October 2014 - June 2016

Postdoctoral Researcher,

University of Texas Arlington, Arlington, TX August 2010 - August 2014

Graduate Research Assistant,

HONORS

- STEM Full tuition assistantship, University of Texas Arlington.
- Outstanding Student Award - 2014, University of Texas Arlington.

PUBLICATIONS

Journal Publications

- [1] H. Y. Ban, M. Schweiger, **V. C. Kavuri**, J. M. Cochran, L. Xie, D. R. Busch, J. Katrasnik, S. Pathak, S. H. Chung, K. Lee, R. Choe, B. Czerniecki, S. R. Arridge, and A. G. Yodh, "Heterodyne frequency-domain multispectral diffuse optical tomography of breast cancer in the parallel-plane transmission geometry," *Medical Physics*, vol. Under Review, **Equal Contribution** and Corresponding Author, 2016.
- [2] D. Wang, A. B. Parthasarathy, W. B. Baker, K. Gannon, **V. C. Kavuri**, T. Ko, S. Schenkel, Z. Li, Z. Li, M. T. Mullen, *et al.*, "Fast blood flow monitoring in deep tissues with real-time software correlators," *Biomedical Optics Express*, vol. 7, no. 3, pp. 776–797, 2016.
- [3] **V. C. Kavuri** and H. Liu, "Hierarchical clustering method to improve transrectal ultrasound-guided diffuse optical tomography for prostate cancer imaging," *Academic radiology*, vol. 21, no. 2, pp. 250–262, 2014.
- [4] R. H. Patel, A. S. Wadajkar, N. L. Patel, **V. C. Kavuri**, K. T. Nguyen, and H. Liu, "Multifunctionality of indocyanine green-loaded biodegradable nanoparticles for enhanced optical imaging and hyperthermia intervention of cancer," *Journal of biomedical optics*, vol. 17, no. 4, pp. 0460031–04600310, 2012.
- [5] **V. C. Kavuri**, Z.-J. Lin, F. Tian, and H. Liu, "Sparsity enhanced spatial resolution and depth localization in diffuse optical tomography," *Biomedical optics express*, vol. 3, no. 5, pp. 943–957, 2012.

Conference Publications

- [1] A. B. Parthasarathy, K. Gannon, W. B. Baker, **V. C. Kavuri**, M. T. Mullen, J. A. Detre, and A. G. Yodh, “Functional monitoring of blood flow dynamics in brain with photon correlation techniques,” in *SPIE BiOS*, International Society for Optics and Photonics, 2016, 97070H–97070H.
- [2] C. Chen, **V. C. Kavuri**, X. Wang, R. Li, H. Liu, and J. Huang, “Multi-frequency diffuse optical tomography for cancer detection,” in *Biomedical Imaging (ISBI), 2015 IEEE 12th International Symposium on*, IEEE, 2015, pp. 67–70.
- [3] **V. C. Kavuri**, P. Kapur, M. Morgan, J. Cadeddu, C. Roehrborn, and H. Liu, “Optical properties of ex-vivo prostate tissues and the design of trans-rectal ultrasound coupled optical probe,” in *Biomedical Optics*, Optical Society of America, 2014, BM3A–28.
- [4] **V. C. Kavuri** and H. Liu, “Hierarchical clustering method for improved prostate cancer imaging in diffuse optical tomography,” in *SPIE BiOS*, International Society for Optics and Photonics, 2013, 85781K–85781K.
- [5] V. Kavuri, Z.-J. Lin, and H. Liu, “Heterogeneous hierarchical segmentation method for improved prostate cancer imaging in diffuse optical tomography: Simulation study,” in *Biomedical Optics*, Optical Society of America, 2012, BTu3A–37.
- [6] **V. C. Kavuri**, Z.-J. Lin, and H. Liu, “Comparison of l1 and l2 regularizations in diffuse optical tomography,” in *Biomedical Optics*, Optical Society of America, 2012, BTu3A–22.
- [7] V. Krishnamurthy, **V. C. Kavuri**, F. Tian, and H. Liu, “Detectability of hemodynamic response to thermal pain in pre-frontal cortex using diffuse optical tomography,” in *Biomedical Optics*, Optical Society of America, 2010, BTuD103.

PATENTS

- “TRUS-Integrated FD-DOI Multi-modal Imaging System for Prostate Cancer,” US Provisional Patent Application Serial No. 61/985,905, April 2014.

MEMBERSHIPS

- Member, International Professional Society for Optics and Photonics Technology(SPIE).
- Member, Optical Society of America(OA).
- Member, Institute of Electrical and Electronics Engineers(IEEE).