

Stanford



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Bio

ACADEMIC APPOINTMENTS

- Clinical Professor, Radiation Oncology - Radiation Physics

Publications

PUBLICATIONS

- **Pareto Optimal Projection Search (POPS): Automated Radiation Therapy Treatment Planning by Direct Search of the Pareto Surface** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
Huang, C., Yang, Y., Panjwani, N., Boyd, S., Xing, L.
2021; 68 (10): 2907-2917
- **Deep learning-augmented radioluminescence imaging for radiotherapy dose verification.** *Medical physics*
Jia, M., Yang, Y., Wu, Y., Li, X., Xing, L., Wang, L.
2021
- **Fully automated noncoplanar radiation therapy treatment planning.** *Medical physics*
Huang, C., Yang, Y., Xing, L.
2021
- **Deep learning-enabled EPID-based 3D dosimetry for dose verification of step-and-shoot radiotherapy.** *Medical physics*
Jia, M., Wu, Y., Yang, Y., Wang, L., Chuang, C., Han, B., Xing, L.
2021
- **Independent verification of brachytherapy treatment plan by using deep learning inference modeling.** *Physics in medicine and biology*
Fan, J., Xing, L., Yang, Y.
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- **Deep learning-augmented radiotherapy visualization with a cylindrical radioluminescence system.** *Physics in medicine and biology*
Jia, M., Li, X., Wu, Y., Yang, Y., Kasimbeg, P., Skinner, L. B., Wang, L., Xing, L.
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- **Automated multi-parameter high-dose-rate brachytherapy quality assurance via radioluminescence imaging.** *Physics in medicine and biology*
Jia, M., Kim, T. J., Yang, Y., Xing, L., Jean, P. D., Grafil, E., Jenkins, C. H., Fahimian, B. P.
2020; 65 (22): 225005
- **Data-driven dose calculation algorithm based on deep U-Net.** *Physics in medicine and biology*
Fan, J. n., Xing, L. n., Dong, P. n., Wang, J. n., Hu, W. n., Yang, Y. n.
2020
- **Verification of the machine delivery parameters of treatment plan via deep learning.** *Physics in medicine and biology*
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- **Beam data modeling of linear accelerators (linacs) through machine learning and its potential applications in fast and robust linac commissioning and quality assurance.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*

Zhao, W. n., Patil, I. n., Han, B. n., Yang, Y. n., Xing, L. n., Schüler, E. n.

2020

- **Incorporating imaging information from deep neural network layers into image guided radiation therapy (IGRT).** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*

Zhao, W., Han, B., Yang, Y., Buyyounouski, M., Hancock, S. L., Bagshaw, H., Xing, L.

2019; 140: 167–74

- **Incorporating dosimetric features into the prediction of 3D VMAT dose distributions using deep convolutional neural network** *PHYSICS IN MEDICINE AND BIOLOGY*

Ma, M., Kovalchuk, N., Buyyounouski, M. K., Xing, L., Yang, Y.

2019; 64 (12)

- **Dose Distribution Prediction in Isodose Feature-Preserving Voxelize Domain Using Deep Convolutional Neural Network.** *Medical physics*

Ma, M., Buyyounouski, M. K., Vasudevan, V., Xing, L., Yang, Y.

2019

- **Incorporating dosimetric features into the prediction of 3D VMAT dose distributions using deep convolutional neural network.** *Physics in medicine and biology*

Ma, M., Kovalchuk, N., Buyyounouski, M. K., Xing, L., Yang, Y.

2019

- **Dosimetric features-driven machine learning model for DVH prediction in VMAT treatment planning** *MEDICAL PHYSICS*

Ma, M., Kovalchuk, N., Buyyounouski, M. K., Xing, L., Yang, Y.

2019; 46 (2): 857–67

- **Markerless pancreatic tumor target localization enabled by deep learning.** *International journal of radiation oncology, biology, physics*

Zhao, W. n., Shen, L. n., Han, B. n., Yang, Y. n., Cheng, K. n., Toesca, D. A., Koong, A. C., Chang, D. T., Xing, L. n.

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- **Automatic marker-free target positioning and tracking for image-guided radiotherapy and interventions**

Zhao, W., Shen, L., Wu, Y., Han, B., Yang, Y., Xing, L., Fei, B., Linte, C. A.

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- **Optimizing efficiency and safety in external beam radiotherapy using automated plan check (APC) tool and six sigma methodology.** *Journal of applied clinical medical physics*

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- **Factor 10 Expedience of Monthly Linac Quality Assurance via an Ion Chamber Array and Automation Scripts.** *Technology in cancer research & treatment*

Skinner, L. B., Yang, Y., Hsu, A., Xing, L., Yu, A. S., Niedermayr, T.

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- **Feasibility of optimizing intensity-modulated radiation therapy plans based on measured mucosal dose adjacent to dental fillings and toxicity outcomes** *JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS*

Seol, S., Aggarwal, S., von Eyben, R., Wang, Z., Chan, C., Say, C., Xing, L., Hara, W., Yang, Y., Quynh Thu Le

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Huang, P., Yu, G., Kapp, D. S., Bian, X., Ma, C., Li, H., Chen, J., Liang, Y., Zhang, Y., Qin, S., Xie, Y., Yang, Y., Yin, et al

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- **A unified material decomposition framework for quantitative dual- and triple-energy CT imaging.** *Medical physics*
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- **Automating quality assurance of digital linear accelerators using a radioluminescent phosphor coated phantom and optical imaging.** *Physics in medicine and biology*
Jenkins, C. H., Naczynski, D. J., Yu, S. S., Yang, Y., Xing, L.
2016; 61 (17): L29-37
- **Evaluation of on-board kV cone beam CT (CBCT)-based dose calculation** *PHYSICS IN MEDICINE AND BIOLOGY*
Yang, Y., Schreibmann, E., Li, T., Wang, C., Xing, L.
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- **Four-dimensional cone-beam computed tomography using an on-board imager** *MEDICAL PHYSICS*
Li, T., Xing, L., Munro, P., McGuinness, C., Chao, M., Yang, Y., Loo, B., Koong, A.
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- **Overview of image-guided radiation therapy** *MEDICAL DOSIMETRY*
Xing, L., Thorndyke, B., Schreibmann, E., Yang, Y., Li, T., Kim, G., Luxton, G., Koong, A.
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- **Measurement of ionizing radiation using carbon nanotube field effect transistor** *PHYSICS IN MEDICINE AND BIOLOGY*
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- **Inverse treatment planning with adaptively evolving voxel-dependent penalty scheme** *MEDICAL PHYSICS*
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- **Quantitative measurement of MLC leaf displacements using an electronic portal image device** *45th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*
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- **Incorporating leaf transmission and head scatter corrections into step-and-shoot leaf sequences for IMRT** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
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