

Jianming Liang, PhD

Professor, Arizona State University; Adjunct Associate Professor, Mayo Clinic
Biomedical Informatics, Computer Science, Computer Engineering, Robotics and Autonomous Systems,
Software Engineering, Biomedical Engineering, and Radiology
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I have a background in both academia and industry; after six years at Siemens, I joined the faculty of Arizona State University (ASU) in December 2008, where I am currently a full professor with chair privileges in the graduate faculties of biomedical informatics, computer science, computer engineering, software engineering, robotics and autonomous systems, and biomedical engineering. Funded by an [NIH R01 grant](#) and [multiple state and local grants](#), **my research is highly interdisciplinary**, meshing *multiple* branches of science and engineering with medical specialties for direct societal impacts. Specifically, drawing upon computer vision, machine (deep) learning, visualization, high-performance computing, software engineering, imaging science, statistics, and mathematics, my research focuses on developing novel computational methodologies and systems to support clinical decision-making and facilitate precision medicine and health. My lab seeks to address a profound challenge facing biomedicine: **big data**, through a multi-disciplinary team-based approach, involving cardiology, gastroenterology, oncology, pathology, radiology, etc. These systems aim to remove barriers to health and healthcare by decreasing diagnosis time, increasing throughput, boosting accuracy, enhancing quality, reducing cost, and expanding accessibility to medical expertise. Supporting ASU's charter and goals to “establish, with Mayo Clinic¹, innovative health solutions pathways capable of . . . enhancing treatment for 2 million patients”, I have established strong collaborations with Mayo Clinic across multiple departments and divisions, and my efforts have led to several multidisciplinary team-based grants. I was selected as an inaugural Mayo Clinic-ASU Alliance Fellow. I have published **100+ peer-reviewed publications** in some of the most prestigious journals and conferences in my field, such as *IEEE Transactions on Medical Imaging (TMI)*, *Medical Image Analysis (MedIA)*, *CVPR*, *ICCV*, *MICCAI*, and *IPMI*. Our publications have been honored in this research area, including a [MICCAI Best Paper Runner Up](#) (2023), a [DART Best Paper Award Runner Up](#) (2023), the [Elsevier MedIA Best Paper Award](#) (2020), a [MICCAI Young Scientist Award](#) (2019), a [Finalist for the MICCAI Best Presentation Award](#) (2019), and a [Finalist for the MICCAI Young Scientist Award](#) (2015). Moreover, I have been awarded **38 US patents** with an additional 50+ patents pending. I have been known for my **meticulous approach to teaching and mentoring**. My students have received **50+ awards and recognitions** for their achievements, including the [NCWIT Collegiate Award](#) (2022) and the [AMIA Doctoral Dissertation Award](#) [the best dissertation in biomedical informatics worldwide] (2022). I have been nominated for the Faculty Teaching Award four times in 2019, 2020, 2023, and 2024. I currently serve as an Associate Editor on the Editor Board of *Medical Image Analysis*, the best journal in my field, and as an area chair for *MICCAI* and *CVPR*, the top conferences in my area. I have served as a Guest Editor for the *IEEE Transactions on Medical Imaging* (2020-2021). I have also served on NIH study sections. In recognition of my contributions, I have been elected a [Fellow](#) of the [National Academy of Inventors \(NAI\)](#) (2021) and received the [Distinguished Faculty Award](#) (2023), the [Faculty Mentoring Award](#) (2020), the [Faculty Innovation Award](#) (2019), and the [President's Award for Innovation](#) (2015). My team is the winner of the [Elsevier Medical Image Analysis Best Paper Award](#) (2020), one of the most prestigious awards in the field.

RESEARCH INTERESTS

- Machine Learning; Computer Vision; Data Science; and Imaging Informatics and Analytics
- Deep Learning; Biomedical Imaging; Visualization; and Computer-aided Diagnosis, Therapy, and Surgery

¹Mayo Clinic is ranked #1 among the best hospitals by the U.S. News & World Report (health.usnews.com/best-hospitals).

POSITIONS

- **Arizona State University, Tempe, AZ, USA**
 August 2022 – Present: Full Professor (tenured)
 August 2016 – August 2022: Associate Professor (tenured)
 December 2008 – August 2016: Associate Professor (tenure track)
 Faculties: *Computer Science, Computer Engineering, Biomedical Informatics, Robotics and Autonomous Systems, Software Engineering, and Biomedical Engineering*
- **Mila – Quebec Artificial Intelligence Institute², Montreal, Canada**
Centre de recherche du CHUM (CRCHUM)³, Montreal, Canada
 January 2018 – July 2018: Invited Professor (sabbatical)
 Topic: *Deep Learning in Biomedical Imaging across Diseases, Modalities, and Specialties*
- **Mayo Clinic, Rochester, MN, USA**
 January 2018 – Present: Adjunct Associate Professor
 May 2010 – Present: Research Affiliate
 Faculty: *Radiology*
- **Arizona Cancer Center, Tucson, AZ, USA**
 December 2009 – Present: Full Investigator
 Program: *Cancer Imaging*
- **Siemens Medical Solutions USA, Inc., Malvern, PA, USA**
 December 2002 – December 2008: Staff Scientist
 Topic: *Computer-aided Diagnosis and Therapy in Medical Imaging*
- **Advanced Research Group, Analog Design Automation Inc. (ADA)⁴, Ottawa, Canada**
 January 2001 – December 2002: Senior Research Scientist, NSERC Industrial Research Fellow
 Topics: *Intelligent Systems, Visualization, and Optimization*
- **North China Institute of Computing Technology (NCI)⁵, Beijing, P. R. China**
 March 1990 – February 1992: Principal Investigator & Project Manager
 Project: *“Support Techniques for Decision Making” funded by the National 8:5 Program, The Ministry of Science and Technology, Beijing, P. R. China*

EDUCATION

- **Turku Centre for Computer Science (TUCS)⁶, Turku, Finland**
 Doctor of Philosophy in Computer Science, January 2001
 Thesis: *Dynamic Chest Image Analysis: New Model-based Computer Methods for Dynamic Pulmonary Imaging and Other Applications*
 Advisors: Prof. Timo Järvi, PhD (Computer Science, University of Turku, Finland)
 Prof. Martti Kormano, MD (Diagnostic Radiology, University of Turku, Finland)
 Prof. Tim McInerney (currently at Ryerson University, Toronto, Canada)
 Prof. Demetri Terzopoulos⁷ (currently at the University of California, Los Angeles, USA)
- **Department of Computer Science, University of Toronto, Toronto, Canada**
 Visiting PhD Student, April 1998 – March 1999

²Mila (mila.quebec/en) is led by Prof. Yoshua Bengio, one of the three pioneers in deep learning.

³CRCHUM (crchum.com) is the largest biomedical and healthcare research center at Université de Montréal and one of the largest in Canada.

⁴ADA was acquired by Synopsys Inc. (www.synopsys.com) in February, 2004.

⁵NCI (www.nci.ac.cn) is a top computer science and engineering research institute and affiliated with the Ministry of Electronics, China.

⁶TUCS (www.tucs.fi) is a center of excellence and a founding member of the European Educational Forum (EEF).

⁷Prof. Terzopoulos (cs.ucla.edu/~dt) is a pioneer of deformable models in computer vision, computer graphics, and medical image analysis.

Topic: *Deformable Models in Medical Image Analysis*

Advisors: Prof. Demetri Terzopoulos⁷ (currently at the University of California, Los Angeles, USA)
Prof. Tim McInerney (currently at Ryerson University, Toronto, Canada)

- **Department of Computer Science, University of Aalborg, Denmark**

Visiting Scholar, March 1992 – August 1994

Topics: *Bayesian Networks, Active Vision, and Medical Informatics*

Advisor: Prof. Finn V. Jensen⁸ (Computer Science)

- **North China Institute of Computing Technology (NCI)⁵, Beijing, P. R. China.**

Master of Science in Computer Science, February 1990

Thesis: *Probabilistic Reasoning: Belief Networks and a Toolkit*

Advisors: Prof. Jiaqi Fang (Computer Science, NCI, Beijing, P. R. China)

Prof. Zhuoqun Xu (Computer Science, Peking University, Beijing, P. R. China)

- **University of Science and Technology (UST), Beijing, P. R. China.**

Bachelor of Science in Computer Science, July 1987

Thesis: *The Design and Implementation of a Dynamic Storage Model for RDBMS*

Advisor: Prof. Yongjian Ma (Computer Science, UST, Beijing, P. R. China)

MEMBERSHIPS

- Fellow, The National Academy of Inventors (NAI)
- Senior Member, The Institute of Electrical and Electronics Engineers (IEEE)
 - IEEE Computer Society (IEEE CS)
 - IEEE Engineering in Medicine and Biology Society (IEEE EMBS)
- Member, The Association for Computing Machinery (ACM)
- Member, The Medical Image Computing and Computer Assisted Intervention Society (MICCAI)
- Member, American Medical Informatics Association (AMIA)
- Member, New York Academy of Sciences (NYAS)

AWARDS AND HONORS

Research Grants:

- The ACCESS Resource (12/22/2022 – 12/21/2024); PI: Dr. Liang (2,000,000.0 ACCESS Credits)
The Extreme Science and Engineering Discovery Environment (XSEDE) supported by the NSF
Image Analysis with Omni-Pretraining (MED220025). Role: PI
(Awarded as GPU hours with 2,000,000.0 ACCESS Credits)
- NSF Standard Grant (10/1/2022 – 9/30/2023); PI: Douglas Jennewein (ASU) (\$399,997)
National Science Foundation (NSF)
CC Compute: The Arizona Federated Open Research Computing Enclave (AFORCE), an Advanced Computing Platform for Science, Engineering, and Health*. Role: Co-I and Major User
- The XSEDE Resource (1/1/2020 – 6/30/2024); PI: Dr. Liang (\$193,875.24 = \$30,225+\$163,650.24)
The Extreme Science and Engineering Discovery Environment (XSEDE) supported by the NSF
Annotation-Efficient 3D Medical Image Analysis. Role: PI
(supplemented in August 2022 with 40,000.0 GPU Hours)
- NIH R01 Grant (7/1/2016 – 4/30/2023); PI: Dr. Liang (\$2.5M)
The National Heart, Lung, and Blood Institute (NHLBI), NIH

⁸Prof. Jensen (people.cs.aau.dk/~fvj) and his team is renowned for Bayesian networks and applications.

Computer-aided diagnosis of pulmonary embolism. Role: PI

Research Grants (completed):

- The XSEDE Resource (4/1/2019 – 12/31/2019); PI: Dr. Liang (\$10,500)
The Extreme Science and Engineering Discovery Environment (XSEDE) supported by the NSF
Active transfer learning for biomedical imaging. Role: PI
- ABRC Arizona Investigator Grant (07/01/2017 – 06/30/2020); PI: Dr. Liu (\$750K)
Arizona Biomedical Research Commission (ABRC)
Towards Precise Intensity-Modulated Proton Therapy for Lung Cancer. Role: subaward PI
- Erickson Student Summer Support (5/8/2017 – 5/7/2018); PI: Dr. Liang
Mayo Clinic, Scottsdale, AZ
Deep Learning in medical Imaging. Role: PI
- Marley Fund Student Support (8/1/2017 – 2/28/2018); PI: Dr. Liang
Mayo Clinic, Scottsdale, AZ
Proton Therapy. Role: PI
- Mayo Development Award (12/01/2015 – 12/01/2017); PI: Dr. Liang
Mayo Clinic, Scottsdale, AZ
Personalized proton therapy for lung cancer. Role: PI
- Mayo Research Award (9/1/2016 – 8/31/2017); PI: Dr. Liang
Mayo Clinic, Scottsdale, AZ
Preliminary clinical study of algorithms for determining the quality of colonoscopy. Role: PI
- Faculty Summer Residency Program (5/8/2017 – 8/5/2017); PI: Dr. Liang
Mayo Clinic and ASU Alliance
Towards a Comprehensive Decision Support Environment in Biomedical Imaging for Value-based Health Care Delivery. Role: PI
- ASU-Mayo Seed Award (01/01/2015 – 12/31/2015); PI: Dr. Liang
Arizona State University and Mayo Clinic, Scottsdale, AZ
Robust intensity-modulated proton therapy for lung cancer. Role: PI
- ASU-Mayo Seed Research Award (01/01/2014 – 12/31/2015); PI: Dr. Liang
Arizona State University and Mayo Clinic, Scottsdale, AZ
Developing computer algorithms to ensure high-quality colonoscopy. Role: PI
- FURNACE Grant (01/01/2013 – 12/31/2014); Liang (PI)
Arizona Technology Enterprises and the State of Arizona, Phoenix, AZ
Pre-commercializing software for carotid intima-media thickness image interpretation
- Discovery Translation Grant (07/01/2012 – 6/30/2015); PI: Dr. Liang
Mayo Clinic in Rochester, Minnesota, USA
The development of a highly efficient and user-friendly software system for carotid intima-media thickness image interpretation. Role: PI
- ASU-Mayo Seed Research Award (01/01/2012 – 6/30/2014); PI: Dr. Liang
Arizona State University and Mayo Clinic, Scottsdale, AZ
Diagnosis and prognosis of pulmonary embolism in CT pulmonary angiography. Role: PI
- Mayo Clinic Research Award (CR20) (05/01/2010 – 08/31/2011); PI: Dr. Liang
Mayo Clinic, Scottsdale, AZ
Developing image analysis algorithms for measuring carotid intima-media thickness. Role: PI

- ASU-Mayo Seed Research Award (01/01/2010 – 12/31/2011); PI: Dr. Liang
Arizona State University and Mayo Clinic, Phoenix, AZ
Left ventricular untwisting: Diagnostic role and biomechanical evaluation in acute mild and moderate elevation of right ventricular afterload in acute pulmonary embolism. Role: PI

Awards and Recognitions:

- Nominated for Faculty Teaching Award (April, 2024)
College of Health Solutions, Arizona State University
- Best Paper Award Runner Up (October 12, 2023)
The 5th MICCAI Workshop on Domain Adaptation and Representation Transfer (DART)
- MICCAI Best Paper Runner Up (October 11, 2023)
The MICCAI Society
- Distinguished Faculty Award (May 2023)
College of Health Solutions, Arizona State University
- Professor of Impact Award (May 2023)
CSE 591 Students, Arizona State University
- Nominated for Faculty Teaching Award (May, 2023)
College of Health Solutions, Arizona State University
- Poster Award Second Prize, Faculty Research Day (Jan 25, 2023)
College of Health Solutions, Arizona State University
- Elected Fellow of the National Academy of Inventors (December, 2021)
Arizona State University
- Best Paper Award (October, 2020)
Elsevier *Medical Image Analysis*
- Faculty Mentoring Award (May, 2020)
College of Health Solutions, Arizona State University
- Nominated for Faculty Teaching Award (May, 2020)
College of Health Solutions, Arizona State University
- Sun Award (September, 2020)
Arizona State University
- Faculty Innovation Award (May, 2019)
College of Health Solutions, Arizona State University
- Elected Senior Member of the National Academy of Inventors (April, 2019)
The National Academy of Inventors and Arizona State University
- Nominated for Faculty Teaching Award (May, 2019)
College of Health Solutions, Arizona State University
- Certificate of Recognition (May, 2019)
University Senate, Arizona State University
- Inducted into the National Academy of Inventors (March, 2017)
Elected as an inaugural member of the ASU chapter of the NAI
- Mayo Clinic-ASU Alliance Fellow (February, 2017)
Arizona State University and Mayo Clinic

- Presidential Poster Award, the American College of Gastroenterology (October, 2016)
Not All Visual Data Acquired During Withdrawal Phase (WP) of Colonoscopy Is Interpretable: Introducing the Concept of "Effective" WP Time, the 81st Annual Meeting, October 14 - 19, 2016, Las Vegas, Nevada.
- Certificate of Recognition (May, 2016)
University Senate, Arizona State University
- President's Award for Innovation (March, 2015)
Arizona State University
- Women & Philanthropy Finalist (March, 2015)
Arizona State University
- Certificate of Recognition (May, 2015)
University Senate, Arizona State University
- MICCAI 2009 Travel Award (September, 2009)
International Conference on Medical Image Computing and Computer Assisted Intervention, London, UK
- NSERC Industrial Research Fellowship (January 2001 – December 2002)
The Natural Sciences and Engineering Research Council of Canada (NSERC), Ottawa, Canada

AWARDS AND HONORS TO MY STUDENTS

Zongwei Zhou:

- The AMIA Doctoral Dissertation Award First Prize, September 13, 2022
- University Graduate Fellowship, Arizona State University, March 5, 2021
- Elsevier-MedIA Best Paper Award, Medical Image Analysis, October 7, 2020
- Sun Award, Arizona State University, September 7, 2020
- MICCAI Student Participation Award, MICCAI-2020, August 21, 2020
- The first & third places in Annual Student Poster Competition, BMI/BMD Symposium, April 24, 2020
- University Graduate Fellowship, Arizona State University, March 18, 2020
- Young Scientist Award, MICCAI-2019, October 16, 2019
- Best Presentation Award Finalist, MICCAI-2019, October 16, 2019
- Graduate Student Travel Award, MICCAI-2019, August 7, 2019
- CHS Grad Student Travel Support, CHS, July 23, 2019
- The first place in the Annual Student Poster Competition, BMI/BMD Symposium, April 26, 2019

Md Mahfuzur Rahman Siddiquee:

- Engineering Graduate Fellowship, by Ira A. Fulton School of Engineering, May 4, 2020
- Travel Grant, CVPR 2020, by GPSA, April 29, 2020
- Student Travel Award, by ICCV 2019, October 14, 2019
- CIDSE Conference Travel Award, ICCV 2019, by ASU School of Computing, Informatics, and Decision Systems Engineering, September 23, 2019
- Travel Grant, ICCV 2019, by GPSA, August 30, 2019
- Travel Grant, CVPR 2019, by GPSA, March 26, 2019
- The second Place in the Annual Student Poster Competition, BMI/BMD Symposium, April 13, 2019

Vatsal Sodha

- Elsevier-MedIA Best Paper Award, Medical Image Analysis, October 7, 2020
- Engineering Graduate Fellowship, by Ira A. Fulton School of Engineering, date 2019-20

- Engineering Graduate Fellowship, by Ira A. Fulton School of Engineering, date 2018-19
- Travel Grant, CVPR 2019, by GPSA, June 2019

Mohammad Reza Hosseinzadeh Taher

- CVPR 2024 Outstanding Reviewer, May 22, 2024
- Travel Grant, CVPR 2024, by GPSA, April 30, 2024
- The Best Paper Award Runner Up, DART 2023, October 12, 2023
- MICCAI 2023 Outstanding Reviewer Award Honorable Mention, October 11, 2023
- Travel Grant, MICCAI 2023, by GPSA, October 2nd, 2023
- Certificate of GPSA Research Grant Reviewer, May 8th, 2023
- Certificate of GPSA Travel Grant Reviewer, May 8th, 2023
- Travel Grant, CVPR 2022, by GPSA, April 25th, 2022
- SCAI Doctoral Fellowship, March 1, 2022
- ASU Teaching Excellence Award, by ASU SCAI, December 6, 2021
- ASU Outstanding Research Award, by GPSA, December 6, 2021
- Travel Grant, MICCAI 2021, by GPSA, September 2, 2021
- Travel Grant, CVPR 2021, by GPSA, April 19, 2021
- Reviewer Excellence, by GPSA, December 4, 2020
- Travel Grant, MICCAI 2020, by GPSA, July 30, 2020
- Travel Grant, IPAM 2020, by GPSA, December 27, 2019

Fatemeh Haghghi

- Professor of Impact Award, by ASU, May 6, 2023
- Nominated for 2023 Google PhD Fellowship by ASU, September 20, 2022
- IEEE TMI Distinguished Reviewer Certificate, August 27th, 2022
- Travel Grant, CVPR 2022, by GPSA, April 25th, 2022
- NCWIT Collegiate Award Winner, by NCWIT, April 14, 2022
- NCWIT Collegiate Award Finalist, by NCWIT, December 23, 2021
- ASU Outstanding Research Award, by GPSA, December 6, 2021
- ASU Teaching Excellence Award, by ASU SCAI, December 6, 2021
- Travel Grant, MICCAI 2021, by GPSA, August, 2021
- MICCAI Society Student Participation Award, MICCAI-2021, August 5, 2021
- Travel Grant, CVPR 2021, by GPSA, April 19, 2021
- University Graduate Fellowship, Arizona State University, March 24, 2021
- MICCAI 2020 NIH Awards, September 17, 2020
- Travel Grant, MICCAI 2020, by GPSA, July 30, 2020
- Travel Award, Institute for Pure and Applied Mathematics (IPAM) 2020, October, 2019

Jiaxuan Pang

- MICCAI Best Paper Runner Up, MICCAI 2023, October 11, 2023
- Travel Grant, CVPR 2023, by GPSA, April 25th, 2023
- Poster Award Second Prize, Faculty Research Day, Jan 25, 2023
- Travel Grant, CVPR 2022, by GPSA, April 25th, 2022
- Elsevier-MedIA Best Paper Award, Medical Image Analysis, October 7, 2020

DongAo Ma

- MICCAI Best Paper Runner Up, MICCAI 2023, October 11, 2023

- 2023-24 Graduate College Travel Award Q2, by Graduate College, September 28, 2023
- SCAI Conference Funding, by SCAI, September 22nd, 2023
- Travel Grant, MICCAI 2023, by GPSA, July 31, 2023
- MICCAI 2023 STudent Author Registration (STAR) Awards, by MICCAI Society, July 19, 2023
- Certificate of GPSA Travel Grant Reviewer, May 8th, 2023
- Travel Grant, CVPR 2023, by GPSA, April 25th, 2023
- Travel Grant, MICCAI 2022, by GPSA, August 27, 2022
- Travel Grant, CVPR 2022, by GPSA, April 25th, 2022

Nahid Islam

- Travel Grant, MICCAI 2022, by GPSA, August 27, 2022
- Travel Grant, CVPR 2022, by GPSA, April 25th, 2022

Zuwei Guo

- Travel Grant, DART 2022, by GPSA, August 27, 2022

Yasar Mehmood

- NVidia Academic Hardware Grant, March 12th, 2022

Madhumitha Saravanan

- MICCAI Society Participation Grant 2023

Andrew Yang

- The 2nd place: Senior Division: Computational Biology & Bioinformatics

PUBLICATIONS

Editorials (advisee names in bold)

1. Xiaohao Cai, Youwei Wen, and Jianming Liang. Editorial: Segmentation and classification: theories, algorithms and applications. *Frontiers in Computer Science*, 6 (1), 2024 (available online in November 2023)
2. **N. Tajbakhsh**, H. Roth, D. Terzopoulos, and J. Liang. Annotation-Efficient Deep Learning: The Holy Grail of Medical Imaging. *IEEE Transactions on Medical Imaging*, 40 (10), 2526–2533, 2021 [8 pages; Impact Factor: 10.048 (the best journal in medical imaging)].

Peer-Refereed Journal Publications (advisee names in bold)

1. **Mohammad Reza Hosseinzadeh Taher**, **Fatemeh Haghighi**, Michael B. Gotway, Jianming Liang. Large-scale Benchmarking and Boosting Transfer Learning for Medical Image Analysis *Medical Image Analysis* (in revision) [23 pages; Impact Factor: 13.828 (the best journal in medical image analysis)].
2. **Zuwei Guo**, **Nahid Ul Islam**, Michael B. Gotway, Jianming Liang. Stepwise Incremental Pretraining for Integrating Discriminative, Restorative, and Adversarial Learning. *Medical Image Analysis* 95:103159, [13 pages; Impact Factor: 13.828 (the best journal in medical image analysis)] (available online April 16, 2024)
3. **Fatemeh Haghighi**, **Mohammad Reza Hosseinzadeh Taher**, Michael B. Gotway, Jianming Liang. Self-supervised Learning for Medical Image Analysis: Discriminative, Restorative, or Adversarial? *Medical Image Analysis* 94:103086, [19 pages; Impact Factor: 13.828 (the best journal in medical image analysis)] (Available online January 28, 2024)
4. **Nahid Ul Islam**, **Zongwei Zhou**, **Shiv Gehlot**, **Utkarsh Nath**, Michael B. Gotway, Jianming Liang. Seeking an Optimal Approach for Computer-aided Diagnosis of Pulmonary Embolism. *Medical Image*

- Analysis* 91:102988, 2024 [16 pages; Impact Factor: 13.828 (the best journal in medical image analysis)]. (Available online 13 October 2023)
5. **Z. Zhou, J. Y. Shin**, S. Gurudu, M. Gotway, and J. Liang. Active, Continual Fine Tuning of Convolutional Neural Networks for Reducing Annotation Efforts. *Medical Image Analysis*, 71:101997, 2021 [15 pages; Impact Factor: 11.148 (the best journal in medical image analysis)] (Available online March 24, 2021)
 6. **F. Haghghi, M. R. Hosseinzadeh Taher, Z. Zhou**, M. B. Gotway, and J. Liang. Transferable Visual Words. *IEEE Transactions on Medical Imaging*, 40 (10), 2857–2868, 2021 [12 pages; Impact Factor: 10.048 (the best journal in medical imaging)].
 7. **Z. Zhou, V. Sodha, J. Pang**, M. B. Gotway, and J. Liang. Models Genesis. *Medical Image Analysis*, 67:101840, 2021 [23 pages; Impact Factor: 11.148 (the best journal in medical image analysis)] (received the **Elsevier MedIA Best Paper Award**)
 8. **A. Chen, J. Zhang, L. Zhao**, R. D. Rhoades, D. Y. Kim, **N. Wu**, J. Liang, and J. Chae. Machine-learning enabled wireless wearable sensors to study individuality of respiratory behaviors. *Biosensors and Bioelectronics* 173 (2021): 112799. [10 pages; Impact Factor: 10.257].
 9. **Z. Zhou, M. M. Rahman Siddiquee, N. Tajbakhsh**, and J. Liang. UNet++: Redesigning Skip Connections to Exploit Multi-Resolution Features in Image Segmentation. *IEEE Transactions on Medical Imaging*, 39 (6), 1856-1867, 2019 [12 pages; Impact Factor: 10.048 (the best journal in medical imaging)].
 10. **N. Tajbakhsh, J. Y. Shin**, M. Gotway, and J. Liang. Computer-aided Detection and Visualization of Pulmonary Embolism Using a Novel, Compact, and Informative Image Representation. *Medical Image Analysis* 58, 101541. December 2019, [13 pages; Impact Factor: 11.148 (the best journal in medical image analysis)].
 11. **Z. Zhou, J. Y. Shin**, and J. Liang. Integrating active learning and transfer learning for carotid intima-media thickness video interpretation. *Journal of Digital Imaging*, 32(2):290–299, 2019 [10 pages; Impact Factor: 3.697 (the best journal in imaging informatics)].
 12. S. V. Aksenov, K. A. Kostin, A. V. Ivanova, J. Liang, and A. V. Zamyatin. An ensemble of convolutional neural networks for the use in video endoscopy. *Modern Technologies in Medicine*, 10(2), 7-17, 2018. DOI: 10.17691/stm2018.10.2.01
 13. J. Bernal, **N. Tajbakhsh**, ... S. Gurudu, ... J. Liang, A. Histace. Comparative Validation of Polyp Detection Methods in Video Colonoscopy: Results from the MICCAI 2015 Endoscopic Vision Challenge. *IEEE Transactions on Medical Imaging*. 36(6):1231-49, 2017. (ASU took the shared first authorship with J. Bernal from Spain and shared the senior authorship with A. Histace from France) (Impact Factor: 10.048 ; the best journal in medical imaging) [12 pages; Impact Factor: 10.048 (the best journal in medical imaging)].
 14. **Y. An**, J. Liang, S. E. Schild, M. Bues, and W. Liu. Robust Treatment Planning with Conditional Value at Risk Chance Constraints in Intensity Modulated Proton Therapy. *Medical Physics*. 44(1):28–36, 2017 [9 pages; Impact Factor: 3.177 (the best journal in medical physics)].
 15. **N. Tajbakhsh, J. Y. Shin**, S. Gurudu, R. T. Hurst, C. B. Kendall, M. B. Gotway, and J. Liang. Convolutional neural networks for medical image analysis: Full training or fine tuning? *IEEE Transactions on Medical Imaging*. 35(5):1299-1312, 2016 [12 pages; Impact Factor: 10.048 (the best journal in medical imaging)].
 16. **N. Tajbakhsh**, S. Gurudu, and J. Liang. Automated polyp detection in colonoscopy videos using shape and context information. *IEEE Transactions on Medical Imaging*. 35(2):630-644, 2016 (Impact Factor: 10.048 ; the best journal in medical imaging)
 17. E. S. Glazer, P. H. Bartels, J. Liang, A. R. Prasad, M. L. Yozwiak, M. Krutzsch, C. Clark, S. Kha, H. G. Bartels, J. G. Einspahr, D. S. Alberts, R. S. Krouse. High proportion of nuclear phenotype identifies aggressive

- cutaneous squamous cell carcinoma. *Analytical and Quantitative Cytology and Histology*. 37(5) 302-10, 2015.
18. R. D. Rudyanto, ... **W. Xue, X. Zhu**, J. Liang, ... B. van Ginneken. Comparing algorithms for automated vessel segmentation in computed tomography scans of the lung: the VESSEL12 study. *Medical Image Analysis*. 18(7):1217-32, 2014. (Impact Factor: 11.148; the best journal in medical image analysis)
 19. **N. Tajbakhsh, W. Xue, H. Wu**, E. M. McMahon, M. Belohlavek, and J. Liang. Motion analysis of right ventricular dysfunction under mild and moderate pressure overload caused by acute pulmonary embolism. *Ultrasound in medicine and biology*. 39(11):2066-74, 2013. (Impact Factor: 2.514)
 20. **N. Tajbakhsh, H. Wu, W. Xue**, M. Gotway, and J. Liang. A novel online learning approach for automatic anatomy detection. *Machine vision and applications*. 24(7):1359-70, 2013. (Impact Factor: 1.444)
 21. J. Liang, M. B. Gotway, D. Terzopoulos, and H. D. Sostman. Interobserver agreement in the diagnosis of acute pulmonary embolism from computed tomography pulmonary angiography and on the effectiveness of computer-aided diagnosis. *The American journal of emergency medicine*. 29(5):465-467, 2011. (Impact Factor: 1.613)
 22. M. Das, G. Mühlenbruch, A. Helm, A. Bakai, M. Salganicoff, S. Stanzel, J. Liang, M. Wolf, R. W. Günther, and J. E. Wildberger. Computer-aided detection of pulmonary embolism: Influence on radiologists' detection performance with respect to vessel segments. *European Radiology*, 18(7):1350-1355, 2008. (Impact Factor: 4.338)
 23. S. Buhmann, P. Herzog, J. Liang, M. Wolf, M. Salganicoff, C. Kirchhoff, M. Reiser, and C. Becker. Clinical evaluation of a computer-aided diagnosis (CAD) prototype for the detection of pulmonary embolism. *Academic Radiology*, 14(6):651-658, 2007. (Impact Factor: 2.077)
 24. **X. Zou**, J. Liang, M. Wolf, M. Salganicoff, A. Krishnan, and D. Naidich. Anatomy-based automatic detection and segmentation of major vessels in thoracic CTA images. *International Journal of Computer Assisted Radiology and Surgery*, Volume 2, Supplement 1, Pages S68-S70, June 2007. (Impact Factor: 1.659)
 25. J. Liang, T. McInerney, and D. Terzopoulos. United snakes. *Medical Image Analysis*, 10(2):215-233, 2006. (Impact Factor; 5.356; the best journal in medical image analysis)
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Peer-Refereed Conference Full Publications (advisee names in bold)

1. **Mohammad Reza Hosseinzadeh Taher**, Michael B. Gotway, and Jianming Liang. Representing Part-Whole Hierarchies in Foundation Models by Learning Localizability, Composability, and Decomposability from Anatomy via Self-Supervision. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024*. [20 pages with supplementary materials]
2. **Ziyu Zhou, Haozhe Luo, Jiaxuan Pang**, Xiaowei Ding, M. B. Gotway, and J. Liang. Learning Anatomically Consistent Embedding for Chest Radiography. In *Proceedings of the 34th British Machine Vision Conference (BMVC 2023)* [22 pages with supplementary materials] (one of the best conferences in machine vision).
3. **M. R. Hosseinzadeh Taher**, M. B. Gotway, and J. Liang. Towards Foundation Models Learned from Anatomy in Medical Imaging via Self-supervision. In *Proceedings of the 5th MICCAI Workshop on Domain Adaptation and Representation Transfer (DART 2023)* [19 pages with supplementary materials] (the best workshop in representation learning).
4. **D. Ma, J. Pang**, M. B. Gotway, and J. Liang. Foundation Ark: Accruing and Reusing Knowledge for Superior and Robust Performance. In *Proceedings of the 26th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2023)* [17 pages with supplementary materials] (the most prestigious conference in image computing).
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9. **M. R. Hosseinzadeh Taher, F. Haghghi**, M. B. Gotway, and J. Liang. CAiD: A self-supervised Learning Framework for Empowering Instance Discrimination in Medical Imaging. In *Medical Imaging with Deep Learning (MIDL 2022)* [17 pages with supplementary materials] (the best conference in deep learning for medical imaging)].
10. **N. U. Islam, S. Gehlot, Z. Zhou**, M. B. Gotway, and J. Liang. Seeking an Optimal Approach for Computer-Aided Pulmonary Embolism Detection. In *Machine Learning in Medical Imaging*, Springer, 2021 [16 pages with supplementary materials (the best workshop in machine learning for medical image analysis)].
11. **M. R. Hosseinzadeh Taher, F. Haghghi, R. Feng**, M. B. Gotway, and J. Liang. A Systematic Benchmarking Analysis of Transfer Learning for Medical Image Analysis, In *Domain Adaptation and Representation Transfer*, Springer, 2021 [20 pages with supplementary materials (the best workshop in representation

learning)].

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20. **J. Y. Shin, N. Tajbakhsh, R. T. Hurst, C. B. Kendall, and J. Liang.** Automating carotid intima-media thickness video interpretation with convolutional neural networks. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 2526–2535, 2016. [10 pages; H-index: 299 (the top conference in computer vision and pattern recognition)].
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Book Chapters (advisee names in bold)

1. **Zongwei Zhou**, Michael B. Gotway and Jianming Liang. Interpreting Medical Images. *Intelligent Health Systems in Medicine and Health: The Role of AI*. edited by Trevor A. Cohen, Vimla L. Patel and Edward H. Shortliffe, Springer. 2022 [the first textbook in the field].
2. **N. Tajbakhsh, J. Y. Shin**, S. Gurudu, R. T. Hurst, C. B. Kendall, M. B. Gotway, and J. Liang. On the necessity of fine-tuned convolutional neural networks for medical imaging. *Deep Learning and Convolutional Neural Networks for Medical Image Computing: Precision Medicine, High Performance and Large-Scale Datasets*. edited by Le Lu, Yefeng Zheng, Gustavo Carneiro, and Lin Yang. Springer. July 12, 2017 [the second book in deep learning for medical image analysis].
3. **N. Tajbakhsh, J. Y. Shin**, R. T. Hurst, C. B. Kendall, and J. Liang. Automatic interpretation of carotid intima-media thickness videos using convolutional neural networks. *Deep Learning for Medical Image Analysis*. edited by Kevin Zhou, Hayit Greenspan and Dinggang Shen, Academic Press. January 18, 2017 [the first book in deep learning for medical image analysis; the top 5 for chapter usage on Science Direct].
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Conference Abstracts (advisee names in bold)

1. **Z. Zhou**, Z. Akkus, M. S. Warner, M. N. Stan, J. Liang, and B. J. Erickson. A Preliminary Study of Using Machine Learning to Reduce Biopsies of Thyroid Nodules Based on Ultrasound Images. The 2nd SIIM

- Conference on Machine Intelligence in Medical Imaging, September 26–27, 2017 (A top conference on imaging informatics)
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 3. **Z. Zhou**, J. Shin, R. T. Hurst, C. B. Kendall, and J. Liang. Integrating Active Learning and Transfer Learning for Carotid Intima-Media Thickness Video Interpretation. The 2nd SIIM Conference on Machine Intelligence in Medical Imaging, September 26–27, 2017 (A top conference on imaging informatics)
 4. **L. Zhang**, **Z. Zhou**, H. Siddiki, N. S. Madiraju, F. C. Ramirez, S. R. Gurudu, and J. Liang. Approaching Medical Fellow-Level Performance on Colonoscopy Frame Classification with Deep Neural Networks. WP Time, the 82rd Annual Meeting, October 13–18, 2017, Orlando, Florida, USA (the top conference in Gastroenterology).
 5. Michael Meyer, Rahul Katdare, Chris Presley, David Wilbur, David Steinhauer, Jianming Liang, Javier Zulueta, Robert Keith, York Miller, Wilbur Franklin, Grgory Yang, Jon Hayenga, Alan Nelson. Non-Invasive LuCED Test for Endobronchial Dysplasia, Enabling Chemoprevention Therapy with Drugs Such as Iloprost. *Journal of Thoracic Oncology* 12, no. 1 (2017): S342-S343.
 6. H. Siddiki, **L. Zhang**, N. Baffy, J. Liang, F. Ramirez, S. Gurudu. Employing deep neural network computing for determining effective withdrawal time for colonoscopy exams. A feasibility study. WP Time, the 82rd Annual Meeting, October 13–18, 2017, Orlando, Florida, USA (the top conference in Gastroenterology).
 7. H. Siddiki, F. C. Ramirez, M. Temkit, J. Liang, A. Gupta, S. Gurudu. Not All Visual Data Acquired During Withdrawal Phase (WP) of Colonoscopy Is Interpretable: Introducing the Concept of "Effective" WP Time, the 81st Annual Meeting, October 14 - 19, 2016, Las Vegas, Nevada. Received **the Presidential Poster Award**, the American College of Gastroenterology. (the top conference in Gastroenterology).
 8. **J. Shin**, J. Liang, S. Schild, W. Wong and W. Liu. Effective dose-volume-histogram prediction method using euclidean distance volume histogram for volumetric modulated arc therapy to treat prostate cancer. *Medical Physics* 42, 3413 (2015) (AAPM-2015, the top conference in medical physics; published in *Medical Physics* with Impact Factor: 4.592)
 9. **Y. An**, J. Liang, W. Liu. Novel chance constrained optimization in intensity modulated proton therapy planning to account for range and patient setup uncertainties. *Medical Physics* 42, 3467 (2015) (AAPM-2015, the top conference in medical physics; published in *Medical Physics* with Impact Factor: 4.592)

PATENTS (advisee names in bold)

Patents pending developed at ASU

11. **Ziyu Zhou**, **Haozhe Luo**, **Jiaxuan Pang**, **DongAo Ma**, and Jianming Liang. ACE: Anatomically Consistent Embeddings via Composition and Decomposition. (Filed on May 5, 2024 through Skysong Innovations, M24-296L)
12. **Jiaxuan Pang**, **DongAo Ma**, and Jianming Liang. ASA: Learning Anatomical Consistency, Sub-volume Spatial Relationships and Fine-grained Appearance for CT Images. (Filed on March 11, 2024 through Skysong Innovations, M24-213L)
13. **Fatemeh Haghighi** and Jianming Liang. David: Disentangling Anatomical Visual Information from Diseases for Learning Entangled Representation (Filed on March 11, 2024 through Skysong Innovations, M24-212L)
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- I30. **Zongwei Zhou** and Jianming Liang. *Towards Annotation-Efficient Deep Learning in Computer-Aided Diagnosis*. (Filed on April 8, 2021 through Skysong Innovations, M21-229L)
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- I32. **F. Haghighi, M. R. Hosseinzadeh Taher, Z. Zhou**, and Jianming Liang. *Transferable Visual Words: Exploiting the Semantics of Anatomical Patterns for Self-supervised Learning*. (Filed on February 19, 2021 through Skysong Innovations, M21-170L).
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- I41. **Zongwei Zhou, Vatsal Sodha, M. M. Rahman Siddiquee, Ruibin Feng, Nima Tajbakhsh**, and Jianming Liang. *Models Genesis: Generic Autodidactic Models for 3D Medical Image Analysis*. (Filed on April 10, 2019 through Skysong Innovations, M19-252LC)
- I42. **Zongwei Zhou, Jaeyul Shin**, and Jianming Liang. AFT*: Active Fine Tuning of Convolutional Neural Networks for Reducing Annotation Efforts. (Filed on February 20, 2019 through Skysong Innovations, M19-194L) [Awarded]
- I43. **Zongwei Zhou, M. M. Rahman Siddiquee, Nima Tajbakhsh**, and Jianming Liang. UNet++: Redesigning Skip Connections to Exploit Multiscale Features in Image Segmentation (Filed on February 19, 2019 through Skysong Innovations, M19-189LC) [Awarded]
- I44. **M. M. Rahman Siddiquee, Zongwei Zhou, Ruibin Feng, Nima Tajbakhsh**, and Jianming Liang. *Learning Fixed Points in Generative Adversarial Networks: From Image-to-Image Translation to Disease Detection and Localization*. (Filed on November 23, 2018 through Skysong Innovations, M19-117L) [Awarded]
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PUBLICLY RELEASED SOFTWARE

1. Large-scale Benchmarking and Boosting Transfer Learning for Medical Image Analysis (<https://github.com/JLiangLab/BenchmarkTransferLearning>, Version 2), 2024
2. Learning Anatomically Consistent Embedding for Chest Radiography (<https://github.com/JLiangLab/PEAC>), 2023
3. Training foundation models by accruing and reusing knowledge from heterogeneous expert annotations (<https://github.com/JLiangLab/Ark>), 2023
4. Learning foundation models from anatomy in medical imaging via self-supervision (<https://github.com/JLiangLab/Eden>), 2023
5. Achieving discriminative, restorative, and adversarial learning via stepwise incremental pretraining (<https://github.com/JLiangLab/StepwisePretraining>), 2022 (v1) and 2023 (v2)
6. Benchmarking and boosting transformers for medical image classification (<https://github.com/JLiangLab/BenchmarkTransformers>), 2022
7. Restoring patch order and appearance for self-supervised medical image analysis (<https://github.com/JLiangLab/POPAR>), 2022
8. Developing context-aware instance discrimination for self-supervised framework (<https://github.com/JLiangLab/CAiD>), 2022
9. Uniting discriminative, restorative, and adversarial learning for self-supervised medical image analysis (<https://github.com/JLiangLab/DiRA>), 2022 (v1) and 2023 (v2)
10. Benchmarking transfer learning for medical imaging (<https://github.com/JLiangLab/BenchmarkTransferLearning>), 2021
11. Evaluating and optimizing deep learning methods for computer-aided diagnosis of pulmonary embolism (https://github.com/jlianglab/CAD_PE), 2021 (v1) and 2023 (v2)
12. Exploiting the semantics of anatomical patterns for self-supervised learning (<https://github.com/JLiangLab/TransVW>), 2021
(<https://github.com/JLiangLab/SemanticGenesis>), 2020
13. Building a primary source of transfer learning for 3D medical imaging applications (<https://github.com/JLiangLab/ModelsGenesis>), 2019 (v1) and 2020 (v2)
14. Learning fixed points in generative adversarial networks (<https://github.com/JLiangLab/Fixed-Point-GAN>), 2019
15. Advancing deep architectures for medical image segmentation (<https://github.com/JLiangLab/UNetplusplus>), 2018 (v1) and 2019 (v2)

SERVICE ON JOURNALS

- Associate Editor for *Medical Image Analysis* (Impact Factor: 11.148; the best journal in medical image analysis), since 2021
- Guest Editor for *Frontiers in Computer Science* Special Issue on Segmentation and classification: theories, algorithms and applications 2021-2024
- Guest Editor/Associate Editor for the *IEEE Transactions on Medical Imaging* Special Issue on Annotation-

Efficient Deep Learning for Medical Imaging (Impact Factor: 10.048 ; the best journal in image imaging), 2020-2021

- Associate Editor in the *Medical Physics and Imaging* section for *Frontiers in Physics* and *Frontiers in Physiology* (the two Frontiers journals covering imaging), since 2022
- Editor Board Member of *Bioengineering* (a top journal in biomedical engineering), since 2022
- Guest Editor of a *Journal of Imaging* Special Issue on Imaging Informatics: Computer-aided Diagnosis (a top journal in biomedical imaging), since 2022

SERVICE ON CONFERENCE PROGRAM COMMITTEES

- Area Chair, *Medical Image Computing and Computer Assisted Interventions (MICCAI 2024)*, 6-10 October 2024, Marrakesh, Morocco (the top conference in my research field)
- Area Chair, *International Conference on Medical Imaging with Deep Learning (MIDL 2024)*, July 3-5, 2024, Paris, France
- Area Chair, *Medical Image Computing and Computer Assisted Interventions (MICCAI 2023)*, October 8 – 12 2023 Vancouver, Canada (the top conference in my research field)
- Area Chair, *the International Conference on Medical Imaging with Deep Learning (MIDL 2023)*, July 10-12, 2023, Nashville, Tennessee (the recently established conference in my research area)
- General Chair of Workshop/Tutorial/Challenge, *Medical Image Computing and Computer Assisted Interventions (MICCAI 2022)*, September 18 – 22 2022, Singapore (the top conference in my research field)
- Area Chair, *Medical Image Computing and Computer Assisted Interventions (MICCAI 2022)*, September 18 – 22 2022, Singapore (the top conference in my research field)
- Area Chair, *the International Conference on Medical Imaging with Deep Learning (MIDL 2022)*, July 6 – 8, 2022, Zurich, Switzerland (the recently established conference in my research area)
- Program Committee Member, *MICCAI Workshop on Domain Adaptation and Representation Transfer (DART 2021)*, Strasbourg, France (the top workshop in my research field)
- Program Committee Member, *MICCAI Workshop on Domain Adaptation and Representation Transfer (DART 2020)*, Lima, Peru (the top workshop in my research field)
- Oral Session Chair for *the 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI-2020)*, Lima, Peru (the top conference in my research field)
- Program Area Chair for *the 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI-2020)*, Lima, Peru (the top conference in my research field)
- Program Committee Member, *MICCAI Workshop on Domain Adaptation and Representation Transfer (DART 2019)*. October 13, 2019. Shenzheng, China
- Program Committee Member, *The 4th workshop on Deep Learning in Medical Image Analysis (DLMIA 2018)*. September 16–20 2018, Granada, Spain.
- Program Committee Member, *The 3th workshop on Deep Learning in Medical Image Analysis (DLMIA 2017)*. September 10–14, 2017, Quebec City, Quebec, Canada.
- Program Committee Member, *The Tenth International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)*, October 17–21, 2016, Athens, Greece.
- Program Committee Member, *The 2rd workshop on Deep Learning in Medical Image Analysis (DLMIA 2016)*. October 17–21, 2016, Athens, Greece.
- Program Committee Member, *The first workshop on Deep Learning in Medical Image Analysis (DLMIA 2015)*. October 5-9, 2015, Munich, Germany
- Program Committee Member, *The Ninth International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)*, October 5-9, 2015, Munich, Germany
- Organizer, *Endoscopic Vision Challenge: Automatic Polyp Detection in Colonoscopy Videos (EndoVis*

- Polyp 2015*), Medical Image Computing and Computer Assisted Intervention, October 9, 2015, Munich, Germany
- Program Committee Member, *The 6th International Workshop on Machine Learning in Medical Imaging (MLMI 2015)*, October 5, 2015, Munich, Germany
 - Program Committee Member, *The Eighth International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)*, October 5, 2015, Munich, Germany
 - Program Committee Member, The 8th International Conference on Image and Graphics (ICIG 2015), August 13-16, 2015, Tianjin, China.
 - Organizer, *The Automatic Polyp Detection Challenge in Colonoscopy Videos (Polyp 2015)*, The 2015 IEEE International Symposium on Biomedical Imaging, April 16-19, 2015, New York, New York, USA
 - Program Committee Member, *The 5th International Workshop on Machine Learning in Medical Imaging (MLMI 2014)*, September 14, 2013, Boston, MA, USA
 - Program Committee Member, *The Seventh International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)*, September 14, 2014, Boston, MA, USA
 - Program Committee Member, *The 4th International Workshop on Machine Learning in Medical Imaging (MLMI 2013)*, September 26, 2013, Nagoya, Japan
 - Program Committee Member, *The Sixth International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)*, September 22, 2013, Nagoya, Japan
 - Program Committee Member, *The 3rd International Workshop on Machine Learning in Medical Imaging (MLMI 2012)*, October 1, 2012, Nice, France
 - Program Committee Member, *The First Workshop on Medical Computer Vision at CVPR 2012 (CVPRMCV)*, June 21 2012, Providence, RI, USA
 - Program Committee Member, *The 3rd International Conference on Biomedical Engineering and Informatics (BMEI 2010)*, 16-18 October 2010, Yantai, China
 - Local Organizer, *The 5th International Symposium on Biomedical Simulation (ISBMS10)*, January 23–24, 2010, Phoenix, Arizona, USA
 - Program Committee Member, *The Nineteenth Annual Workshop on Information Technologies and Systems (WITS'09)*, 14-15 December 2009, Phoenix, Arizona, USA
 - Program Committee Member, *The Second International Conference on Computer Vision Theory and Applications (VISAPP)*, March 2007, Barcelona, Spain
 - Program Committee Member, *The First International Conference on Computer Vision Theory and Applications (VISAPP)*, February 2006, Setal, Portugal

TEACHING AT ASU

- Image Processing and Analysis (BMI 507 70179), Fall 2024
- Image Processing and Analysis (BME 507 72128), Fall 2024
- Image Processing and Analysis (CSE 507 81888), Fall 2024
- Image Processing and Analysis (CEN 507 81887), Fall 2024
- Image Processing and Analysis (CSE 494 88016), Fall 2024
- Topic: Imaging Informatics & Diagnostics (BMI 598 81496), Fall 2024
- Topic: Imaging Informatics & Diagnostics (BMI 598 81497), Fall 2024
- Image Analytics and Informatics (BMI 591 19791), Spring 2024
- Image Analytics and Informatics (CSE 591 19879), Spring 2024
- Image Analytics and Informatics (BME 598 20887), Spring 2024
- Topic: Imaging in Diagnostics (BMI 598 96882), Fall 2023

- Topic: Imaging in Diagnostics (BMI 598 96883), Fall 2023
- Introduction to Image Processing (BMI 507 81280), Fall 2023
- Introduction to Image Processing (BME 507 83535), Fall 2023
- Introduction to Image Processing (CSE 507 97386), Fall 2023
- Introduction to Image Processing (CEN 507 97385), Fall 2023
- Image Analytics and Informatics (BMI 591 20982), Spring 2023
- Image Analytics and Informatics (CSE 591 21078), Spring 2023
- Image Analytics and Informatics (BME 598 22377), Spring 2023
- Topic: Imaging in Diagnostics (BMI 598 18144), Spring 2023
- Topic: Imaging in Diagnostics (BMI 598 19003), Spring 2023
- Introduction to Image Processing (BMI 507 82791), Fall 2022
- Introduction to Image Processing (BME 507 85640), Fall 2022
- Introduction to Image Processing (CSE 591 98193), Fall 2022
- Image Analytics and Informatics (BMI 591 22526), Spring 2022
- Image Analytics and Informatics (CSE 591 22638), Spring 2022
- Image Analytics and Informatics (BME 598 24345), Spring 2022
- Topic: Imaging in Diagnostics (BMI 598 19063), Spring 2022
- Topic: Imaging in Diagnostics (BMI 598 20094), Spring 2022
- Introduction to Image Processing (BMI 507 84762), Fall 2021
- Introduction to Image Processing (BME 507 88575), Fall 2021
- Image Analytics and Informatics (BMI 591 24460), Spring 2021
- Image Analytics and Informatics (CSE 591 24612), Spring 2021
- Image Analytics and Informatics (MBE 598 27193), Spring 2021
- Topic: Imaging in Diagnostics (BMI 598 21321), Spring 2021
- Topic: Imaging in Diagnostics (BMI 598 20105), Spring 2021
- Introduction to Image Processing (BMI 507 88054), Fall 2020
- Introduction to Image Processing (BME 507 94182), Fall 2020
- Image Analytics and Informatics (BMI 591 27674), Spring 2020
- Image Analytics and Informatics (CSE 591 27953), Spring 2020
- Image Analytics and Informatics (MBE 598 31834), Spring 2020
- Topic: Imaging in Diagnostics (BMI 598 21367), Spring 2020
- Topic: Imaging in Diagnostics (BMI 598 22909), Spring 2020
- Introduction to Image Processing (BMI 507 92215), Fall 2019
- Introduction to Image Processing (CSE 591 94240), Fall 2019
- Topic: Imaging in Diagnostics (BMI 598 25510), Spring 2019
- Topic: Imaging in Diagnostics (BMI 598 23168), Spring 2019
- Image Analytics and Informatics (BMI 591 32594), Spring 2019
- Introduction to Image Processing (BMI 507 32593), Spring 2019
- Image Analytics and Informatics (CSE 591 32919), Spring 2019
- Introduction to Image Processing (CSE 591 32918), Spring 2019

[Note: Relieved from teaching for research in Fall 2018]

[Note: On Sabbatical, Fall 2017 and Spring 2018]

- Image Analytics and Informatics (BMI 591 14460), Spring 2017
- Image Analytics and Informatics (CSE 591 25903), Spring 2017
- Topic: Imaging in Diagnostics (BMI 598 31122), Spring 2017
- Topic: Imaging in Diagnostics (BMI 598 31059), Spring 2017
- Reading and Conference (BMI 790 21436), Spring 2017
- Introduction to Image Processing (BMI 507 76475), Fall 2016
- Introduction to Image Processing (CSE 591 85857), Fall 2016
- Image Analytics and Informatics (BMI 591 15024), Spring 2016
- Image Analytics and Informatics (CSE 591 31186), Spring 2016
- Introduction to Public Health and Imaging Informatics (BMI 102 86698), Fall 2015
- Introduction to Image Processing (BMI 507 77156), Fall 2015
- Introduction to Image Processing (CSE 591 91754), Fall 2015
- Image Analytics and Informatics (BMI 591 15560), Spring 2015
- Image Analytics and Informatics (CSE 591 16826), Spring 2015
- Introduction to Image Processing (BMI 507 78750), Fall 2014
- Introduction to Image Processing (CSE 591 83226), Fall 2014
- Image Analytics and Informatics (BMI 591 16944), Spring 2014
- Image Analytics and Informatics (CSE 591 18893), Spring 2014
- Introduction to Image Processing (BMI 507 81230), Fall 2013
- Introduction to Image Processing (CSE 591 82590), Fall 2013
- Image Analytics and Informatics (BMI 591 18522), Spring 2013
- Image Analytics and Informatics (CSE 591 27712), Spring 2013
- Introduction to Image Processing (BMI 507 85960), Fall 2012
- Introduction to Image Processing (CSE 591 87162), Fall 2012
- Introduction to Biomedical Informatics (BMI 501 77563), Fall 2012
- Advanced Algorithms in Medical Imaging (BMI 591 22045), Spring 2012
- Introduction to Biomedical Informatics (BMI 501 79276), Fall 2011
- Biomedical Imaging Informatics (BMI 591 23228), Spring 2011
- Introduction to Digital Image Processing (BMI 591 83435), Fall 2010
- Introduction to Biomedical Informatics (BMI 501 83431), Fall 2010
- BMI Symposium (BMI 570) Spring 2010
- Introduction to Digital Image Processing (BMI 591 89276), Fall 2009
- BMI Symposium (BMI 570) Fall 2009
- Informatics in Biomedical Imaging (BMI 591 27114), Spring 2009
- Guest lecture for BMI 501 (Fall, 2009; Fall, 2010; Fall, 2013)
- Guest lectures for BMI 502 (Fall, 2009)
- Guest lecture for BME 591 (Fall 2009; Fall 2010)

TEACHING AT UA College of Medicine

- Informatics in Biomedical Imaging, part of Neurological Sciences Block, Fall, 2010
- Informatics in Biomedical Imaging, part of Neurological Sciences Block, Fall, 2009
- Informatics in Biomedical Imaging, part of Neurological Sciences Block, Spring, 2009

INTERNAL SERVICE ROLES

- Research Faculty Search Committee (Committee Chair), 2023–2024
- College Ad Hoc Annual Review: Tenure/Tenure Track, 2023–2024
- College Faculty Awards Committee, 2023–2024
- College Scholarly Activity Funds, 2021–2024
- College Research Council, 2023–2024
- BMI Academic Program Committee, 2023–2024
- University Intellectual Property and Institutional Review Committee, 2023–2024
- College Personnel Committee, 2022–2023
- College Ad Hoc Annual Review: Tenure/Tenure Track, 2022–2023
- College Faculty Awards Committee, 2022–2023
- College Scholarly Activity Funds, 2021–2024
- College Research Council, 2022–2023
- BMI Academic Program Committee, 2022–2023
- University Intellectual Property and Institutional Review Committee, 2022–2023
- Ad Hoc Annual Review: Tenure/Tenure Track, 2021–2022
- BMI Academic Program Committee, 2021–2022
- BMI Associate/Full Professor Search Committee, 2021–2022
- College Faculty Awards Committee, 2021–2022 (Committee Chair)
- College Scholarly Activity Funds, 2021–2024
- Ad Hoc Annual Review: Tenure/Tenure Track, 2020–2021
- BMD Lecturer Search Committee, 2020–2021
- BMI Academic Program Committee, 2020–2021
- BMI Associate/Full Professor Search Committee, 2020–2021
- BMI Space Committee, 2020–2021 (Committee Chair)
- College Faculty Award Committee, 2020–2021
- Peer Teaching Evaluation Committee, 2020–2021
- Transnational Teams Committee, 2020–2021
- Ad Hoc Annual Review: Tenure/Tenure Track, 2019–2020
- BMI Academic Program Committee, 2019–2020
- BMI Admission Committee, 2019–2020 (Committee Chair)
- College Faculty Award Committee, 2019–2020
- College Faculty Hiring Committee, 2019–2020 (Committee Chair)
- Transnational Teams Committee, 2019–2020
- Vice Dean Search Committee, 2019–2020
- Workload Distribution Committee, 2019–2020
- BMI Admission Committee, 2018–2019
- College Committee on Committees, 2018–2019
- College Faculty Award Committee, 2018–2019
- College Faculty Hiring Committee, 2018–2019 (Committee Chair)
- University Senate, 2018–2019
- University Senate - Personnel Committee, 2018–2019

[Note: On Sabbatical, Fall 2017 and Spring 2018]

- Faculty Recruitment Committee, 2016–2017
- CHS Committee on Committees, 2016–2017
- University Senate, 2013–2016
- Academic Program Committee, 2010–2016
- Faculty Recruitment Committee, 2010-2014 (Committee Chair, 2014)
- Student Admission Committee, 2009-2010
- Space Committee, 2010-2011
- Coordinator for the BMI Colloquium, 2009-2010