

PUBLICATIONS (h-index: 54, Google Scholar: scholar.google.com/citations?user=qY6pzKoAAAAJ)

• **Book**

1. “Applications of GPU-based High Performance Computing in Radiation Therapy,” edited by **Xun Jia**, and Steve B. Jiang. Published in 2015 by Taylor & Francis Group/CRC Press. ISBN 9781482244786.

• **Book chapters**

1. Dan Nguyen, Chenyang Shen, **Xun Jia**, Steve Jiang, “Reinforcement learning for radiation therapy planning and image processing,” in “Artificial Intelligence in Radiation Oncology and Biomedical Physics,” edited by Gilmer Valdes and Lei Xing. Published in 2023 by CRC press. ISBN 9781000903751.
2. You Zhang, Jing Wang, **Xun Jia**, “Uncertainties of IGRT for Abdominal Cancer Radiotherapy,” in “Principles and Practice of Image-Guided Abdominal Radiation Therapy,” edited by Yu Kuang. Published in 2022 by Institute of Physics Publishing. ISBN 9780750324663.
3. Youfang Lai, Sami Hissoiny, **Xun Jia**, “GPU-based Fast Monte Carlo Simulation for Radiotherapy Dose Calculation,” in “Monte Carlo Applications in Radiation Therapy,” 2nd edition, edited by Joao Seco, and Frank Verhaegen. Published in 2021 by CRC Press. ISBN 1032079932.
4. Omer Burnett, **Xun Jia**, Elizabeth Kidd, Ann Klopp, “Intensity Modulated Radiation Therapy and Volumetric Modulated Arc Therapy,” in “Radiation Therapy Techniques for Gynecological Cancers: A comprehensive approach,” edited by Kevin Albuquerque, Sushil Beriwal, Beth Erickson, Akila Viswanathan. Published in 2019 by Springer. ISBN 9783030014438.
5. Asa Carlsson Tedgren, **Xun Jia**, Alexandr Malusek, Manuel Sanchez-Garcia, “Advanced method in brachytherapy dose calculations,” in “Emerging Technologies in Brachytherapy,” edited by William Song, Kari Tanderup, Bradley Pieters. Published in 2017 by Taylor & Francis Group/CRC Press. ISBN 9781498736527.
6. **Xun Jia**, Sami Hissoiny, and Steve B. Jiang, “GPU-based Fast Monte Carlo Simulation for Radiotherapy Dose Calculation,” in “Monte Carlo Applications in Radiation Therapy,” edited by Joao Seco, and Frank Verhaegen. Published in 2013 by Taylor & Francis Group/CRC Press. ISBN 9781466507920.

• **Review Articles**

1. William Song, Luc Beaulieu, Alejandro Berlin, Eric N. Carver, Debarghya China, Kai Ding, Issam El Naqa, Benjamin P. Fahimian, Aaron Fenster, Yin Gao, Ulysses Gardner, Rachel M Glicksman, Milan Grkovski, Rachit Kumar, Junghoon Lee, Moeen Meftahi, Sandra Meyers, Björn Morén, Tarun K. Podder, Susan Richardson, Alexandra Rink, Mark J. Rivard, Jessica Rodgers, Michael Roumeliotis, Daniel Scanderbeg, Åsa Carlsson Tedgren, Tiana Trumpour, Javier Vijande, Catheryn Yashar, Akila N. Viswanathan, **Xun Jia**, “Roadmap: Medical Physics Technologies in Brachytherapy,” accepted by *Phys. Med. Biol.*, (2025).
2. **Xun Jia**, Yi Rong, Qingrong Wu, Carlos E. Cardenas, Laurence E. Court, William T. Hrinivich, Hyejoo Kang, Nataliya Kovalchuk, Thomas J. Whitaker, Ying Xiao, Pengpeng Zhang, and Quan Chen, “NRG Oncology Assessment of Artificial Intelligence for Automatic Treatment Planning in Radiation Therapy Clinical Trials: Present and Future,” accepted by *Int. J. Rad. Onc. Bio. Phys.*, (2025).
3. Ying Xiao, Stanley Benedict, Yunfeng Cui, Carri Glide-Hurst, Stephen Graves, **Xun Jia**, Stephen Kry, Heng Li, Liyong Lin, Martha Matuszak, Mark Newpower, Harold Paganetti, Sharon X. Qi, Emilie Roncali, Yi Rong, George Sgouros, Chuck Simone, John Sunderland, Paige Taylor, Leila

- Tchelebi, Michael Weldon¹, Jennifer W. Zou, Evan Wuthrick, Mitchell Machtay, Quynh-Thu Le, Jeffery Buchsbaum, “Embracing the future of clinical trials in radiotherapy: A CIRO technology retreat whitepaper on pioneering technologies and AI-driven solutions,” accepted by *Int. J. Rad. Onc. Bio. Phys.* (2025).
4. **Xun Jia**, Brett Cater, Aileen Duffton, Emma Harris, Robert Hobbs, Heng Li, “Advancing the Collaboration between Imaging and Radiation Oncology,” *Seminars in Radiation Oncology*, **34**, 402 (2024).
 5. Surbhi Grover, Laurence Court, Sheldon Amoo-Mitchual, Mac Longo, Danielle Rodin, Aba Anoa Scott, Yolande Lievens, Mei Ling Yap, May Abdelwahab, Peter Lee, Ekaterina Harsdorf, Jamal Khader, **Xun Jia**, Manjit Dosanjh, Ahmed Elzawawy, Tofeeq Ige, Miles Pomper, David Pistenmaa, Patricia Hardenbergh, Daniel Petereit, Michele Sargent, Kristin Cina, Benjamin Li, Yavuz Anacak, Chuck Mayo, Nikki Prattipati, Nwamaka Lasebikan, Katherine Rendle, Donna O’Brien, Eugenia Wendling, C Norman Coleman, “Global Workforce and Access: Demand, Education, Quality,” *Seminars in Radiation Oncology*, **34**, 477 (2024).
 6. **Xun Jia**, Kevin Albuquerque, “Artificial Intelligence and Deep learning for brachytherapy,” *Seminars in Radiation Oncology*, **32**, 389 (2022).
 7. Dan Nguyen, Mu-Han Lin, David Sher, Weiguo Lu, **Xun Jia**, Steve Jiang, “Advances in Automated Treatment Planning,” *Seminars in Radiation Oncology*, **32**, 343 (2022).
 8. William Song, James Robar, Björn Morén, Torbjörn Larsson, Åsa Carlsson Tedgren, **Xun Jia**, “Emerging technologies in brachytherapy,” Topic Review article, *Phys. Med. Biol.*, **66**, 23TR01 (2021).
 9. Hyojun Park, Harald Paganetti, Jan Schuemann, **Xun Jia**, and Chul Hee Min, “Monte Carlo methods for device simulations in radiation therapy,” Topic Review article. *Phys. Med. Biol.*, **66**, 18TR01 (2021).
 10. Adam Cunha, Ryan Flynn, Cedric Belanger, CameronCallaghan, Yusung Kim, **Xun Jia**, Zhe Chen, Luc Beaulieu, “Brachytherapy Future directions,” *Special issue on Brachytherapy in Seminars of Radiation Oncology*, **30**, 94 (2020).
 11. Hongming Shan, **Xun Jia**, Pingkun Yan, Yunyao Li, Harald Paganetti, Ge Wang, “Synergizing Medical Imaging and Radiotherapy with Deep Learning,” *Machine Learning: Science and Technology*, **1**, 021001 (2020).
 12. Chenyang Shen, Dan Nguyen, Zhiguo Zhou, Steve Jiang, Bin Dong, **Xun Jia**, “An Introduction to Artificial Intelligence in Medical Physics: Advantages, Potential and Challenges,” *Phys. Med. Biol.*, **65**, 05TR01 (2020).
 13. Philippe Després, **Xun Jia**, “A review of GPU-based medical image reconstruction,” *Physica Medica, European Journal of Medical Physics*, **42**, 76 (2017).
 14. **Xun Jia**, Peter Ziegenhein, Steve B. Jiang, “GPU-based high-performance computing for radiation therapy,” Topic review, *Phys. Med. Biol.*, **59**, R151 (2014).
 15. **Xun Jia**, Todd Pawlicki, Kevin T. Murphy, and Arno J. Mundt, “Proton therapy dose calculations on GPU: advances and challenges,” *Translational Cancer Research*, **1-3**, 207 (2012).

• Peer-Reviewed Journal Publications

2025

1. Victoria L. Doss, Cecilia de Sousa, Elaina Hales, Tinker Trent, Esi Hagan, Tsion Gebre, Anas Obaideen, Meti Negassa, Dezhi Liu, Chen Hu, Akila N. Viswanathan, Heng Li, K. Ranh Voong, **Xun Jia**, Todd McNutt, Russell K. Hales, Rachel B. Ger, “Efficacy and Safety of BID Accelerated Hyperfractionated Reirradiation for Thoracic Malignancies.” Accepted by *Radiotherapy and Oncology*.

2. Xiaoyu Hu, Yan Dai, Ahad Ollah Ezatti, Junghoon Lee, Jie Deng, **Xun Jia**. “Report on the Quantitative Intra-Voxel Incoherent Motion Diffusion MRI Reconstruction Grand Challenge.” *Med. Phys.*, **52**, e17998 (2025).
3. Lingshu Yin, Daniel Sforza, Devin Miles, Masumi Umezawa, Kan Ota, Xun Jia, and Heng Li, “Commissioning of a 142.4 MeV ultra-high dose rate (UHDR) proton beamline in a synchrotron-based proton therapy system.” *Med. Phys.*, **52**, e18008 (2025).
4. Mainul Arbar, Parvat Sapkota, Damon Sprouts, **Xun Jia**, Yujie Chi, “Actor Critic with Experience Replay (ACER)-based automatic treatment planning for prostate cancer intensity modulated radiotherapy,” *Med. Phys.*, **52**, e17915 (2025).
5. Yuting Peng, Youfang Lai, Lingshu Yin, Yujie Chi, Heng Li, **Xun Jia**, “Investigating the radical yield variations in FLASH and conventional proton irradiation via microscopic Monte Carlo simulations,” *Phys. Med. Biol.*, **70**, 105012 (2025).
6. Laura Antonia Cerbone, Giovanni Mettivier, Youfang Lai, **Xun Jia**, Steven K. Boyd, and Paolo Russo, “Absorbed and effective dose estimates in HR-pQCT of the distal radius and tibia: virtual dosimetry with a GPU-accelerated Monte Carlo code.” *Phys. Med. Biol.*, **70**, 095005 (2025).
7. Yixun Xing, Casey Moore, Debabrata Saha, Dan Nguyen, MaryLena Bleile, **Xun Jia**, Robert Timmerman, Hao Peng, Steve Jiang, “Mathematical modeling of the synergetic effect between radiotherapy and immunotherapy,” *Mathematical Biosciences and Engineering*, **22**, 1206, (2025).
8. Yan Dai, **Xun Jia**, Jiaen Liu, Yen-Peng Liao, Jie Deng, “Joint k-b Space Image Reconstruction and Data Fitting for Diffusion-Weighted Magnetic Resonance Imaging,” *Med. Phys.*, **52**, 2038 (2025).
9. Xiaoyu Hu, Yuncheng Zhong, **Xun Jia**, Kai Yang, “Optimizing energy threshold selection for low-concentration gold nanoparticle quantification in small animal photon-counting CT,” *Phys. Med. Biol.*, **70**, 045004 (2025).

2024

10. Lin Su, Ellen Huang, Devin Miles, Reza Farjam, Ian Marsh, Qiongge Li, Joseph Moore, Todd McNutt, Kai Ding, Ken Wang, Adam Robinson, Gregory Kuri, Richard Seabrease, David Adam, Ryan Oglesby, Bin Shen, BinBin Wu, Junghoon Lee, **Xun Jia**, and Sarah Han-Oh, “Commissioning and validation of a single photon beam model in RayStation for multiple matched Elekta Linacs,” *JACMP*, **25**, e14485(2024).
11. Xuhui Ning, Yuncheng Zhong, Qi Cai, Yaohong Wang, **Xun Jia**, Jer-Tsong Hsieh, Jie Zheng, and Mengxiao Yu, “Gold Nanoparticle Transport in the Injured Kidneys with Elevated Renal Function Biomarkers.” *Advanced Materials*, **2024**, 2402479 (2024).
12. Yuting Peng, Yan Dai, Shu Zhang, Jie Deng, **Xun Jia**, “Joint k- ω Space Image Reconstruction and Data Fitting for Chemical Exchange Saturation Transfer Magnetic Resonance Imaging”, *Tomography*, **10**, 1123 (2024).
13. Yin Gao, Yang Kyun Park, **Xun Jia**, “Human-like Intelligent Automatic Treatment Planning of Head and Neck Cancer Radiation Therapy,” *Phys. Med. Biol.*, **69**, 115049 (2024).
14. William T. Hrinivich, Mahasweta Bhattacharya, Todd McNutt, Xun Jia, Heng Li, Daniel Y. Song, Junghoon Lee, “Clinical VMAT machine parameter optimization for localized prostate cancer using deep reinforcement learning,” *Med. Phys.*, **51**, 3972 (2024).
15. Yin Gao, Yesenia Gonzalez, Chika Nwachukwu, Kevin Albuquerque, **Xun Jia**, “Predicting treatment plan approval probability for high-dose-rate brachytherapy of cervical cancer using adversarial deep learning,” *Phys. Med. Biol.*, **69**, 095010 (2024).

16. Giovanni Mettivier, Youfang Lai, **Xun Jia**, Paolo Russo, “Virtual clinical trial for 3D dosimetry with three cone beam breast computed tomography scanners using a fast GPU based Monte Carlo code,” *Phys. Med. Biol.*, **69**, 045028 (2024).
17. Xiaoyu Hu, **Xun Jia**, “Spectral CT image reconstruction using a constrained optimization approach — An Algorithm for AAPM 2022 Spectral CT Grand Challenge and Beyond,” *Med. Phys.*, **51**, 3376 (2024).
18. Jace Grandinetti, Yuncheng Zhong, Yuting Peng, **Xun Jia**, “Design and construction of gradient coils for an MRI-guided small animal radiation platform,” *Heliyon*, **10**, e26251 (2024).
19. Amir Owraangi, Astrid Medrano, Yin Gao, Samaneh Kazemifar, Brian Hryuschko, Paul Medin, Chika Nwachukwu, **Xun Jia**, Kevin Albuquerque, “Definitive Radiation for Advanced cervix cancer is not associated with Vaginal shortening – a prospective Vaginal length and dose correlation,” *Brachytherapy*, **23**, 136 (2024).
20. Lingshu Yin, Umezawa Masumi, Kan Ota, Daniel Sforza, Devin Miles, Mohammad Rezaee, John W. Wong, **Xun Jia**, Heng Li, “Feasibility of synchrotron-based ultra-high dose rate (UHDR) proton irradiation with pencil beam scanning for FLASH research,” *Cancers*, **16**, 221 (2024).
21. Jingying Lin, Mingli Chen, Youfang Lai, Zipalkumar Trivedi, Junjie Wu, Tim Foo, Yesenia Gonzalez, Robert Reynolds, Justin Park, Yulong Yan, Andrew Godley, Steve Jiang, **Xun Jia**, Mu-Han Lin, Arnold Pompos, and Weiguo Lu. “ART2Dose: A comprehensive dose verification platform for online adaptive radiotherapy,” *Med. Phys.*, **51**, 18 (2024).

2023

22. Hamed Hooshangnejad, Quan Chen, Xue Feng, Rui Zhang, Reza Farjam, Ranh Voong, Russell Hales, Yong Du, **Xun Jia**, Kai Ding, “DAART: a Deep Learning Platform for Deeply Accelerated Adaptive Radiation Therapy for Lung Cancer,” *Frontiers in Oncology*, **13**, 1201679 (2023).
23. Yin Gao, Chenyang Shen, **Xun Jia**, Yang Kyun Park, “Implementation and Evaluation of an Intelligent Automatic Treatment Planning Robot for Prostate Cancer Stereotactic Body Radiation Therapy,” *Radiotherapy and Oncology*, **184**, 109685 (2023).
24. Bryan Dinh, Satzhan Sitmukhambetov, Youfang Lai, Zui Pan, **Xun Jia**, Yujie Chi, “Development and Implementation of a Metaphase DNA Model for Ionizing Radiation Induced DNA Damage Calculation,” *Phys. Med. Biol.*, **68**, 014001 (2023).

2022

25. Jace Grandinetti, Yin Gao, Yesenia Gonzalez, Jie Deng, Chenyang Shen, **Xun Jia**, “MR Image Reconstruction from Undersampled Data for Image-Guided Radiation Therapy using a Patient-Specific Deep Manifold Image Prior,” *Frontiers in Oncology*, **12**, 1013783 (2022).
26. Ge Wang, Andreu Badal, **Xun Jia**, Jonathan S. Maltz, Klaus Mueller, Kyle J. Myers, Chuang Niu, Michael Vannier, Pingkun Yan, Zhou Yu, and Rongping Zeng, “Development of Metaverse for Intelligent Healthcare,” *Nature Machine Intelligence*, **4**, 922 (2022).
27. Yuting Peng, Mengzhou Li, Jace Grandinetti, Ge Wang, **Xun Jia**, “Top-level Design and Simulated Performance of the First Portable CT-MR scanner,” *IEEE Access*, **10**, 102325 (2022).
28. Xiaoyu Hu, Yuncheng Zhong, Youfang Lai, Chenyang Shen, Kai Yang, **Xun Jia**, “Small Animal Photon Counting Cone-beam CT on a Preclinical Radiation Research Platform to Improve Radiation Dose Calculation Accuracy,” *Phys. Med. Biol.*, **67**, 195004 (2022).
29. Youfang Lai, Yujie Chi, **Xun Jia**, “Mechanistic Modelling of Oxygen Enhancement Ratio of radiation via Monte Carlo simulation-based DNA damage calculation,” *Phys. Med. Biol.*, **67**, 175009 (2022).

30. Paul D’Cunha, Yesenia Gonzalez, Chika Nwachukwu, Brian Hrycushko, Thomas Banks, Amir Owangi, **Xun Jia**, Kevin Albuquerque, “Change in Image-guided Planning Strategies Over Time Impacts Oncologic and Survival Outcomes for Intracavitary Cervical Cancer Brachytherapy,” *Brachytherapy*, **21**, 668 (2022).
31. Huan Liu, Chenyang Shen, Peter Klages, Kevin Albuquerque, Chang-Ming Ma, **Xun Jia**, “Interactive Treatment Planning in High Dose-Rate Brachytherapy for Gynecological Cancer”, *Mathews Journal of Cancer Science*, **7**, 31 (2022).
32. Yin Gao, Chenyang Shen, Yesenia Gonzalez, **Xun Jia**, “Modeling Physician’s Preference in Treatment Plan Approval of Stereotactic Body Radiation Therapy of Prostate Cancer”, *Phys. Med. Biol.*, **67**, 115012 (2022).
33. Damon Sprouts, Chao Wang, **Xun Jia**, Chenyang Shen, Yujie Chi, “The Development of a Deep Reinforcement Learning Based, Clinical Treatment Planning System Adapted Virtual Treatment Planner,” *Biomedical Physics & Engineering Express*, **8**, 045008 (2022).
34. Xiaoyu Hu, Yuncheng Zhong, Yanqi Huang, Chenyang Shen, **Xun Jia**, “Improving small animal cone beam CT resolution by mitigating x-ray focal spot induced blurring via deconvolution,” *Phys. Med. Biol.*, **67**, 125005 (2022).
35. Giovanni Mettivier, Antonio Sarno, Youfang Lai, Bruno Golosio, Viviana Fanti, Maria Elena Italiano, **Xun Jia**, and Paolo Russo, “Virtual Clinical Trials in 2D and 3D X-ray Breast Imaging and Dosimetry: Comparison of CPU-Based and GPU-Based Monte Carlo Codes,” *Cancers*, **14**, 1027 (2022).
36. Chao Wang, Hyunuk Jung, Ming Yang, Chenyang Shen, **Xun Jia**, “Simultaneous Image Reconstruction and Element Decomposition for Iodine Contrast Agent Visualization in Multi-energy Element-resolved Cone Beam CT,” *Special issue on Dual-energy/spectral CT in Radiation Therapy*, *Frontiers in Oncology*, **12** 827136 (2022).
37. **Xun Jia**, J. Adam M. Cunha, Yi Rong, “AI can overcome challenges in brachytherapy treatment planning,” *Parallel/Opposed debate*, *JACMP*. **23**, e13504 (2022).

2021

38. Yin Gao, Jennifer Xiong, Chenyang Shen, **Xun Jia**, “Improving robustness of a deep learning-based lung-nodule classification model of CT images with respect to image noise,” *Phys. Med. Biol.*, **66**, 245005 (2021).
39. Yanqi Huang, Xiaoyu Hu, Yuncheng Zhong, Youfang Lai, Chenyang Shen, **Xun Jia**, “Improving dose calculation accuracy in preclinical radiation experiments using multi-energy element resolved cone beam CT,” *Phys. Med. Biol.*, **66**, 245003 (2021).
40. Jace Grandinetti, Yuncheng Zhong, Chenyang Shen, **Xun Jia**, “Design and experimental validation of a unilateral magnet for MRI-guided small animal radiation experiments,” *J. Mag. Res.*, **332**, 107062 (2021).
41. Youfang Lai, **Xun Jia**, Yujie Chi, “Recent Developments on gMicroMC: Transport Simulations of Proton and Heavy Ions and Concurrent Transport of Radicals and DNA,” *International Journal of Molecular Sciences*, **22**, 6615 (2021).
42. Chenyang Shen, Liyuan Chen, **Xun Jia**, “A Hierarchical Deep Reinforcement Learning Framework for Intelligent Automatic Treatment Planning of Prostate Cancer Intensity Modulated Radiation Therapy,” *Phys. Med. Biol.*, **66**, 134002 (2021).
43. Jianhui Ma, Dan Nguyen, Ti Bai, Michael Folkerts, **Xun Jia**, Weiguo Lu, Linghong Zhou, and Steve Jiang, “A Feasibility Study on Deep Learning-Based Individualized 3D Dose Distribution Prediction,” *Med. Phys.*, **48**, 4438 (2021).

44. Chenyang Shen, Liyuan Chen, Yesenia Gonzalez, **Xun Jia**, “Improving Efficiency of Training a Virtual Treatment Planner Network via Knowledge-guided Deep Reinforcement Learning for Intelligent Automatic Treatment Planning of Radiotherapy,” *Med. Phys.*, **48**, 1909 (2021).
45. Yanqi Huang, Kai Yang, Youfang Lai, Huan Liu, Chenyang Shen, Yuncheng Zhong, Yiping Shao, Xinhua Li, Bob Liu, **Xun Jia**, “Experimental and numerical studies on kV scattered x-ray imaging for real-time image guidance in radiation therapy,” *Phys. Med. Biol.*, **66**, 045022 (2021).
46. Chao Wang, Yesenia Gonzalez, Chenyang Shen, Brian Hrycushko, **Xun Jia**, “Simultaneous Needle Catheter Selection and Dwell Time Optimization for Preplanning of High-dose-rate Brachytherapy of Prostate Cancer,” *Phys. Med. Biol.*, **66**, 055028 (2021).
47. Youfang Lai, **Xun Jia**, Yujie Chi, “Modeling the Effect of Oxygen on the Chemical Stage of Water Radiolysis using GPU-based Microscopic Monte Carlo Simulations, with an Application in FLASH Radiotherapy,” *Phys. Med. Biol.*, **66**, 025004 (2021).
48. Yesenia Gonzalez, Fantine Giap, Peter Klages, Amir Owraangi, **Xun Jia**, Kevin Albuquerque, “Predicting Which Patients May Benefit from Hybrid Intracavitary+Interstitial Needle (IC/IS) Applicator for Advanced Cervical Cancer: A Dosimetric Comparison and Toxicity Benefit Analysis,” *Brachytherapy*, **20**, 136 (2021).

2020

49. Chenyang Shen, Min-Yu Tsai, Liyuan Chen, Dan Nguyen, Jing Wang, Steve B. Jiang, **Xun Jia**, “On the Robustness of Deep Learning based Lung Nodule Classification for CT images,” *Phys. Med. Biol.*, **65**, 245037 (2020).
50. Yesenia Gonzalez, Chenyang Shen, Hyunuk Jung, Dan Nguyen, Steve B. Jiang, Kevin Albuquerque, **Xun Jia**, “Semi-automatic Sigmoid Colon Segmentation in CT via a Human-Like Iterative Deep Learning Approach for Radiation Therapy Treatment Planning,” *Medical Imaging Analysis*, **68**, 101896 (2020).
51. Hugh Lee, Xinhui Duan, Yang-Kyun Park, **Xun Jia**, Steve B. Jiang, Ming Yang, “Convolutional neural network based proton stopping-power-ratio estimation: a feasibility study,” *Phys. Med. Biol.*, **65**, 215060 (2020).
52. Yuncheng Zhong, Youfang Lai, Debabrata Saha, Michael Story, **Xun Jia**, Strahinja Stojadinovic, “Dose rate determination for preclinical total body irradiation,” *Phys. Med. Biol.*, **65**, 175018 (2020).
53. Guanglin Tang, Yulong Yan, Chenyang Shen, **Xun Jia**, Meyer Zinn, Zipalkumar Trivedi, Alicia Yingling, Kenneth Westover, Steve Jiang, “Balancing Robustness and Responsiveness in a Real-time Indoor Location System using Bluetooth Low Energy Technology and Deep Learning to Facilitate Clinical Applications,” *Med. Phys.*, **47**, 3277 (2020).
54. Chenyang Shen, Dan Nguyen, Liyuan Chen, Yesenia Gonzalez, Nan Qin, Steve B. Jiang, **Xun Jia**, “Operating a Treatment Planning System using a Deep-Reinforcement-Learning based Virtual Treatment Planner for Intensity-Modulated Radiation Therapy Treatment Planning,” *Med. Phys.*, **47**, 2329 (2020).
55. Yangmei Zhang, Yusi Chen, Anni Zhong, **Xun Jia**, Linghong Zhou, and Yuan Xu, “CBCT scatter correction based on adaptive photon path-based Monte Carlo simulation method in Multi-GPU platform,” *Computer Methods and Programs in Biomedicine*, **194**, 105487 (2020).
56. Bhavani S Gannavarapu, Brian Hrycushko, **Xun Jia**, Kevin Albuquerque, “Upfront Radiotherapy for Patients with High-Risk Endometrial Cancer,” *Brachytherapy*, **19**(2), 139 (2020).
57. Youfang Lai, Min-Yu Tsai, Zhen Tian, Nan Qin, Congchong Yan, Shih-Hao Hung, Yujie Chi, **Xun Jia**, “A new open-source GPU-based microscopic Monte Carlo simulation tool for the calculations

- of DNA damages caused by ionizing radiation — Part II: sensitivity and uncertainty analysis,” *Med. Phys.*, **47**, 1971 (2020).
58. Min-Yu Tsai, Zhen Tian, Nan Qin, Congchong Yan, Youfang Lai, Shih-Hao Hung, Yujie Chi, **Xun Jia**, “A new open-source GPU-based microscopic Monte Carlo simulation tool for the calculations of DNA damages caused by ionizing radiation — Part I: Core algorithm and validation,” *Med. Phys.*, **47**, 1958 (2020).
 59. **Xun Jia**, Lei Ren, Jing Cai, “Clinical implementation of AI technologies will require interpretable AI models,” Point/Counter-point debate, *Med. Phys.*, **47**, 1 (2020).
 60. Ying Ren, Min-Yu Tsai, Liyuan Chen, Jing Wang, Yufei Liu, **Xun Jia**, Chenyang Shen, “A Manifold Learning Regularization Approach to Enhance 3D CT Image-based Lung Nodule Classification,” *International Journal of Computer Assisted Radiology and Surgery*, **15**, 287 (2020).
 61. Qiang He, Xin Li, Nathan Kim, **Xun Jia**, Xuejun Gu, Xin Zhen, Linghong Zhou, “Feasibility study of a multi-criteria decision-making based hierarchical model for multi-modality feature and multi-classifier fusion: applications in medical prognosis prediction,” *Information Fusion*, **55**, 207 (2020).
 62. Dan Nguyen, Rafe McBeth, Azar Sadeghnejad Barkousaraie, Gyanendra Bohara, Chenyang Shen, **Xun Jia**, Steve Jiang, “Incorporating human and learned domain knowledge into training deep neural networks: A differentiable dose volume histogram and adversarial inspired framework for generating Pareto optimal dose distributions in radiation therapy,” *Med. Phys.*, **47**, 837 (2020).

2019

63. Youfang Lai, Yuncheng Zhong, Ananta Chalise, Yiping Shao, Mingwu Jin, **Xun Jia**, Yujie Chi, “gPET: A GPU-based, accurate and efficient Monte Carlo simulation tool for PET,” *Phys. Med. Biol.*, **64**, 245002 (2019).
64. Yujie Chi, Chenyang Shen, Bin Li, You Zhang, Ming Yang, Michael Folkert, and **Xun Jia**, “A method to reconstruct intra-fractional liver motion in rotational radiotherapy using linear fiducial markers,” *Phys. Med. Biol.*, **64**, 225013 (2019).
65. Hyunuk Jung, Chenyang Shen, Yesenia Gonzalez, Kevin Albuquerque, **Xun Jia**, “Deep-learning Assisted Automatic Digitization of Interstitial Needles in 3D CT Image based High Dose-rate Brachytherapy of Gynecological Cancer,” *Phys. Med. Biol.*, **64**, 215003, (2019).
66. Euikyu Je, Heui Chang Lee, Xinhui Duan, Bin Li, **Xun Jia**, Ming Yang, “Optimal Energy Selection for Proton Stopping-Power-Ratio Estimation Using Dual-Energy CT-Based Monoenergetic Imaging,” *Phys. Med. Biol.*, **64**, 195015, (2019).
67. Hyunuk Jung, Yesenia Gonzalez, Chenyang Shen, Peter Klages, Kevin Albuquerque, **Xun Jia**, “Deep-learning Assisted Automatic Digitization of Applicators in 3D CT Image-based High Dose-rate Brachytherapy of Gynecological Cancer.” *Brachytherapy*, **S1538-4721(19)** 30098-4 (2019).
68. Chun-Chien Shieh, Yesenia Gonzalez, Bin Li, **Xun Jia**, Simon Rit, Cyril Mory, Matthew Riblett, Geoffrey Hugo, Yawei Zhang, Zhuoran Jiang, Xiaoning Liu, Lei Ren, Paul Keall, “SPARE: SPArse-view REconstruction challenge for 4D cone-beam CT from a one-minute scan,” *Med. Phys.*, **46**, 3799 (2019).
69. Deepak Shrestha, Min-yu Tsai, Nan Qin, You Zhang, **Xun Jia**, and Jing Wang, “Dosimetric Evaluation of 4D-CBCT Reconstructed by Simultaneous Motion Estimation and Image Reconstruction (SMEIR) for Carbon Ion Therapy of Lung Cancer”, *Med. Phys.*, **46**, 4087 (2019).
70. Chenyang Shen, Yifei Lou, Liyuan Chen, Tieyong Zeng, Michael K. Ng, Lei Zhu, **Xun Jia**, “Comparison of Three Undersampling Approaches in CT Reconstruction,” *Quantitative Imaging in Medicine and Surgery*, Special issue on Quantitative Imaging for Radiation Oncology, **9**, 1229 (2019).

71. Chenyang Shen, Yesenia Gonzalez, Peter Klages, Nan Qin, Hyunuk Jung, Liyuan Chen, Dan Nguyen, Steve B. Jiang, **Xun Jia**, “Intelligent Inverse Treatment Planning via Deep Reinforcement Learning, a Proof-of-Principle Study in High Dose-rate Brachytherapy for Cervical Cancer,” *Phys. Med. Biol.*, **64**, 115013 (2019).
72. Heui Chang Lee, Bin Li, Xinhui Duan, Linghong Zhou, **Xun Jia**, Ming Yang, “Systematic analysis of the impact of imaging noise on dual-energy CT-based proton stopping-power-ratio estimation,” *Med. Phys.*, **46**, 2251 (2019).
73. You Zhang, Michael Folkert, Bin Li, Xiaokun Huang, Jeffrey Meyer, Tsuicheng Chiu, Pam Lee, Joubin Tehrani, Jing Cai, David Parsons, **Xun Jia**, Jing Wang, “4D liver tumor localization using cone beam projections and a biomechanical model,” *Radiotherapy and Oncology*, **133**, 183 (2019).
74. Dan Nguyen, **Xun Jia**, David Sher, Mu-Han Lin, Zohaib Iqbal, Hui Liu, Steve Jiang, “Three-Dimensional Radiotherapy Dose Prediction on Head and Neck Cancer Patients with a Hierarchically Densely Connected U-net Deep Learning Architecture,” *Phys. Med. Biol.*, **64**, 065020 (2019).
75. Dan Nguyen, Troy Long, **Xun Jia**, Weiguo Lu, Xuejun Gu, Zohab Iqbal, Steve B. Jiang, “A feasibility study for predicting optimal radiation therapy dose distributions of prostate cancer patients from patient anatomy using deep learning,” *Scientific Reports*, **9**, 1076 (2019).
76. Wenbo Gu, Dan Ruan, Daniel O’Connor, Wei Zou, Lei Dong, Min-yu Tsai, **Xun Jia**, Ke Sheng, “Robust Optimization for Intensity-Modulated Proton Therapy with Soft Spot Sensitivity Regularization,” *Med. Phys.*, **46**, 1408 (2019).
77. Jan Schuemann, Aimee McNamara, John Warmenhoven, Nicholas Henthorn, Karan Kirkby, Mike Merchant, Samuel Ingram, Harald Paganetti, Kathryn Held, Jose Ramos-Mendez, Bruce Faddegon, Joseph Perl, Dudley Goodhead, Ianik Plante, Hans Rabus, Heidi Nettelbeck, Werer Friedland, Pavel Kundrat, Andrea Ottolenghi, Giorgio Baiocco, Sofia Barbier, Michael Dingfelder, Sebastien Incerti, Carmen Villagrasa, Marta Bueno, Mario Bernal, Susanna Guatelli, Dousatsu Sakata, Jeremy Brown, Ziad Francis, Ioanna Kyriakou, Nathanael Lampe, Francesca Ballarini, Mario Carante, Maria Davidko-va, Vaclav Stepan, **Xun Jia**, Francis Cucinotta, Reinhard Schulte, Robert Stewart, David Carlson, Seb Galer, Zdenka Kuncic, Sandrine LaCombe, Sang Hyun Cho, Taku Inaniwa, Takumi Sato, and Stephen McMahon, “A Standard data format for DNA Damage (SDD),” *Radiation Research*, **191**, 76 (2019).
78. Yuan Xu, Yusi Chen, Zhen Tian, **Xun Jia**(co-senior author), Linghong Zhou, “Metropolis Monte Carlo Simulation Scheme for Fast Scattered X-ray Photon Calculation in CT,” *Opt. Exp.*, **27**(2), 1262 (2019).

2018

79. Timothy Rozario, Tsuicheng Chiu, Mingli Chen, **Xun Jia**, Weiguo Lu, Sergey Bereg, Weihua Mao, “A novel markerless lung tumor tracking method using MV treatment beam imaging,” *Applied Sciences*, **2018**(8), 2525 (2018).
80. Chenyang Shen, Bin Li, Yifei Lou, Linghong Zhou, **Xun Jia**, “Multi-energy Element-resolved Cone Beam CT (MEER-CBCT) Realized on a Conventional CBCT Platform,” Letter in *Med. Phys.*, **45**, 4461, (2018).
81. Chenyang Shen, Yesenia Gonzalez, Liyuan Chen, Steve B. Jiang, **Xun Jia**, “Intelligent Parameter Tuning in Optimization-based Iterative CT Reconstruction via Deep Reinforcement Learning,” *IEEE Trans. Med. Img.*, **37**, 1430, (2018).
82. Bin Li, Chenyang Shen, Yujie Chi, Ming Yang, Linghong Zhou, Yifei Lou, **Xun Jia**, “Multi-energy cone beam CT reconstruction with a spatial spectral nonlocal means algorithm,” *SIAM Journal on Imaging Science*, **11**, 1205, (2018).

83. Chenyang Shen, Bin Li, Liyuan Chen, Ming Yang, Yifei Lou, **Xun Jia**, “Material Elemental Decomposition in Dual and Multi-energy CT via a Sparsity-Dictionary Approach for Proton Stopping Power Ratio Calculation,” *Med. Phys.*, **45**, 1491, (2018).
84. Deepak Shrestha, Nan Qin, You Zhang, Faraz Kalantari, Shanzhou Niu, **Xun Jia**, Arnold Pompos, Steve Jiang, Jing Wang, “Iterative reconstruction with boundary detection for carbon ion computed tomography,” *Phys. Med. Biol.*, **63**, 055002, (2018).
85. Hao Gong, Bin Li, **Xun Jia**, Guohua Cao, “Physics model based scatter correction in multi-source interior computed tomography,” *IEEE Trans. Med. Imag.*, **37**, 349, (2018).
86. Nan Qin, Chenyang Shen, Min-Yu Tsai, Marco Pinto, Zhen Tian, George Dedes, Arnold Pompos, Steve B. Jiang, Katia Parodi, **Xun Jia**, “Full Monte Carlo-based biological treatment plan optimization system for intensity modulated carbon ion therapy on GPU,” *Int. J. Rad Onc, Bio, Phys.*, **235**, 243, (2018).

2017

87. Ti Bai , Hao Yan , Luo Ouyang , David Staub , Jing Wang , **Xun Jia**, Steve B Jiang , Xuanqin Mou, “Data correlation based noise level estimation for cone beam projection data,” *Journal of X-ray Science and Technology*, **25**, 907 (2017).
88. Ti Bai, Hao Yan, **Xun Jia**, Steve Jiang, Ge Wang, and Xuanqin Mou, “Z-Index Parameterization (ZIP) for Volumetric CT Image Reconstruction via 3D Dictionary Learning,” *IEEE Trans. Med. Imag.*, **36**, 2466 (2017).
89. Ryan T. Jones, Nima Hassan-Rezaeian, Neil B. Desai, Yair Lotan, **Xun Jia**, Raquibul Hannan, Nathan Kim, Brad Hornberger, Jeff Dubas, Aaron Laine, Michael J. Zelefsky, Robert D. Timmerman, Michael R. Folkert, “Dosimetric comparison of rectal sparing capabilities of rectal balloon versus injectable spacer gel in stereotactic ablative radiation therapy (SABR) for prostate cancer: lessons learned from prospective trials,” *Medical Dosimetry* **42**, 341, (2017).
90. Xi Chen, Luo Ouyang, Hao Yan, **Xun Jia**, Bin Li, Qingwen Lyu, You Zhang, Jing Wang, “Optimization of the Geometry and Speed of a Moving Blocker System for Cone-beam Computed Tomography Scatter Correction,” *Med. Phys.*, **44**, 2473, (2017).
91. Bin Li, Xinhui Duan, Chenyang Shen, Linghong Zhou, **Xun Jia**, Ming Yang, “Comprehensive analysis of proton range uncertainties related to stopping-power-ratio estimation using dual-energy CT imaging,” *Phys. Med. Biol.*, **62**, 7056, (2017).
92. Yujie Chi, Nima Hassan Rezaeian, Chenyang Shen, Yuhong Zhou, Weiguo Lu, Ming Yang, Raquibul Hannan, **Xun Jia**, “A new method to reconstruct intra-fractional prostate motion in volumetric modulated arc therapy,” *Phys. Med. Biol.*, **62**, 5509, (2017).
93. Yuhong Zhou, Peter Klages, Jun Tan, Yujie Chi, Strahinja Stojadinovic, Ming Yang, Brian Hrycushko, Paul Medin, Arnold Pompos, Steve Jiang, Kevin Albuquerque, **Xun Jia**, “Automated High-dose Rate Brachytherapy Treatment Planning for a Single-channel Vaginal Cylinder Applicator,” *Phys. Med. Biol.*, **62**, 4361, (2017). Special issue on “Recent Progress in Applications of Computing to Radiotherapy.”
94. Zhen Tian, Steve B. Jiang, **Xun Jia**, “Accelerated Monte Carlo Simulation on the Chemical Stage in Water Radiolysis using GPU,” *Phys. Med. Biol.*, **62**, 3081, (2017).
95. Nan Qin, Marco Pinto, Zhen Tian, Georgios Dedes, Arnold Pompos, Steve B. Jiang, Katia Parodi, and **Xun Jia**, “Initial Development of goCMC: A GPU-oriented Fast Cross-Platform Monte Carlo Engine for Carbon Ion Therapy,” *Phys. Med. Biol.*, **62**, 3682 (2017).
96. Zhen Tian, Yongbao Li, Nima Hassan-Rezaeian, Steve B. Jiang, **Xun Jia**, “Moving GPU-OpenCL-based Monte Carlo dose calculation toward clinical use: Automatic beam commissioning

- and source sampling for treatment plan dose calculation,” *Journal of Applied Clinical Medical Physics*, **18:2**, 69 (2017).
97. **Xun Jia**, Zhen Tian, Yan Xi, Steve B. Jiang, Ge Wang, “A new concept on an integrated interior MRI and medical linear accelerator system (iMRI-LINAC) for radiation therapy,” *J. Med. Imag.* **4(1)**, 015004 (2017).
 98. Weihua Mao, Timothy Rozario, Weiguo Lu, Xuejun Gu, Yulong Yan, **Xun Jia**, Baran Sumer, David L. Schwartz, “Online Dosimetric Evaluation of Larynx SBRT: A Pilot Study of Adaptive Replanning for Quality Assurance,” *Journal of Applied Clinical Medical Physics*, **18**, 157 (2017).
 99. Hao Gong, Hao Yan, **Xun Jia**, Bin Li, Ge, Wang, Guohua Cao, “X-ray scatter correction for multi-source interior computed tomography,” *Med. Phys.*, **44**, 71 (2017).
 100. Yongbao Li, Zhen Tian, Ting Song, Zhaoxia Wu, Yaqiang Liu, Steve Jiang, **Xun Jia**, “A New Approach to Integrate GPU-based Monte Carlo Simulation into Inverse Treatment Plan Optimization for Proton Therapy,” *Phys. Med. Biol.*, **62**, 289 (2017).

2016

101. Nan Qin, Pablo Botas, Drosoula Giantsoudi, Jan Schuemann, Zhen Tian, Steve B. Jiang, Harald Paganetti, and **Xun Jia**, “Recent developments and comprehensive evaluations of a GPU-based Monte Carlo package for proton therapy,” *Phys. Med. Biol.*, **61**, 7347 (2016).
102. Miao Zhang, Nan Qin, Wei Zou, **Xun Jia**, Atif Khan, Ning Yue, “Investigation on using high energy proton beam for total-body irradiation,” *Journal of Applied Clinical Medical Physics*, **17**, 5, 90 (2016).
103. Yujie Chi, Zhen Tian, **Xun Jia**, “Modeling parameterized geometry in GPU-based Monte Carlo particle transport simulation for radiotherapy,” *Phys. Med. Biol.*, **61**, 5851, (2016).
104. Xingya Jiang, Bujie Du, Mengxiao Yu, **Xun Jia**, and Jie Zheng, “Surface-ligand effect on radiosensitization of ultrasmall luminescent gold nanoparticles,” *Journal of Innovative Optics in Health and Optics*, **9**, No. 4, 1642003 (2016) .
105. Hao Yan, Zhen Tian, Yiping Shao, Steve B. Jiang, **Xun Jia**, “A new scheme for real-time, low-dose, high-contrast imaging in lung cancer radiotherapy: a proof-of-concept study,” *Phys. Med. Biol.*, **61**, 2372, (2016).
106. Zhen Tian, Miao Zhang, Brian Hrycushko, Kevin Albuquerque, Steve B. Jiang, **Xun Jia**, “Monte Carlo dose calculation for High-dose-rate Brachytherapy using GPU,” *Brachytherapy*, **15**(3), 387 (2016).
107. Zichun Zhong, Xiaohu Guo, Yiqi Cai, Ying Yang, Jing Wang, **Xun Jia**, Weihua Mao, “3D-2D deformable image registration using feature-based non-uniform meshes,” *Biomedical Research International* **2016**, 4382854 (2016).

2015

108. Ting Song, David Staub, Mingli Chen, Weiguo Lu, Yongbao Li, Zhen Tian, **Xun Jia**, Linghong Zhou, Steve B. Jiang, Xuejun Gu, “Patient-specific dosimetric endpoints based treatment plan quality control in radiotherapy,” *Phys. Med. Biol.*, **60**, 8213 (2015).
109. Zhen Tian, Yongbao Li, Michael Folkerts, Feng Shi, Steve Jiang, **Xun Jia**, “An Analytic Linear Accelerator Source Model for GPU-based Monte Carlo Dose Calculations,” *Phys. Med. Biol.*, **60**, 7941 (2015).
110. Zhen Tian, Feng Shi, Michael Folkerts, Nan Qin, Steve Jiang, **Xun Jia**, “A GPU OpenCL based cross-platform Monte Carlo dose calculation engine (goMC),” *Phys. Med. Biol.*, **60**, 7419 (2015).
111. Zhen Tian, Fei Peng, Michael Folkerts, Jun Tan, **Xun Jia**, Steve B. Jiang, “Multi-GPU implementation of a VMAT treatment plan optimization algorithm,” *Med. Phys.*, **42**, 2841 (2015).

112. Yongbao Li, Jeremy Hoisak, Nan Li, Carrie Yan Jiang, Zhen Tian, Quentin Gautier, Masoud Zarepisheh, Zhaoxia Wu, Yaqiang Liu, **Xun Jia**, Jona Hattangadi-Gluth, Loren K Mell, Steve Jiang, and James D Murphy, "Dosimetric benefit of adaptive re-planning in pancreatic cancer stereotactic body radiotherapy (SBRT)," *Med. Dos.*, **S0958-3947(15)**, 35 (2015).
113. Yuan Xu, Hao Yan, Luo Ouyang, Jing Wang, Linghong Zhou, Laura Cervino, Steve B. Jiang, **Xun Jia**, "A method for volumetric imaging in radiotherapy using single x-ray projection," *Med. Phys.*, **42**, 2498 (2015).
114. Yuan Xu, Ti Bai, Hao Yan, Luo Ouyang, Arnold Pompos, Jing Wang, Linghong Zhou, Steve B. Jiang, **Xun Jia**, "A Practical Cone-beam CT Scatter Correction Method with Optimized Monte Carlo Simulations for Image-Guided Radiation Therapy," *Phys. Med. Biol.*, **60**, 3567 (2015).
115. Xin Zhen, Haibin Chen, Hao Yan, Linghong Zhou, Loren Mell, Catheryn Yashar, Steve Jiang, **Xun Jia**, Xuejun Gu, Laura Cervino, "A segmentation and point-matching enhanced efficient deformable image registration method for dose accumulation between HDR CT images," *Phys. Med. Biol.*, **60**, 2981 (2015).
116. **Xun Jia**, George Xu, Colin Orton, "GPU is the hope for near real-time Monte Carlo dose calculations," Point/Counter-point debate, *Med. Phys.*, **42**, 1474 (2015).
117. Yan Jiang Graves, Arthur-Allen Smith, Roger Rice, Loren Mell, **Xun Jia**, Steve B. Jiang, and Laura Cervino, "A Two-Dimensional Deformable Head and Neck Phantom With In-Vivo Dosimetry for Adaptive Radiotherapy Quality Assurance ", *Med. Phys.*, **42**, 1490 (2015).
118. Yongbao Li, Zhen Tian, Feng Shi, Ting Song, Zhaoxia Wu, Yaqiang Liu, Steve B. Jiang, **Xun Jia**, "A new Monte Carlo-based treatment plan optimization approach for intensity modulated radiation therapy," *Phys. Med. Biol.*, **60**, 2903(2015).
119. Drosoula Giantsoudi, Jan Schuemann, **Xun Jia**, Stephen Dowdell, Steve B. Jiang, Harald Paganetti, "Validation of a GPU-based Monte Carlo code (gPMC) for proton radiation therapy: clinical cases study," *Phys. Med. Biol.*, **60**, 2257 (2015).

2014

120. Hao Yan, Xiaoyu Wang, Feng Shi, Ti Bai, Michael Folkerts, Laura Cervino, Steve B. Jiang, **Xun Jia**, "Towards the clinical implementation of iterative low-dose cone-beam CT reconstruction in image-guided radiation therapy: cone/ring artifact correction and multiple GPU implementation," *Med. Phys.*, **41**, 111912 (2014).
121. Zhen Tian, Yan Jiang Graves, **Xun Jia**, Steve B. Jiang, "Automatic Commissioning of a GPU-based Monte Carlo code for Clinical Photon Beam Dose Calculation," *Phys. Med. Biol.*, **59**, 6467 (2014).
122. Wenting Lu, Hao Yan, Xuejun Gu, Zhen Tian, Luo Ouyang, Liu Yang, Linghong Zhou, Cervino Laura, Jing Wang, Steve B. Jiang, and **Xun Jia**, "Reconstructing cone-beam CT with spatially varying quality for adaptive radiotherapy, a proof-of-principle study," *Phys. Med. Biol.*, **59**, 6251 (2014).
123. Hao Yan, Xin Zhen, Michael Folkerts, Yongbao Li, Tinsu Pan, Laura Cervino, Steve B. Jiang, and **Xun Jia**, "A hybrid reconstruction algorithm for fast and high-quality 4D cone-beam CT imaging," *Med. Phys.*, **41**, 071903 (2014).
124. Jianfeng Cai, **Xun Jia**, Hao Gao, Steve B. Jiang, Zuowei Shen, Hongkai Zhao, "Cine cone beam CT reconstruction using low-rank matrix factorization: algorithm and a proof-of-principle study," *IEEE Transactions on Medical Imaging*, **33**, 1581 (2014), arXiv:1204.3595.
125. Masoud Zarepisheh, Troy Long, Nan Li, Zhen Tian, H. Edwin Romeijn, **Xun Jia**, and Steve B. Jiang, "A DVH-Guided Optimization Algorithm for Automatic Treatment Planning and Adaptive Radiotherapy Re-planning," *Med. Phys.*, **41**, 061711(2014).

126. Masoud Zarepisheh, Andres Uribe-Sanchez, Nan Li, **Xun Jia**, Steve B. Jiang, “A Multi-Criteria Framework with Voxel-Dependent Parameters for Radiotherapy Treatment Plan Optimization,” *Med. Phys.*, **41**, 041705 (2014).
127. Davide Montanari, Enrica Scolari, Chiara Silvestri, Yan Jiang Graves, Hao Yan, Roger Rice, Laura Cervino, Steve Jiang, **Xun Jia**, “Comprehensive Evaluations of Cone-beam CT dose in Image-guided Radiation Therapy via GPU-based Monte Carlo simulations,” *Phys. Med. Biol.*, **59**, 1239 (2014).

2013

128. Li-Tien Cheng, Bin Dong, Chunhua Men, **Xun Jia**, Steve Jiang, “Binary Level-Set Shape Optimization Model and Algorithm for Volumetric Modulated Arc Therapy in Cancer Radiotherapy,” *SIAM Journal on Scientific Computing*, **35-6**, B1321, (2013).
129. Nan Li, Masoud Zarepisheh, Andres Uribe-Sanchez, Kevin Moore, Zhen Tian, Xin Zhen , Yan Grave, Quentin Gautier, Loren Mell, Linghong Zhou, **Xun Jia**, Steve B. Jiang, “Automatic treatment plan re-optimization for adaptive radiotherapy guided with the initial plan DVHs,” *Phys. Med. Biol.*, **58**, 8725 (2013).
130. Xin Zhen, Hao Yan, Linghong Zhou, **Xun Jia**, Steve B. Jiang, “Deformable Image Registration of CT and Truncated Cone-beam CT for Adaptive Radiation Therapy,” *Phys. Med. Biol.*, **58**, 7979 (2013).
131. Reid W Townson, **Xun Jia**, Zhen Tian, Carrie Jiang, Sergei Zavgorodni, Steve B Jiang, “GPU-based Monte Carlo radiotherapy dose calculation using phase-space sources,” *Phys. Med. Biol.*, **58**, 4341(2013).
132. Hao Yan, Xin Zhen, Laura, Cervino, Steve B. Jiang, **Xun Jia**, “Progressive cone beam CT dose control in image-guided radiation therapy,” *Med. Phys.*, **40**, 060701 (2013).
133. Yifei Lou, Tianye Niu, Patrico Vela, Lei Zhu, **Xun Jia**, Allen Tannenbaum, “Joint CT/CBCT deformable registration and CBCT enhancement for cancer radiotherapy,” *Medical Image Analysis*, **17**, 387 (2013).
134. Yanbo Zhang, Hao Yan, **Xun Jia**, Steve B. Jiang, Xuanqin Mou, “A hybrid metal artifact reduction algorithm for X-ray CT,” *Med. Phys.*, **40**, 041910 (2013).
135. Yan Jiang Graves, **Xun Jia**, Steve B. Jiang, “Effect of Statistical Fluctuation in Monte Carlo Dose Calculation on Gamma Index Evaluation,” *Phys. Med. Biol.*, **58** 1839 (2013). arXiv:1208.2379.
136. Xuejun Gu, Bin Dong, Jing Wang, John Yordy, Loren Mell, **Xun Jia**, Steve B. Jiang, “A Contour-Guided Deformable Image Registration Algorithm for Adaptive Radiotherapy,” *Phys. Med. Biol.*, **58**, 1889 (2013).
137. Hao Yan, Xiaoyu Wang, Wotao Yin, Tinsu Pan, Moiz Ahmad, Xuanqin Mou, Laura Cervino, **Xun Jia**, and Steve B. Jiang, “Extracting respiratory signals from thoracic cone beam CT projections,” *Phys. Med. Biol.*, **58**, 1447 (2013).

2012

138. Bin Dong, Yan Jiang Graves, **Xun Jia**, and Steve B. Jiang, “Optimal Surface Marker Locations for Tumor Motion Estimation in Lung Cancer Radiotherapy,” *Phys. Med. Biol.*, **57**, 8201, (2012). arXiv:1204.4719.
139. **Xun Jia**, Hao Yan, Laura Cervino, Michael Folkerts, and Steve B. Jiang, “A GPU Tool for Efficient, Accurate, and Realistic Simulation of Cone Beam CT Projections,” *Med. Phys.*, **39**, 7368(2012) . arXiv:1204.6367.
140. **Xun Jia**, Jan Schuemann, Harald Paganetti, and Steve B. Jiang, “GPU-based fast Monte Carlo dose calculation for proton therapy,” *Phys. Med. Biol.*, **57**, 7783 (2012).

141. Xin Zhen, Xuejun Gu, Hao Yan, Linghong Zhou, **Xun Jia**, Steve B. Jiang, "CT to Cone-beam CT Deformable Registration With Simultaneous Intensity Correction," *Phys. Med. Biol.*, **57**, 6807 (2012). arXiv:12046295.
142. Xue Dong, Tianye Niu, **Xun Jia**, Lei Zhu, "Relationship between x-ray illumination field size and flat field intensity and its impacts on x-ray imaging," *Med. Phys.*, **39**, 5901 (2012).
143. **Xun Jia**, Zhen Tian, Yifei Lou, Jan-Jakob Sonke, and Steve B. Jiang, "Four-dimensional Cone Beam CT reconstruction and enhancement with a temporal non-local means method," *Med. Phys.*, **39**, 5592 (2012). arXiv:1201.2450.
144. Fei Peng, **Xun Jia**, Xuejun Gu, Marina A. Epelman, H. Edwin Romeijn, and Steve B. Jiang, "A new column generation based heuristic for VMAT treatment plan optimization," *Phys. Med. Biol.*, **57**, 4569 (2012).
145. Hao Yan, Laura Cervino, **Xun Jia**, and Steve B. Jiang, "A comprehensive study on the relationship between image quality and imaging dose in low-dose cone beam CT," *Phys. Med. Biol.*, **57**, 2063(2012). arXiv:1112.0398.
146. **Xun Jia**, Hao Yan, Xuejun Gu, and Steve B. Jiang, "Fast Monte Carlo simulation for patient-specific CT imaging dose calculation," *Phys. Med. Biol.*, **57**, 577(2012). arXiv:1109.3266.

2011

147. Ruijiang Li, John H. Lewis, **Xun Jia**, Xuejun Gu, Michael Folkerts, Chunhua Men, William Y. Song, and Steve B. Jiang, "3D tumor localization through real-time volumetric x-ray imaging for lung cancer radiotherapy," *Med. Phys.*, **38**, 2783(2011). arXiv:1102.1712.
148. **Xun Jia**, Xuejun Gu, Yan Jiang Graves, Michael Folkerts, and Steve B. Jiang, "GPU -based fast Monte Carlo simulation for radiotherapy dose calculation," *Phys. Med. Biol.*, **56**, 7017(2011). arXiv:1107.3355.
149. **Xun Jia**, Chunhua Men, Yifei Lou, and Steve B. Jiang, "Beam orientation optimization for intensity modulated radiation therapy using adaptive $l_{2,1}$ minimization," *Phys. Med. Biol.*, **56**, 6205(2011). arXiv:1101.3089.
150. Ruijiang Li, John Lewis, **Xun Jia**, Tianyu Zhao, James Lamb, Deshan Yang, Daniel A. Low, and Steve B. Jiang, "On a PCA based lung motion model," *Phys. Med. Biol.*, **56**, 6009(2011). arXiv:1002.0033.
151. Zhen Tian, **Xun Jia**(co-first author), Kehong Yuan, Tingsu Pan, and Steve B. Jiang, "Low dose CT reconstruction via edge-preserving total variation regularization," *Phys. Med. Biol.*, **56**, 5949(2011). arXiv:1009.2288.
152. **Xun Jia**, Bin Dong, Yifei Lou, and Steve B. Jiang, "GPU-based iterative cone beam CT reconstruction using tight frame regularization", *Phys. Med. Biol.*, **56**, 3787(2011). arXiv:1008.2042.
153. John H. Lewis, Ruijiang Li, **Xun Jia**, Tyler Watkins, Yifei Lou, William Y. Song, and Steve B. Jiang, "Mitigation of motion artifacts in CBCT of lung tumors based on tracked tumor motion during CBCT acquisition," *Phys. Med. Biol.*, **56**, 5485(2011).
154. **Xun Jia**, Yifei Lou, John Lewis, Ruijiang Li, Xuejun Gu, Chunhua Men, and Steve B. Jiang, "GPU-based cone beam CT reconstruction via total variation regularization," *J. X-ray Sci. and Tech.*, **19**(2), 139(2011). arXiv:1001.0599.
155. Xuejun Gu, Urszula Jelen, Jinsheng Li, **Xun Jia**, and Steve B. Jiang, "A GPU-based finite-size pencil beam algorithm with 3D-density correction for radiotherapy dose calculation," *Phys. Med. Biol.*, **56**, 3337(2011). arXiv:1103.1164.
156. Xuejun Gu, **Xun Jia**, and Steve B. Jiang, "GPU-based fast gamma index calculation," *Phys. Med. Biol.*, **56**, 1431 (2011). arXiv:1012.1900.

157. Zhen Tian, **Xun Jia**(co-first author), Bin Dong, Yifei Lou, and Steve B. Jiang, “Low-dose 4DCT reconstruction via temporal non-local means,” *Med. Phys.*, **38**, 1359(2011). arXiv:1009.1351.

2010

158. Chunhua Men, H. Edwin Romeijn, **Xun Jia**, and Steve B. Jiang, “Ultra-fast treatment plan optimization for volumetric modulated arc therapy (VMAT),” *Med. Phys.*, **37**, 5787 (2010). arXiv:1005.4396.
159. Chunhua Men, **Xun Jia**, and Steve B. Jiang, “GPU-based ultra-fast direct aperture optimization for online adaptive radiation therapy,” *Phys. Med. Biol.*, **55**, 4309(2010). arXiv:1003.5402.
160. **Xun Jia**, Yifei Lou, Bin Dong, Zhen Tian, and Steve B. Jiang, “4D computed tomography reconstruction from few-projection data via temporal non-local regularization,” *Lecture Notes in Computer Science*, **6361**, 143(2010).
161. Ruijiang Li, **Xun Jia**, John H. Lewis, Xuejun Gu, Michael Folkerts, Chunhua Men, and Steve B. Jiang, “Real-time volumetric image reconstruction and 3D tumor localization based on a single x-ray projection image for lung cancer radiotherapy,” Letter in *Med. Phys.*, **37**, 2822 (2010). arXiv:1004.0014.
162. **Xun Jia**, Yifei Lou, Ruijiang Li, William Y. Song, and Steve B. Jiang, “GPU-based fast cone beam CT reconstruction from undersampled and noisy projection data via total variation,” Letter in *Med. Phys.*, **37**, 1757 (2010). arXiv:1002.3675.
163. Jonghyoun Eun, **Xun Jia**, and Sudip Chakravarty, “Quantum oscillations in electron doped high temperature superconductors,” *Phys. Rev. B*, **82**, 094515 (2010). arXiv:0912.0728.
164. **Xun Jia**, Xuejun Gu, Josep Sempau, Dongju Choi, Amitava Majumdar, and Steve B. Jiang, “Development of a GPU-based Monte Carlo dose calculation code for coupled electron-photon transport,” *Phys. Med. Biol.*, **55**, 3077(2010). arXiv:0910.0329.

2009 and before

165. **Xun Jia**, Pallab Goswami, Sudip Chakravarty, “Resolution of two apparent paradoxes concerning quantum oscillations in underdoped high- T_c superconductors,” *Phys. Rev. B*, **80**, 134503 (2009). arXiv:0811.1056.
166. Pallab Goswami, **Xun Jia**, Sudip Chakravarty, “Quantum oscillations in graphene in the presence of disorder and interactions,” *Phys. Rev. B*, **78**, 245406 (2008). arXiv:0809.3536.
167. Ivailo Dimov, Pallab Goswami, **Xun Jia**, Sudip Chakravarty, “Competing order, Fermi surface reconstruction, and quantum oscillations in underdoped high temperature superconductors,” *Phys. Rev. B*, **78**, 134529 (2008). arXiv:0807.4202.
168. **Xun Jia**, Pallab Goswami, and Sudip Chakravarty, “Dissipation and criticality in the lowest Landau level of graphene,” *Phys. Rev. Lett.*, **101**, 036805 (2008). arXiv:0804.1975.
169. **Xun Jia**, Arvind R. Subramaniam, Ilya A. Gruzberg, and Sudip Chakravarty, “Entanglement entropy and multifractality at localization transitions,” *Phys. Rev. B*, **77**, 014208 (2008). arXiv:0710.1871.
170. Pallab Goswami, **Xun Jia**, and Sudip Chakravarty, “Quantum Hall plateau transition in the lowest Landau level of disordered graphene,” *Phys. Rev. B*, **76**, 205408 (2007). arXiv:0706.3737.
171. Angela Kopp, **Xun Jia**, and Sudip Chakravarty, “Replacing energy by von Neumann entropy in quantum phase transitions,” *Ann. Phys.*, **322**, 1466 (2007). arXiv:cond-mat/0604152.
172. **Xun Jia**, Sudip Chakravarty, “Quantum dynamics of an Ising spin-chain in a random transverse field,” *Phys. Rev. B*, **74**, 172414 (2006). arXiv:cond-mat/0607703.
173. Fangting Li, **Xun Jia**, “Dynamical analysis of protein regulatory network in budding yeast nucleus,” *Chin. Phys. Lett.*, **23** (8), 2307 (2006).

174. **Xun Jia**, Huimin Liao, Luqun Zhou, Qi Ouyang, “Properties of wave propagations induced by temporal noise in a subexcitable medium,” *Physica D*, **199**, 194 (2004).
175. **Xun Jia**, Luqun Zhou, and Qi Ouyang, “Responses of a noisy excitable system to external signals with different periods,” *Chin. Phys. Lett.*, **21**, 435 (2004).
176. Guoji Lin, **Xun Jia**, and Qi Ouyang, “Predict SARS infection with the small world network model,” *J. Peking Univ.(Health Sci.)*, **35**, 66 (2003).
177. Luqun Zhou, **Xun Jia**, and Qi Ouyang, “Experimental and numerical studies of noise-induced coherent patterns in a subexcitable system,” *Phys. Rev. Lett.*, **88**, 138301 (2002).

• Conference Proceedings

1. Yuncheng Zhong, Xiaoyu Hu, Daniel Sforza, **Xun Jia**, “Image-based Semi-Blind Materials Decomposition from Small Animal Multi-energy CT,” The 18th Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D), (2025).
2. Rongping Zeng, Andreu Badal, Ahad Ollah Ezzati, **Xun Jia**, Arjun Krishna, Klaus Mueller, Kyle J Myers, Chuang Niu, Ge Wang, Wenjun Xia, “Deep virtual CT workflow for evaluating AI in low-dose CT lung cancer screening: a 2D demonstratio.” Conference proceedings of the SPIE Medical Imaging (2025).
3. Yin Gao, Yang Kyun Park, Daniel Yang, and **Xun Jia**, “Intelligent Automatic Treatment Planning for Radiation Therapy,” Conference proceedings of the 20th International Conference on the use of Computers in Radiation Therapy (ICCR), (2024).
4. Xiaoyu Hu, Yuncheng Zhong, Kai Yang, and **Xun Jia**, “Detectability of Iodine Contrast Agent with Ultra-low Concentration by Photon-counting CT: A Simulation Study,” Conference proceedings of the 20th International Conference on the use of Computers in Radiation Therapy (ICCR), (2024).
5. Youfang Lai, Yuting Peng, Meiyang Xing, Yujie Chi, and **Xun Jia**, “Recent progress in gMicroMC package for microscopic Monte Carlo simulations,” Conference proceedings of the 20th International Conference on the use of Computers in Radiation Therapy (ICCR), (2024).
6. Xiaoyu Hu, Yuncheng Zhong, Kai Yang, **Xun Jia**, “On the optimal selection of energy thresholds for quantification of gold concentration in photon-counting-based CT,” 17th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’23), (2023).
7. Xiaoyu Hu, Yuncheng Zhong, Kai Yang, **Xun Jia**, “kV scattered x-ray imaging for real-time imaging and tumor tracking in lung cancer radiation therapy,” 17th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’23), (2023).
8. Xiaoyu Hu, Yuncheng Zhong, Kai Yang, **Xun Jia**, “Photon counting detector-based multi-energy cone beam CT platform for preclinical small animal radiation research,” 7th International Conference on Image Formation in X-Ray Computed Tomography, 123042R (2022).
9. Chuang Niu, Ge Wang, Pingkun Yan, Juergen Hahn, Youfang Lai, **Xun Jia**, Arjun Krishna, Klaus Mueller, Andreu Badal, Kyle J. Myers, and Rongping Zeng, “Noise Entangled GAN For Low-Dose CT Simulation,” 16th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’21), (2021).
10. Min-Yu Tsai, Youfang Lai, Yujie Chi, **Xun Jia**, Shih-Hao Hung, “Performance Evaluation of a GPU-based Monte Carlo Simulation Package for Water Radiolysis with sub-MeV Electrons,” Proceedings of the International Conference on Research in Adaptive and Convergent Systems, 226 (2020).

11. Hyunuk Jung, Chenyang Shen, **Xun Jia**, “Simultaneous Image Reconstruction and Element Decomposition for Iodine Contrast Agent Visualization in Multi-energy Cone Beam CT,” The 6th International Conference on Image Formation in X-Ray Computed Tomography (CT meeting), 538, (2020).
12. Youfang Lai, Yuncheng Zhong, Ananta Chalise, Shiwei Zhou, Yiping Shao, Mingwu Jin, **Xun Jia**, Yujie Chi, “Development of a GPU-Based Mont Carlo Simulation Tool for PET,” 2019 IEEE Symposium on Nuclear Science (NSS/MIC), (2019).
13. Samiha Rouf, Chenyang Shen, Yan Cao, Conner Davis, **Xun Jia**, Yifei Lou, “A Neural Network Approach for Image Reconstruction from a Single X-Ray Projection,” Proceedings of Annual Conference on Medical Image Understanding and Analysis, 208 (2019).
14. Dan Nguyen, Azar Sadeghnejad Barkousaraie, Chenyang Shen, **Xun Jia**, Steve Jiang, “Generating Pareto optimal dose distributions for radiation therapy treatment planning,” International Conference on Medical Image Computing and Computer-Assisted Intervention, 59 (2019).
15. Hongming Shan, **Xun Jia**, Klaus Mueller, Uwe Kruger, Ge Wang, “Low-dose CT simulation with a generative adversarial network,” Proceedings of SPIE 11113, Developments in X-Ray Tomography XII, 111131F, (2019).
16. Chenyang Shen, Min-Yu Tsai, Yesenia Gonzalez, Liyuan Chen, Steve B. Jiang, **Xun Jia**, “Quality-guided deep reinforcement learning for parameter tuning in iterative CT reconstruction,” 15th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’19), (2019).
17. Chenyang Shen, Guoyang Ma, **Xun Jia**, “Low-dose CT reconstruction assisted by a global CT image manifold prior,” 15th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’19), (2019).
18. **Xun Jia**, Steve B. Jiang, Gary Pickrell, Ge Wang, “Interior Tomography Approach for MRI-guided Radiation Therapy,” 14th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’17), (2017).
19. Chenyang Shen, Bin Li, Yifei Lou, and **Xun Jia**, “A Novel Framework for Stopping Power Ratio Calculation in Proton Therapy using Multi-energy Cone-beam CT Realized on a Conventional Cone-beam CT Platform,” 14th International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully3D’17), (2017).
20. Yujie Chi, Nima Hassan Rezaeian, Raquibul Hannan, **Xun Jia**, “Intra-fractional motion tracking and dose reconstruction for adaptive stereotactic body radiation therapy in high-risk prostate cancer,” Conference proceedings of the 18th International Conference on the use of Computers in Radiation Therapy (ICCR), (2016).
21. Yuhong Zhou, Jun Tan, Kevin Albuquerque, **Xun Jia**, “3D Image-based Auto-planning and Quality Assurance for High-dose Rate (HDR) Brachytherapy with a Vaginal Cylinder Applicator,” Conference proceedings of the 18th International Conference on the use of Computers in Radiation Therapy (ICCR), (2016).
22. Yongbao Li, Zhen Tian, Ting Song, Zhaoxia Wu, Yawing Liu, Steve B. Jiang, **Xun Jia**, “A Monte Carlo-based Inverse Treatment Plan Optimization Approach for Intensity Modulated Proton Therapy,” Conference proceedings of World congress on medical physics and biomedical engineering, 475 (2015).
23. Yifei Lou, Qun He, **Xun Jia**, Eric Chang, Christine B Chung, and Jiang Du, “Metal Artifact Reduction Using a 3D UTE-MSI sequence with Time-Frame Regularized Compressed Sensing Reconstruction,” Conference proceedings of 23st Annual Meeting of International Society of Magnetic Resonance in Medicine, 1828 (2013).

24. **Xun Jia**, Yifei Lou, Jiang Du, “Ultrashort Echo Time (UTE) imaging with a tight frame regularized compressive sensing.” Conference proceedings of 21st Annual Meeting of International Society of Magnetic Resonance in Medicine, 3808 (2013).
25. Xue Dong, **Xun Jia**, Tianye Niu, and Lei Zhu, “Low-dose and scatter-free cone-beam CT imaging: a preliminary study,” Conference proceedings of the SPIE Medical Imaging, 8313, 831319 (2012).
26. **Xun Jia**, Yifei Lou, Ruijiang Li, Xuejun Gu, Chunhua Men, and Steve B. Jiang, “Fast GPU-based low-dose cone beam CT reconstruction via total variation regularization,” Conference proceedings of the 16th International Conference on the use of Computers in Radiation Therapy (ICCR), 12480 (2010).
27. Ruijiang Li, **Xun Jia**, John H. Lewis, Xuejun Gu, Michael Folkerts, Chunhua Men, and Steve B. Jiang, “Single-projection based volumetric image reconstruction and 3D tumor localization in real time for lung cancer radiotherapy,” International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), 449 (2010).
28. Chunhua Men, **Xun Jia**, Xuejun Gu, and Steve B. Jiang, “GPU-based ultra fast direct aperture optimization in IMRT treatment planning,” Conference proceedings of the 16th International Conference on the use of Computers in Radiation Therapy (ICCR), 12522 (2010).
29. Xuejun Gu, Thomas Nelson, Chunhua Men, **Xun Jia**, Yun Liang, Steve B. Jiang, “Volumetric ultrasound guided online adaptive partial breast irradiation,” Conference proceedings of the 16th International Conference on the use of Computers in Radiation Therapy (ICCR), 12519 (2010).
30. Ruijiang Li, John Lewis, **Xun Jia**, Tianyu Zhao, James Lamb, Deshan Yang, Daniel Low, Steve B. Jiang, “PCA-based lung motion model,” Conference proceedings of the 16th International Conference on the use of Computers in Radiation Therapy (ICCR), 12514 (2010).
31. **Xun Jia**, Yifei Lou, Ruijiang Li, Xuejun Gu, John Lewis, and Steve B. Jiang, “A dynamic CT image reconstruction method by inducing prior information from PCA analysis,” Conference proceedings of the 8th International Conference on Machine Learning and Applications(ICMLA), 473 (2009).
32. **Xun Jia**, Fangting Li, and Qi Ouyang, “Dynamical analysis of the protein interaction network in budding yeast nucleus,” 8th China ‘Challenge Cup’ National Competition of Chinese College Students Extracurricular Academic and Scientific Achievements, (2003).

• Other Publications

1. Zhen Tian, Masoud Zarepisheh, **Xun Jia**, Steve B. Jiang, “Fixed-point iteration method for IMRT optimization with Truncations in Dose Deposition Matrix,” arXiv:1303.3504 (2013).
2. Yifei Lou, **Xun Jia**, Xuejun Gu and Allen Tannenbaum. “A GPU-based Implementation of Multimodal Deformable Image Registration Based on Mutual Information or Bhattacharyya Distance.” Insight Journal, <http://hdl.handle.net/10380/3268> (2011).
3. **Xun Jia**, Ivailo Dimov, Pallab Goswami, and Sudip Chakravarty, “Hidden order revealed in quantum oscillations in cuprate superconductors,” arXiv:0806.3793 (2008).