

Lei S. Li

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Email: ll120@rice.eduWebpage: www.light-leili.com/**PROFESSIONAL EXPERIENCE**

- 01/2023– Assistant Professor of Electrical and Computer Engineering,
George R. Brown School of Engineering, Rice University,
Houston, TX, USA
- 07/2022–12/2022 Adjunct Assistant Professor of Electrical and Computer Engineering,
George R. Brown School of Engineering, Rice University,
Houston, TX, USA

EDUCATION

- 07/2019–12/2022 Postdoctoral Fellow in Medical Engineering, California Institute of
Technology (Caltech), Pasadena, CA, USA
Advisor: Professor Lihong Wang
- 01/2017–06/2019 Ph.D. in Electrical Engineering, Caltech, Pasadena, CA, USA
Advisor: Professor Lihong Wang
- 08/2012–08/2016 M.S. in Electrical and System Engineering, Washington University in St.
Louis, St. Louis, MO, USA

RESEARCH INTERESTS

Neuroimaging, Bio-optical Imaging, Artificial Intelligence, Computational Imaging, Image Reconstruction, Biomedical Instrumentation, Medical Devices, Biophotonics Optical Sensing,

HONORS & AWARDS

- 2021 **Rising Stars in Engineering in Health**, Columbia University and Johns Hopkins University
- 2021 **TED Fellowship**, TED Fellows Program
- 2020 **Charles and Ellen Wilts Prize**, California Institute of Technology
- 2020 **Seno Medical Best Paper Award**, SPIE Photonics West Photons Plus Ultrasound: Imaging and Sensing
- 2019 **MIT Technology Review Innovators Under 35** (China), MIT Technology Review
- 2018 Chinese Government Award for Outstanding Self-Financed Students Abroad, **Extraordinary Prize**, Ministry of Education of the People's Republic of China
- 2017 **Seno Medical Best Paper Award**, SPIE Photonics West Photons Plus Ultrasound: Imaging and Sensing
- 2012 Best Master's Degree Thesis of Heilongjiang Province, Education Department of Heilongjiang Province
- 2011 First Prize of Academic Scholarship, Harbin Institute of Technology
- 2010 First Prize of Academic Scholarship, Harbin Institute of Technology

PUBLICATIONS

Summary: over 40 journal publications, including 12 in *Nature Biomedical Engineering*, *Nature Photonics*, *Nature Methods*, *Nature Protocols*, *Science Robotics*, *Nature Communications*, and *Science Advances*. [Google Scholar](#): Total citation >3500, h-index, 25

Select Publications (*co-first author)

- 2023 Z. He, Y. Zhang, X. Tong **L. Li**, L. V. Wang. “Quantum microscopy of cells at the Heisenberg limit,” *Nature Communications* 14, 2441
Highlighted in Mirage News, Newswise, Nanowerk, EurekAlert!, Phys.org, Science Daily, ScienMag, Bioengineer.org, Sciencenewsnet.in, Swift Telecast, New Atlas, Optics.org, Science Alert, MSN, Interesting Engineering, Scitech Daily, NuevoPeriodico, Knowledia, Nouvelles du monde, The Science Time, NewsBeezer.
- 2022 R. Cao, J. Zhao, **L. Li**, L. Du, Y. Zhang, Y. Luo, L. Jiang, S. Davis, Q. Zhou, A. Zerda, L. V. Wang. “Optical-resolution photoacoustic microscopy with a needle-shaped beam,” *Nature Photonics* 17, 89–95
Highlighted in Today UK News, MedicalXpress, Photonics.com, Mycom, Science Springs.
- 2021 **L. Li**, Y. Li, Y. Zhang, L. V. Wang. “Snapshot photoacoustic topography through an ergodic relay of optical absorption in vivo,” *Nature Protocols* 16, 2381–2394
Featured by Nature Protocols in April, 2021
- 2020 Y. Li*, **L. Li***, L. Zhu*, K. Maslov, J. Shi, P. Hu, E. Bo, J. Yao, J. Liang, L. Wang, L. V. Wang. “Snapshot photoacoustic topography through an ergodic relay for high-throughput imaging of optical absorption,” *Nature Photonics* 14, 164–170
Highlighted in “Photoacoustics in a snap”, Editor's Research Highlight, Nature Methods, 2020, 17, 248.
Highlighted in Caltech News, Photonics Views, Machine Design.
- 2019 J. Yang*, **L. Li***, A. A. Shemetov*, S. Lee, Y. Zhao, Y. Liu, Y. Shen, J. Li, Y. Oka, V. V. Verkhusha, L. V. Wang. “Focusing light inside live tissue using reversibly switchable bacterial phytochrome as a genetically encoded photochromic guide star,” *Science Advances* 5 (12), eaay1211, 1–9
- 2019 Z. Wu*, **L. Li***, Y. Yang, P. Hu, Y. Li, S. Yang, L. V. Wang, W. Gao (2019). “A microrobotic system guided by photoacoustic computed tomography for targeted navigation in intestines in vivo,” *Science Robotics* 4 (32): eaax0613, 1–11
Highlighted in Caltech News, New Scientist, Optics & Photonics News, SPIE, MSN.
- 2019 Shi, J., T. T. Wong, Y. He, **L. Li**, R. Zhang, C. Yung, J. Hwang, K. Maslov, L. V. Wang. “High-resolution, high-contrast mid-infrared imaging of fresh biological samples with ultraviolet-localized photoacoustic microscopy,” *Nature Photonics* 13(9), 609–615
Highlighted in Caltech News, Optics & Photonics News, Phys.org, Optics.org.
- 2018 **L. Li**, A. A. Shemetov, M. Baloban, P. Hu, L. Zhu, D. M. Shcherbakova, R. Zhang, J. Shi, J. Yao, L. V. Wang, V. V. Verkhusha. “Small near-infrared photochromic protein for photoacoustic multi-contrast imaging and detection of protein interactions in vivo,” *Nature Communications* 9 (1), 2734, 1–14
Indexed by Nature Index
- 2018 L. Lin, P. Hu, J. Shi, C. Appleton, K. Maslov, **L. Li**, R. Zhang, L. V. Wang. “Single-Breath-Hold Photoacoustic Computed Tomography of the Breast,” *Nature Communications* 9 (1), 2352, 1–9

Highlighted in NIH Director's Blog, featured by "5 Cool Technologies Your Tax Dollars are Funding".

Highlighted in Caltech News, Electronics Weekly, physicsworld.com, Optics.org, Newswise, Health Data Management, Biomedical Picture of the Day.

- 2017 **L. Li**, L. Zhu, C. Ma, L. Lin, J. Yao, L. Wang, K. Maslov, R. Zhang, W. Chen, J. Shi, L. V. Wang. "Single-impulse panoramic photoacoustic computed tomography of small-animal whole-body dynamics at high spatiotemporal resolution," ***Nature Biomedical Engineering*** 1, 0071, 1–11

Highlighted in "Photoacoustic tomography: Breathtaking whole-body imaging", Nature Biomedical Engineering, 2017, 1, 75.

Highlighted in "Laser pulses drum up sharp images of organs in motion" by NIH/NIBIB. Selected as a top 10 article for the first anniversary. Top 10 most cited research article in Nature Biomedical Engineering.

Highlighted in Caltech News, Medical Physics, The Medical News, Daily Mail, Science Newslines, Bioscience Technology, Phys.org, EurekAlert!.

- 2016 J. Yao*, A. A. Kaberniuk*, **L. Li***, D. M. Shcherbakova, R. Zhang, L. Wang, G. Li, V. V. Verkhusha, L. V. Wang. "Multiscale photoacoustic tomography using reversibly switchable bacterial phytochrome as a near-infrared photochromic probe," ***Nature Methods*** 13, 67–73

Highlighted in Medical News Today, Newswise, ecaner, Nanowerk, EurekAlert!.

- 2015 J. Yao, L. Wang, J. M. Yang, K. Maslov, T. Wong, **L. Li**, C. H. Huang, J. Zou, L. V. Wang. "High-speed label-free functional photoacoustic microscopy of mouse brain in action," ***Nature Methods*** 12, 407–410

Highlighted in "A faster way to watch blood flow in the brain", Science, aab0393

Highlighted in Phys.org, BioOptics World, Nanowerk, Today Topics, Medical News Today, Neuroscience, Newswise.

Peer Reviewed Journal Articles (*co-first author)

- 2023 **L. S. Li**, Y. Zhang, R. Cao, Y. Zeng, P. Hu, K. Maslov, X. Tong, Q. Zhou, L. V. Wang, "Full-view functional photoacoustic microscopy of the brain," *In preparation.*
- 2022 P. Hu, **L. Li**, L. V. Wang. "Location-dependent Spatiotemporal Antialiasing in Photoacoustic Computed Tomography," *IEEE Transactions on Medical Imaging*. DOI: 10.1109/TMI.2022.3225565
- 2022 R. Zhang*, **L. S. Li***, B. Rao, H. Rong, M. Y. Sun, J. Yao, R. Chen, Q. Zhou, S. Mennerick, B. Raman, L. V. Wang. "Multiscale photoacoustic tomography of neural activities with GCaMP calcium indicators," *Journal of Biomedical Optics* 27(9) 096004, 1–15
- 2022 A. Abdelfattah, S. Ahuja, T. Akkin, S. R. Allu, D. A. Boas, J. Brake, E. M. Buckley, R. E. Campbell, A. I. Chen, X. Cheng, T. Cižmár, I. Costantini, M. D. Vittorio, A. Devor, P. R. Doran, M. E. Khatib, V. Emiliani, N. Fomin-Thunemann, Y. Fainman, T. F. Alfonso, C. G. L. Ferri, A. Gilad, X. Han, A. Harris, E. M. C. Hillman, U. Hochgeschwender, M. G. Holt, N. Ji, K. Kiliç, E. M. R. Lake, **L. Li**, T. Li, P. Mächler, R. C. Mesquita, E. W. Miller, K.M. N. S. Nadella, U. V. Nägerl, Y. Nasu, A. Nimmerjahn, P. Ondráčková, F. S. Pavone, C. P. Campos, D. S. Peterka, F. Pisano, F. Pisanello, F. Puppò, B. L. Sabatini, S. Sadegh, S. Sakadžić, S. Shoham, S. N. Shroff, R. A. Silver, R. R. Sims, S. L. Smith, V. J. Srinivasan, M. Thunemann, L. Tian, L. Tian, T. Troxler, A. Valera, A. Vaziri, S. A. Vinogradov, F.

- Vitale, L. V. Wang, H. Uhlířová, C. Xu, C. Yang, M. Yang, G. Yellen, O. Yizhar, Y. Zhao, "Neurophotonics tools for microscopic measurements and manipulation: status report," *Neurophoton.* 9(S1) 013001
- 2022 J. Kim*, G. Kim*, **L. Li***, P. Zhang, J. Kim, Y. Kim, L. V. Wang, S. Lee, C. Kim, "Deep learning acceleration of multiscale superresolution localization photoacoustic imaging," *Light: Science & Applications* 11, 131
- 2022 **L. S. Li**, "Wide-field photoacoustic imaging in a snap with a single-element detector," *J Biomed Res* 3.1 (2022): 37-41.
- 2021 **L. Li**, H. Hsu, V. V. Verkhusha, L. V. Wang, D. M. Shcherbakova, "Multiscale photoacoustic tomography of a genetically encoded near-infrared FRET biosensor," *Advanced Science*, e2102474.
- 2021 D. Lee, C. Qian, H. Wang, **L. Li**, K. Miao, J. Du, D. M. Shcherbakova, V. V. Verkhusha, L. V. Wang, L. Wei, "Toward photoswitchable electronic pre-resonance stimulated Raman probes", *The Journal of Chemical Physics* 154, 135102
- 2021 M. Ochocinska, S. Spitalnik, A. Abuhamad, E. Bennett-Guerrero, W. Carlo, M. Cherukuri, A. Doctor, W. Dzik, C. Evans, E. Forzani, P. Kuppusamy, N. Moan, **L. Li**, N. Luban, N. Mohandas, R. Patel, J. Roback, H. Swartz, S. Textor, Sergei. Vinogradov, L. V. Wang, N. Wisniewski, S. Glynn. "NIH Workshop 2018: Towards Minimally Invasive or Noninvasive Approaches to Assess Tissue Oxygenation Pre- and Post-transfusion," *Transfusion Medicine Reviews* 35(1):46-55. doi: 10.1016/j.tmr.2020.12.003.
- 2021 **L. Li**, D. Patil, G. Petruncio, K. Harnden, J. Somasekharan, M. Paige, L. V. Wang, C. S. Morales. "Integration of multitargeted polymer-based contrast agents with photoacoustic computed tomography: An imaging technique to visualize breast cancer intratumor heterogeneity," *ACS Nano*. 15(2): 2413–2427
- 2020 P. Hu, **L. Li**, L. Lin, L. V. Wang. "Spatiotemporal antialiasing in photoacoustic computed tomography," *IEEE Transactions on Medical Imaging*. 39(11): 3535-3547
- 2020 Y. Li, **L. Li**, L. Zhu, J. Shi, K. Maslov, L. V. Wang. "Photoacoustic topography through an ergodic relay for functional imaging and biometric application in vivo," *Journal of Biomedical Optics* 25(7): 070501, 1–8
- 2020 J. Yang, **L. Li**, J. Li, Z. Cheng, Y. Liu, L. V. Wang. "Fighting against fast speckle decorrelation for light focusing inside live tissue by photon frequency shifting," *ACS Photonics* 7(3): 837–844
- 2019 P. Zhang*, **L. Li***, L. Lin, J. Shi, L. V. Wang. "In vivo superresolution photoacoustic computed tomography by localization of single dyed droplets," *Light: Science & Applications* 8(36), 1–9
Highlighted in "Toward in vivo translation of super-resolution localization photoacoustic computed tomography using liquid-state dyed droplets", Light: Science & Applications 2019, 8, 57
Highlighted in EurekaAlert!, Phys.org.
- 2018 HC. Hsu, **L. Li**, J. Yao, T.W. Wong, J. Shi, R. Chen, Q. Zhou, L. V. Wang. "Dual-axis illumination for virtually augmenting the detection view of optical-resolution photoacoustic microscopy," *Journal of Biomedical Optics* 23 (7), 076001, 1–7
- 2018 T. P. Matthews, J. Poudel, **L. Li**, L. V. Wang, M. A. Anastasio. "Parameterized joint reconstruction of the initial pressure and sound speed distributions for photoacoustic computed tomography," *SIAM journal on imaging sciences* 11 (2), 1560–1588

- 2018 Y. Qu*, **L. Li***, Y. Shen, X. Wei, T. W. Wong, P. Hu, J. Yao, K. Maslov, L. V. Wang. “Dichroism-sensitive photoacoustic computed tomography,” *Optica* 5, 495–501
- 2018 T. Imai, J. Shi, T. TW Wong, **L. Li**, L. V. Wang. “High-throughput ultraviolet photoacoustic microscopy with multifocal excitation,” *Journal of Biomedical Optics* 23(3), 036007, 1–6
- 2018 P. Zhang*, **L. Li***, L. Lin, P. Hu, J. Shi, Y. He, L. Zhu, Y. Zhou, L. V. Wang (2018). “High-resolution deep functional imaging of the whole mouse brain by photoacoustic computed tomography in vivo,” *Journal of Biophotonics* 11: e201700024, 1–6
- 2018 W. Liu, Y. Zhou, M. Wang, **L. Li**, E. Vienneau, R. Chen, J. Luo, C. Xu, Q. Zhou, L. V. Wang, J. Yao. “Correcting the limited view in optical-resolution photoacoustic microscopy,” *Journal of Biophotonics* 11: e201700196, 1–7
- 2017 **L. Li**, L. Zhu, Y. Shen, L. V. Wang. “Multiview Hilbert transformation in full-ring transducer array-based photoacoustic computed tomography,” *Journal of Biomedical Optics* 22 (7), 076017, 1–7
- 2017 J. Poudel, T. P. Matthews, **L. Li**, M. A. Anastasio, L. V. Wang. “Mitigation of artifacts due to isolated acoustic heterogeneities in photoacoustic computed tomography using a variable data truncation-based reconstruction method,” *Journal of Biomedical Optics* 22 (4), 041018, 1–9
- 2017 T. Wong, Y. Zhou, A. Garcia-Uribe, **L. Li**, K. Maslov, L. Lin, L. V. Wang. “Use of a single xenon flash lamp for photoacoustic computed tomography of multiple-centimeter-thick biological tissue ex vivo and a whole mouse body in vivo,” *Journal of Biomedical Optics* 22(4), 041003, 1–6
- 2017 L. Lin, P. Zhang, S. Xu, J. Shi, **L. Li**, J. Yao, L. Wang, J. Zou, L. V. Wang. “Handheld optical-resolution photoacoustic microscopy,” *Journal of Biomedical Optics* 22(4), 041002, 1–5
- 2017 C. Yeh*, **L. Li***, L. Zhu, J. Xia, C. Li, W. Chen, A. Garcia-Uribe, K. Maslov, L. V. Wang. “Dry coupling for whole-body small-animal photoacoustic computed tomography,” *Journal of Biomedical Optics* 22 (4), 041003, 1–5
- 2017 B. Rao, R. Zhang, **L. Li**, J. Shao, L. V. Wang. “Photoacoustic imaging of voltage responses beyond the optical diffusion limit,” *Scientific Reports* 7, 2560, 1–10
- 2016 **L. Li**, J. Xia, A. Garcia-Uribe, Q. Sheng, M. Anastasio, L. V. Wang. “Label-free photoacoustic tomography of whole mouse brain structures ex vivo,” *Neurophotonics* 3(3), 035001, 1–8
- 2016 L. Lin, J. Yao, **L. Li**, L. V. Wang. “In vivo photoacoustic tomography of myoglobin oxygen saturation,” *Journal of Biomedical Optics* 21(6), 061002, 1–5
- 2016 Y. He, L. Wang, J. Shi, J. Yao, **L. Li**, R. Zhang, C. Huang, J. Zou, L. V. Wang. “In vivo label-free photoacoustic flow cytography and on-the-spot laser killing of single circulating melanoma cells,” *Scientific Reports* 6, 39616, 1–8
- 2015 G. Li, **L. Li**, L. Zhu, J. Xia, L. V. Wang. “Multiview Hilbert transformation for full-view photoacoustic computed tomography using a linear array,” *Journal of Biomedical Optics* 20 (6), 066010, 1–6
- 2015 L. Lin, J. Xia, T. Wong, **L. Li**, L. V. Wang. “In vivo deep brain imaging of rats using oral-cavity illuminated photoacoustic computed tomography,” *Journal of Biomedical Optics* 20 (1), 016019, 1–4

- 2014 L. Zhu*, **L. Li***, L. Gao, L. V. Wang. “Multi-view optical resolution photoacoustic microscopy,” *Optica* 1(4), 217–222
- 2014 **L. Li**, C. Yeh, S. Hu, L. Wang, B. T. Soetikno, R. Chen, Q. Zhou, K. K. Shung, K. Maslov, L. V. Wang. “Fully motorized optical-resolution photoacoustic microscopy,” *Optics Letters* 39 (7), 2117–2120
Highlighted as cover article in Optics Letters (issue 7, 2014); selected for re-exposure by Virtual Journal for Biomedical Optics
- 2014 Y. S. Zhang, J. Yao, C. Zhang, **L. Li**, L. V. Wang, Y. Xia. “Optical-resolution photoacoustic microscopy for volumetric and spectral analysis of histological and immunochemical samples,” *Angewandte Chemie International Edition* 53, 8099–8103
- 2013 J. Cui, **L. Li**, J. Tan. “Sensing technology and method based on double fiber coupling of return energy for micro-hole measurement,” *Sensors and Actuators A: Physical* 190, 13–18
- 2012 J. Cui, **L. Li**, J. Tan. “Opto-tactile probe for inner dimension measurement with high aspect ratio,” *Measurement Science and Technology* 23 (8), 085105, 1–11
- 2011 J. Cui, **L. Li**, J. Tan. “Optical fiber probe based on spherical coupling of light energy for inner-dimension measurement of microstructures with high aspect ratio,” *Optics Letters* 36 (23), 4689–4691

Book Chapters and Invited Review Articles (*co-first author)

- 2021 **L. Li**, L. V. Wang. “Recent advances in photoacoustic tomography,” *BME Frontiers* vol. 2021, Article ID 9823268, 17 pages. <https://doi.org/10.34133/2021/9823268>
- 2020 **L. Li**, J. Yao, L. V. Wang. “Photoacoustic tomography of neural system,” *Neural Engineering* (ed. B. He) 349-378 (Springer International Publishing, Cham), doi: https://doi.org/10.1007/978-3-030-43395-6_12
- 2018 **L. Li**, L. Lin, L. V. Wang. “Multiscale photoacoustic tomography,” *Optics and Photonics News* 29(4) 32–39
- 2017 M. Zhou*, **L. Li***, J. Yao, R. R. Bouchard, L. V. Wang, C. Li. “Nanoparticles for photoacoustic imaging of vasculature,” *Design and Applications of Nanoparticles in Biomedical Imaging*, 337–356
- 2016 **L. Li**, J. Yao, L. V. Wang. “Photoacoustic tomography enhanced by nanoparticles,” *Wiley Encyclopedia of Electrical and Electronics Engineering, J. G. Webster (Ed.)*. doi:10.1002/047134608X.W8335, 1–14

Conference Proceedings

- 2020 **L. Li**, L. V. Wang, V. V. Verkhusha, D. Shecherbakova. “Multiscale photoacoustic tomography of a genetically encoded near-infrared FRET biosensor,” *SPIE BiOS*, 119600J-6
- 2020 **L. Li**, L. V. Wang, C. Salvador-Morales. “Integration of photoacoustic computed tomography with multitargeted polymer-based nanoparticles visualizes breast cancer intratumor heterogeneity,” *SPIE BiOS*, 1196006-6
- 2020 **L. Li**, Z. Wu, Y. Yang, P. Hu, W. Gao, L. V. Wang. “Photoacoustic computed tomography guided microrobots for targeted navigation in intestines in vivo,” *SPIE BiOS*, 112402R-6
- 2020 **L. Li**, P. Zhang, L. V. Wang. “In vivo super-resolution photoacoustic computed tomography by localization of single dyed droplets,” *SPIE BiOS*, 112402U-6

- 2019 **L. Li**, A. A. Shemetov, P. Hu, D. M. Shcherbakova, J. Shi, J. Yao, V. V. Verkhusha, L. V. Wang. “In vivo photoacoustic multi-contrast imaging and detection of protein interactions using a small near-infrared photochromic protein,” *SPIE BiOS*, 1087818-6
- 2018 **L. Li**, P. Zhang, L. V. Wang. “Linear-array based full-view high-resolution photoacoustic computed tomography of whole mouse brain functions in vivo,” *SPIE BiOS*, 104941H-6
- 2017 **L. Li**, L. Zhu, C. Ma, L. Lin, J. Yao, L. Wang, K. Maslov, R. Zhang, W. Chen, J. Shi, L. V. Wang. “Imaging small animal whole-body dynamics by single-impulse panoramic photoacoustic computed tomography,” *SPIE BiOS*, 100640M-6
- 2016 J. Yao, A. A. Kaberniuk, **L. Li**, D. M. Shcherbakova, R. Zhang, L. Wang, G. Li, V. V. Verkhusha, and L. V. Wang. “Reversibly switchable photoacoustic tomography using a genetically encoded near-infrared phytochrome,” *SPIE BiOS*, 97082U-8
- 2016 T. P. Matthews, **L. Li**, L. V. Wang, M. Anastasia. “Compensation for air voids in photoacoustic computed tomography image reconstruction,” *SPIE BiOS*, 97084I-6
- 2015 G. Li, J. Xia, **L. Li**, L. Wang, L. V. Wang. “Isotropic-resolution linear-array-based photoacoustic computed tomography through inverse Radon transform,” *SPIE BiOS*, 93230I-7
- 2015 C. Yeh, S. Hu, J. Liang, **L. Li**, B. Soetikno, Z. Lu, R. Sohn, K. Maslov, J. M. Arbeit, L. V. Wang. “Optical-resolution photoacoustic microscopy of the metabolic rate of oxygen in a mouse renal tumor model,” *SPIE BiOS*, 93233H-8
- 2014 **L. Li**, C. Yeh, S. Hu, L. Wang, B. T. Soetikno, K. Maslov, R. Chen, Q. Zhou, K. K. Shung, L. V. Wang. “Fully motorized optical-resolution photoacoustic microscopy,” *BIOMED*, BS3A.69
- 2014 L. Zhu, L. Gao, **L. Li**, L. Wang, T. Ma, Q. Zhou, K. K. Shung, L. V. Wang. “Cross-optical-beam nonlinear photoacoustic microscopy,” *SPIE BiOS*, 89433H-5
- 2014 **L. Li**, C. Yeh, S. Hu, L. Wang, B. T. Soetikno, R. Chen, Q. Zhou, K. K. Shung, K. Maslov, L. V. Wang. “Combined optical and mechanical scanning in optical-resolution photoacoustic microscopy,” *SPIE BiOS*, 89435X-6
- 2010 J. Cui, **L. Li**, J. Tan. “Development of ultra-precision micro-cavity measurement technique in HIT-UOI,” *Proc. SPIE* 7544, 75441A; doi:10.1117/12.885701

PATENTS

- 2021 WO2021092250A1 SPATIOTEMPORAL ANTIALIASING IN PHOTOACOUSTIC COMPUTED TOMOGRAPHY, Lihong Wang, Peng Hu, **Lei Li**, Approved
- 2020 WO2020264559A1 IMAGE-GUIDED MICROROBOTIC METHODS, SYSTEMS, AND DEVICES, Wei Gao, Lihong Wang, **Lei Li**, Zhiguang Wu, Approved
- 2018 WO2018209046A1 SNAPSHOT PHOTOACOUSTIC PHOTOGRAPHY USING AN ERGODIC RELAY, Lihong Wang, Yang Li, **Lei Li**, Approved
- 2017 WO2018102446A2 SINGLE-IMPULSE PANORAMIC PHOTOACOUSTIC COMPUTED TOMOGRAPHY (SIP-PACT), Lihong Wang, **Lei Li**, Liren Zhu, Cheng Ma, Approved

INVITED TALKS

- 2023 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *CLEO 2023*, San Jose, May 12

- 2023 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *University of Houston ECE Seminar, Houston*, March 24
- 2023 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *UCLA BioEngineering Seminar, Los Angeles*, February 21
- 2023 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *Stanford University, SCIEN Colloquia 2023, Palo Alto*, January 18
- 2023 Panoramic Photoacoustic Computed Tomography (PACT): From small-animal wholebody imaging to human breast cancer diagnosis, *EI 2023, San Francisco*, January 17
- 2022 New Generation Photoacoustic Imaging: From benchtop to bedside, *PSIMI 2022, Philadelphia*, November 11
- 2022 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *University of Michigan, Ann Arbor*, September 1
- 2022 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *Baylor College of Medicine, Neurological Research Institute*, August 30
- 2022 Multi-contrast Photoacoustic Computed Tomography: Seeing through small-animal wholebody and whole brain at high spatiotemporal resolution, *Washington University in St. Louis*, August 25
- 2021 Multiconstrast photoacoustic tomography of wholebody dynamics and whole brain functions, *IFM 2021*, November 15
- 2021 New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors, *University of Southern California*, August 30
- 2021 Advanced photoacoustic imaging, *TED Monterey*, August 2
- 2018 Multiscale photoacoustic tomography of tissue oxygen, *NIH/NHLBI Tissue Oxygenation Workshop*, Bethesda, April 24.
- 2018 Imaging small-animal whole-body dynamics and whole-brain brain activities using photoacoustic computed tomography, *Society for Brain Mapping and Therapeutics*, Los Angeles, April 14.
- 2014 Photoacoustic imaging, *NIST Workshop on Standards for the Advancement of Optical Medical Imaging*, August 26.

CONFERENCE ACTIVITY

Oral Presentations

- 2022 Multiscale photoacoustic tomography of a genetically encoded near-infrared FRET biosensor, *SPIE Photonics West, San Francisco*, January 27–February 1.
- 2022 Integration of photoacoustic computed tomography with multitargeted polymer-based nanoparticles visualizes breast cancer intratumor heterogeneity, *SPIE Photonics West, San Francisco*, January 27–February 1.
- 2020 Photoacoustic computed tomography guided microrobots for targeted navigation in intestines in vivo, *SPIE Photonics West, San Francisco*, February 1–6.
- 2020 In vivo super-resolution photoacoustic computed tomography by localization of single dyed droplets, *SPIE Photonics West, San Francisco*, February 1–6.
- 2019 In vivo photoacoustic multi-contrast imaging and detection of protein interactions using a small near-infrared photochromic protein, *SPIE Photonics West, San Francisco*, February 2–7.

- 2018 Linear-array based full-view high-resolution photoacoustic computed tomography of whole mouse brain functions in vivo, SPIE Photonics West, San Francisco, January 27–February 1.
- 2017 Imaging small animal whole-body dynamics by single-impulse panoramic photoacoustic computed tomography, SPIE Photonics West, San Francisco, January 28–February 2.
- 2016 Multi-view Hilbert transform on full-ring photoacoustic computed tomography, SPIE Photonics West, San Francisco, February 13–18.
- 2015 Label-free structural photoacoustic tomography of intact mouse brain, SPIE Photonics West, San Francisco, February 7–12.

Poster Presentations

- 2014 Fully motorized optical-resolution photoacoustic microscopy, OSA BIOMED, Miami, April 26–30.
- 2014 Combined optical and mechanical scanning in optical-resolution photoacoustic microscopy, SPIE Photonics West, San Francisco, February 1–6.

PROFESSIONAL SERVICE

Peer Review (2014–present)

Independent Reviewer of Journals including:

Science Advances, Physical Review Letters, Optica, IEEE Transactions on Medical Imaging, Physical Review E, Physical Review Applied, Optics Letters, Optics Express, Biomedical Optics Express, Journal of the Optical Society of America A, Journal of Biomedical Optics, Neurophotonics, Scientific Reports.

PROFESSIONAL ASSOCIATIONS

Editorial Board, International Journal of Medical Imaging, 2021–present

Reviewer Board of Neurophotonics, 2019–present

Member in Optical Society of America, 2014–2019