Stanford



Zi Yang

Clinical Assistant Professor, Radiation Oncology - Radiation Physics

Bio

BIO

Dr. Zi Yang is a Clinical Assistant Professor and an American Board of Radiology–certified medical physicist in the Department of Radiation Oncology at Stanford University. She completed her CAMPEP-accredited residency in Therapeutic Medical Physics at Stanford. Dr. Yang earned her M.S. in Medical Physics from Duke University and her Ph.D. in Biomedical Engineering - Medical Physics track from the University of Texas Southwestern Medical Center.

Her research focuses on the development and clinical translation of artificial intelligence methods to enhance radiation therapy, including applications in target segmentation, outcome prediction, and workflow optimization. She is a recipient of the American Association of Physicists in Medicine (AAPM) Research Seed Funding Grant.

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Radiation Oncology - Radiation Physics

ADMINISTRATIVE APPOINTMENTS

- Chief Resident, Stanford University, (2024-2025)

HONORS AND AWARDS

- Medical Physics Impact Award, Stanford University (2025)
- Basic/Translational Science Award, American Society for Radiation Oncology (ASTRO) (2024)
- Associate of AAPM Science Council Associates Mentorship Program (SCAMP), AAPM (2024)
- Expanding Horizons Travel Grant, AAPM (2024)
- 1st Place of Young Investigator Symposium, Northern California Chapter of AAPM (2024)
- Research Seed Funding Grant Award, AAPM (2023)
- Best in Physics, AAPM (2023)
- Best Award Fellowship, AAPM (2023)
- Best Poster Award, Southwest Chapter of AAPM (2022)
- Best Poster Award, Southwest Chapter of AAPM (2021)
- Best in Physics, American Association of Physicists in Medicine (AAPM) (2019)
- Thesis Research Scholarship, Duke University (2017)
- Medical Physics Scholarship, Duke University (2016-2018)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Society for Radiation Oncology (ASTRO) (2020 - present)
- Member, American Association of Physicists in Medicine (AAPM) (2018 - present)

PROFESSIONAL EDUCATION

- Board Certification, American Board of Radiology , Therapeutic Medical Physics (2026)
- Residency, Stanford University , Medical Physics (2025)
- Ph.D, University of Texas Southwestern Medical Center , Biomedical Engineering - Medical Physics (2023)
- M.S., Duke University , Medical Physics (2018)
- B.S., Xi'an Jiaotong University , Biomedical Engineering (2016)

Teaching

COURSES

2026-27

- Experiential Learning in Medical Physics: BMP 257, RADO 257 (Spr)
- Physics of Radiation Therapy: BMP 252, RADO 252 (Win)

2025-26

- Experiential Learning in Medical Physics: BMP 257, RADO 257 (Spr)

Publications

PUBLICATIONS

- **DATA-DRIVEN AI PREDICTION OF SUPPLEMENTAL INTERSTITIAL NEEDLE NEED AND POSITIONING IN HYBRID CERVIX BRACHYTHERAPY**
  Yang, Z., Niedermayr, T., Dai, X., Kidd, E.
  ELSEVIER.2026: 31-32
- **A universal framework for IMRT dose prediction.** *Medical physics*
  Wang, Q., Chen, M., Zhu, Y., Kazemimoghadam, M., Zhang, K., Yang, Z., Jiang, H., Gu, X., Lu, W.
  2026; 53 (3): e70384
- **The Spinning Manny Indexed Overlay System for VMAT total body irradiation.** *Journal of applied clinical medical physics*
  Skinner, L., Simiele, E., Yang, Z., Hui, C., Romero, I., Binkley, M., Hoppe, R., Hiniker, S. M., Kovalchuk, N.
  2026; 27 (1): e70350
- **Automated contouring, treatment planning, and quality assurance for total marrow lymphoid irradiation** *FRONTIERS IN ONCOLOGY*
  Simiele, E., Hui, C., Romero, I., Yang, Z., Skinner, L., Xing, L., Ross, J. B., Hoppe, R. T., Binkley, M. S., Hiniker, S. M., Kovalchuk, N.
  2025; 15
- **Radiotherapy dose prediction using off-the-shelf segmentation networks: A feasibility study with GammaPod planning.** *Medical physics*
  Wang, Q., Chen, M., Kazemimoghadam, M., Yang, Z., Zhang, K., Gu, X., Lu, W.
  2025
- **A global perspective in contemporary medical physics** *CHINESE SCIENCE BULLETIN-CHINESE*
  Ching, J., Zeng, Z., Yang, Z., Zhou, D., Cheung, A., Lee, S., Cai, J.
  2025; 70 (33): 5663-5674
- **Deep learning-based overall survival prediction in patients with glioblastoma: An automatic end-to-end workflow using pre-resection basic structural multiparametric MRIs.** *Computers in biology and medicine*
  Yang, Z., Zamarud, A., Marianayagam, N. J., Park, D. J., Yener, U., Soltys, S. G., Chang, S. D., Meola, A., Jiang, H., Lu, W., Gu, X.

2024; 185: 109436

- **Exploring deep learning for estimating the isoeffective dose of FLASH irradiation from mouse intestinal histology images.** *International journal of radiation oncology, biology, physics*
  Fu, J., Yang, Z., Melemenidis, S., Viswanathan, V., Dutt, S., Manjappa, R., Lau, B., Soto, L. A., Ashraf, R., Skinner, L., Yu, S. J., Surucu, M., Casey, et al
  2024
- **Leveraging global binary masks for structure segmentation in medical images.** *Physics in medicine and biology*
  Kazemimoghadam, M., Yang, Z., Chen, M., Ma, L., Lu, W., Gu, X.
  2023
- **A deep learning approach for automatic delineation of clinical target volume in stereotactic partial breast irradiation (S-PBI).** *Physics in medicine and biology*
  Kazemimoghadam, M., Yang, Z., Chen, M., Rahimi, A., Kim, N., Alluri, P., Nwachukwu, C., Lu, W., Gu, X.
  2023
- **Ensemble learning for glioma patients overall survival prediction using pre-operative MRIs.** *Physics in medicine and biology*
  Yang, Z., Chen, M., Kazemimoghadam, M., Ma, L., Stojadinovic, S., Wardak, Z., Timmerman, R. D., Dan, T., Lu, W., Gu, X.
  2022
- **Deep-learning and radiomics ensemble classifier for false positive reduction in brain metastases segmentation.** *Physics in medicine and biology*
  Yang, Z., Chen, M., Kazemimoghadam, M., Ma, L., Stojadinovic, S., Timmerman, R. D., Dan, T., Wardak, Z., Lu, W., Gu, X.
  1800
- **Dose kernel decomposition for spot-based radiotherapy treatment planning.** *Medical physics*
  Chen, M., Yang, Z., Wardak, Z., Stojadinovic, S., Gu, X., Lu, W.
  1800
- **Robustness study of noisy annotation in deep learning based medical image segmentation** *PHYSICS IN MEDICINE AND BIOLOGY*
  Yu, S., Chen, M., Zhang, E., Wu, J., Yu, H., Yang, Z., Ma, L., Gu, X., Lu, W.
  2020; 65 (17): 175007
- **A web-based brain metastases segmentation and labeling platform for stereotactic radiosurgery** *MEDICAL PHYSICS*
  Yang, Z., Liu, H., Liu, Y., Stojadinovic, S., Timmerman, R., Nedzi, L., Dan, T., Wardak, Z., Lu, W., Gu, X.
  2020; 47 (8): 3263–76
- **Motion robust 4D-MRI sorting based on anatomic feature matching: A digital phantom simulation study.** *Radiation medicine and protection*
  Yang, Z., Ren, L., Yin, F. F., Liang, X., Cai, J.
  2020; 1 (1): 41-47
- **Predicting real-time 3D deformation field maps (DFM) based on volumetric cine MRI (VC-MRI) and artificial neural networks for on-board 4D target tracking: a feasibility study** *PHYSICS IN MEDICINE AND BIOLOGY*
  Pham, J., Harris, W., Sun, W., Yang, Z., Yin, F., Ren, L.
  2019; 64 (16): 165016
- **The influence of unilateral contraction of hand muscles on the contralateral corticomuscular coherence during bimanual motor tasks** *NEUROPSYCHOLOGIA*
  Zheng, Y., Gao, L., Wang, G., Wang, Y., Yang, Z., Wang, X., Li, T., Dang, C., Zhu, R., Wang, J.
  2016; 85: 199-207