

**Jing Wang, Ph.D., DABR**

Division of Medical Physics and Engineering  
Department of Radiation Oncology  
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**Education and Training**

- 07/2007-12/2009 Postdoctoral Fellow, Department of Radiation Oncology, Stanford University, Stanford, CA
- 01/2007-06/2007 Research Associate, Department of Radiology, State University of New York at Stony Brook, Stony Brook, NY
- 09/2001-12/2006 Ph. D. in Physics  
State University of New York at Stony Brook, Stony Brook, NY, USA
- 09/2001-05/2003 M. A. in Physics  
State University of New York at Stony Brook, Stony Brook, NY, USA
- 09/1997-07/2001 B.S. in Materials Physics  
University of Science and Technology of China, Hefei, Anhui, China

**Professional Experience**

- 09/2016-present Associate Professor (with Tenure), Department of Radiation Oncology, The University of Texas Southwestern Medical Center, Dallas, TX
- 09/2016-present Associate Professor, Biomedical Engineering Graduate Program, The University of Texas Southwestern Medical Center, Dallas, TX
- 03/2016-present Co-Director of Research and Education, Division of and Medical Physics and Engineering, The University of Texas Southwestern Medical Center, Dallas, TX
- 09/2015-present Director of Postdoc Certificate Program in Medical Physics, The University of Texas Southwestern Medical Center, Dallas, TX
- 09/2014-8/2016 Adjunct Assistant Professor, Department of Bioengineering, The University of Texas at Dallas
- 07/2013-8/2016 Assistant Professor, Biomedical Engineering Graduate Program, The University of Texas Southwestern Medical Center, Dallas, TX
- 02/2012-present Member of Harold C. Simmons Cancer Center, The University of Texas Southwestern Medical Center, Dallas, TX
- 01/2010-8/2016 Assistant Professor (Tenure-Track), Department of Radiation Oncology, The University of Texas Southwestern Medical Center, Dallas, TX

**Certification**

- 05/2011-present American Board of Radiology, Certified in Therapeutic Medical Physics, P5012
- 01/2010-present Licensed Medical Physicist, State of Texas, MP10386
- 03/2015 Gamma Knife Training at UPMC

**Honors and Awards**

- 2013 American Cancer Society Research Scholar

*Curriculum Vitae for Jing Wang, Ph.D.*

2012	CPRIT Individual Investigator Research Award
2008	AAPM Annual Meeting Travel Award, ASTRO
2008	John S. Laughlin Science Council Research Symposium, AAPM
2008	Prostate Cancer Training Award, Department of Defense
2007	ASTRO Annual Meeting Travel Award, ASTRO
2006	Research Access Program Travel Grant, SUNY at Stony Brook
2005	Peter B. Kahn Fellowship, SUNY at Stony Brook
1999	Outstanding Student Scholarship, USTC
1998	Zhen Xiong Industry Scholarship, USTC

**Research Grants**

**Active:**

1. Cancer Prevention and Research Institute of Texas, RP160661 (Overall PI: Steve Jiang/ Project 5 PI: Jing Wang)  
Multi-Investigator Research Award  
Title: "Towards Carbon Beam Stereotactic Body Radiation Therapy (C-SBRT) for Higher Risk Early Stage Lung Cancer"  
Period: 08/31/2016 – 08/30/2021  
Role: PI for Project 5 Titled “Real-time volumetric imaging and dose reconstruction for carbon beam SBRT”  
Direct Cost for Overall Project: \$3,898,705                      Total Cost: \$4,103,894  
Direct Cost for Project 5: \$918,190                              Total Cost: \$966,516  
Effort: 18.5%
2. NIH R01 EB020366 (PI: Jing Wang)  
NIH National Institute of Biomedical Imaging and Bioengineering  
Title: "Next generation 4D-CBCT for lung cancer radiation therapy"  
Period: 01/15/2015 – 12/31/2018  
Role: PI  
Direct Cost: \$900,000                      Total Cost: \$1,439,797  
Effort: 23%
3. American Cancer Society, RSG-16-004-01-CCE (PI: Raquibul Hannan)  
Research Scholar Grant  
Title: "Image-Guided Stereotactic Radiation Therapy of Primary Renal Cancer"  
Period: 07/01/2016 – 06/30/2020  
Role: Co-Investigator  
Effort: 5%
4. NIH R03 EB021600 (PI: Mingwu Jin)  
NIH National Institute of Biomedical Imaging and Bioengineering  
Title: " Recovery of true scatter in blocked regions for blocker-based scatter correction of CBCT"  
Period: 06/10/2016 – 04/30/2018  
Role: subcontract PI  
Effort: 3%
5. American Cancer Society, RSG-13-326-01-CCE (PI: Jing Wang)  
Research Scholar Grant

*Curriculum Vitae for Jing Wang, Ph.D.*

Title: "High Quality Low-dose CBCT for Image-Guided and Adaptive Radiation Therapy"  
Period: 07/01/2013 – 06/30/2017 (including 1 year NCE)  
Role: PI  
Direct Cost: \$439,000            Total Cost: \$527,000  
Effort: 20% (Reduced to 3% since 7/1/2016)

6. Cancer Prevention and Research Institute of Texas, RP130109 (PI: Jing Wang)  
Individual Investigator Research Award  
Title: "Quantitative Cone-beam CT for Adaptive Radiation Therapy"  
Period: 06/01/2013 – 5/31/2017 (including 1-Year NCE)  
Role: PI  
Direct Cost: \$642,329            Total Cost: \$676,134  
Effort: 30% (Reduced to 15% since 6/1/2016)

7. Elekta Ltd, 104773 (PI: Jing Wang)  
Title: "Advanced Applications of Four-Dimensional Cone-beam CT"  
Period: 03/01/2014 – 02/28/2017  
Role: PI  
Effort: 3%

8. Cancer Prevention and Research Institute of Texas, RP110562-p2 (PI: Lei Dong/Peter Balter)  
Multi-Investigator Research Award  
Title: "Advanced Volumetric Imaging and Adaptive Radiotherapy for Detecting and Correcting for Inter-fractional Changes"  
Period: 07/01/2011 - 11/30/2017 (including 1.5 year NCE)  
Role: PI for UTSW Subcontract  
Direct Cost of UTSW Subcontract: \$539,804            Total Cost: \$568,737  
Effort: 20%

**Completed:**

1. American Cancer Society, ACS-IRG-02-196 (PI: Jing Wang)  
Institutional Research Grant  
Title: "Enhancement of four-dimension cone-beam computed tomography for radiation therapy of lung cancer"  
Period: 01/01/2011-12/31/2011  
Role: PI  
Direct cost: \$30,000
2. Elekta Ltd, 900555 (PI: Timothy Solberg)  
Title: "Applications of Image Guided Therapy"  
Period: 01/01/2010 –03/31/13  
Role: Co-investigator  
Effort: 10%
3. Department of Defense, W81XWH-08-1-0127 (PI: Jing Wang)  
Prostate Cancer Research Program  
Title: "Accurate and Fast Localization of Prostate for External Beam Radiation Therapy"  
Period: 02/15/2008 – 02/14/2010  
Role: PI

Direct cost: \$115,000

## Grant Review Activities

2017	<b>RSNA</b> Radiation Oncology Research Study Section
2016	<b>DoD</b> Lung Cancer Research Program –Detection, Diagnosis and Prognosis Panel
2016	<b>DoD</b> Discovery Panel-Acute Lung Injury Discovery Award (ALI-DA)
2016	Swiss National Science Foundation ( <b>SNSF</b> ), Div. Mathematics, Physical and Engineering Sciences
2015	<b>DoD</b> Lung Cancer Research Program –Detection, Diagnosis and Prognosis Panel
2015	<b>NIH</b> Special Emphasis Panel - NIAID Centers for Medical Countermeasures against Radiation Consortium (U19) Review Panel, ZAI1-PA-I-M2
2014	<b>DoD</b> Lung Cancer Research Program - Mechanism, Detection and Prognosis Panel
2014	<b>NIH</b> Biomedical Imaging Technology Study Section (BMIT-B)
2013	<b>NIH</b> Special Emphasis Panel - Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) for Radiation Therapy and Biology Study Section, ZRG1 OTC-R(11)
2013	<b>NIH</b> Special Emphasis Panel - Clinical and Translational Imaging Applications, ZRG1 DTCS-A (81) S

## Editorial Activities

2014-present	<b>Associate Editor</b> for Journal of Applied Clinical Medical Physics
2012-present	<b>Guest Associate Editor</b> for Medical Physics

## Journal and Conference Reviewer

2016-present	IEEE Access
2015-present	IEEE Transactions on Computational Imaging
2015-present	IEEE Transactions on Biomedical Engineering
2015-present	PLoS One
2015-present	British Journal of Radiology
2015-present	Technology in Cancer Research & Treatment
2014-present	Computer Methods and Programs in Biomedicine
2014-present	International Journal of Radiation Oncology, Biology, Physics
2013-present	International Journal of Computer Assisted Radiology and Surgery
2013-present	AAPM Annual Meeting
2012-present	E-Journal of Advanced Maintenance
2011	Malaysian Journal of Medical Sciences
2010-present	Physics in Medicine and Biology
2010	Imaging in Medicine
2010-present	Medical Dosimetry
2010-present	Physica Medica: European Journal of Medical Physics
2009-present	Journal of X-ray Science and Technology
2009-present	Medical and Biological Engineering and Computing
2008-present	Medical Physics
2007-present	IEEE Medical Imaging Conference
2006-present	IEEE Transactions on Medical Imaging
2006-present	IEEE Transactions on Imaging Processing
2006-present	IEEE Transactions on Nuclear Science

## **Committee Services**

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|--------------|---|
| 2017         | Scientific Committee, 2017 International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine (Fully 3D 2017), Xi'an, China |
| 2016         | Moderator, Image Processing/Segmentation/Registration/CAD, AAPM Annual Meeting, Washington DC   |
| 2016         | Scientific Committee, 4 <sup>th</sup> International Conference on Image Formation in X-Ray Computed Tomography (CT Meeting), Bamberg, Germany                       |
| 2016         | Interview with MSTP candidates, UTSW  |
| 2015         | Moderator, Cone-Beam CT, AAPM Annual Meeting, Anaheim, CA   |
| 2015         | UTSW Graduate School Interviewer for 2015 Entering Class  |
| 2014         | Moderator, Cone-Beam CT, AAPM Annual Meeting, Austin, TX  |
| 2014         | Moderator, Real-Time Imaging and Tracking, AAPM Annual Meeting, Austin, TX  |
| 2015-present | Disease site-specific team: CNS, Department of Radiation Oncology, UT Southwestern Medical Center   |
| 2013-2016    | Disease site-specific team: Head & Neck, Department of Radiation Oncology, UT Southwestern Medical Center   |
| 2012-present | Disease site-specific team: Lung, Department of Radiation Oncology, UT Southwestern Medical Center  |
| 2016-present | Physic Leader of Disease site-specific team: GU, Department of Radiation Oncology, UT Southwestern Medical Center   |
| 2012-2016    | Disease site-specific team: GU, Department of Radiation Oncology, UT Southwestern Medical Center  |
| 2011         | Departmental strategic research committee, Department of Radiation Oncology, UT Southwestern Medical Center   |
| 2010         | Departmental working group on the use of OBI and CBCT, Department of Radiation Oncology, UT Southwestern Medical Center   |

## **Professional Societies**

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|--------------|---|
| 2008-present | American Association of Physicists in Medicine (AAPM) |
| 2012-present | American Society for Radiation Oncology (ASTRO)       |

## **Invited Talks**

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|------|--|
| 2017 | SWAAPM Chapter Meeting, "Radiomics-based approaches for treatment outcome prediction in radiation oncology", Fort Worth, TX                                  |
| 2015 | International Workshop on Interactive and Spatial Computing, UT Dallas   |
| 2015 | Seminar, "Optimizing CBCT for IGRT", Suzhou Institute of Biomedical Engineering and Technology   |
| 2015 | Workshop, "Recent development in adaptive radiotherapy", Southern Medical University, Guangzhou, China   |
| 2013 | Seminar, "Quantitative cone-beam CT for adaptive radiation therapy", School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China        |
| 2013 | Seminar, "Cone-beam CT for image-guided and adaptive radiotherapy", Shenzhen Institute of Advanced Technology of Chinese Academy of Science, Shenzhen, China |

## Curriculum Vitae for Jing Wang, Ph.D.

- 2013 Seminar, "Optimizing cone-beam CT for image-guided radiotherapy", Department of Biomedical Engineering, Southern Medical University, Guangzhou, China
- 2013 Seminar, "Optimizing cone-beam CT for image-guided radiotherapy", Department of Radiation Oncology, Emory University
- 2013 Colloquium, "Cone-beam CT for image-guided radiation therapy", Department of Physics, University of Texas at Arlington
- 2010 Seminar, "A moving blocker system for scatter correction in cone-beam CT", Department of Radiation Oncology, University of California at San Diego

## Teaching

- 2015-present Director of Postdoc Certificate Program in Medical Physics
- 2015 Thesis committee for Cong Zhao, Department of Physics, University of Texas at Arlington
- 2015 Lecture, Radiation Therapy, Certificate Program in Medical Physics, Department of Radiation Oncology, UTSW
- 2014 BME Exam I committee for Xinzheng Wang, Biomedical Engineering Graduate Program, UTSW
- 2014 Lecturer, Fundamentals of Imaging in Medicine, Certificate Program in Medical Physics, Department of Radiation Oncology, UTSW
- 2014, 2016 Lecturer, Radiation Protection and Safety, Certificate Program in Medical Physics, Department of Radiation Oncology, UTSW
- 2013-present Organizer, Bi-weekly Journal Club, Department of Radiation Oncology, UTSW
- 2013-present Lecturer, Radiological Physics and Radiation Dosimetry, Certificate Program in Medical Physics, Department of Radiation Oncology, UTSW
- 2010-present Lecturer, Imaging for Radiation Therapy, for Medical Residents at Department of Radiation Oncology, UTSW
- 2008 Instructor, Image-guided Radiation Therapy (IGRT) short course  
Department of Radiation Oncology, Stanford University

## Trainee Supervision

### *Postdoctoral Fellows*

1. Alfonso Rodriguez, Ph.D., Medical Physics Resident, Department of Radiation Oncology, University of Texas Southwestern Medical Center, July 2016- June 2017
2. Liyuan Chen, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, January 2016-present
3. Shanzhou Niu, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, December 2015-present
4. You Zhang, Ph.D., Medical Physics Resident, Department of Radiation Oncology, University of Texas Southwestern Medical Center, July 2015- June 2016  
***AAPM Young Investigator Symposium Finalist (2016) -- 10 top-rated abstracts from 393 submissions.***  
***Won ASTRO abstract award on Basic/Translational Science - Junior Investigator Radiation Physics in the Physics category (2016) -- 11 top-rated basic and translational abstracts in clinical practice, radiation and cancer biology, and radiation physics.***
5. Deepak Shrestha, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, May 2015- present

*Curriculum Vitae for Jing Wang, Ph.D.*

6. Zhiguo Zhou, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, November 2014- present
7. Faraz Kalantari, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, September 2014- June 2017 (Position after training, Medical Physics Resident, Department of Radiation Oncology, UTSW)
8. Joubin Nasehi Tehrani, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, January 2014- June 2016, (Position after training, Medical Physics Resident at University of Virginia)
9. Zichun Zhong, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, August 2014- August 2015(Position after training, Assistant Professor at Wayne State University)
10. David Staub, Ph.D., (co-supervise with Dr. Steve Jiang), Department of Radiation Oncology, University of Texas Southwestern Medical Center, January 2014- May 2015 (Position after training, Data Scientist at Argyle Data)
11. Jun Dang, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, October 2012- December, 2014 (Position after training, Assistant Professor at Zhejiang University, China)
12. Zhiliang Li, Ph.D., Department of Radiation Oncology, University of Texas Southwestern Medical Center, June 2011- February 2012 (Position after training, Engineer at American Bureau of Shipping)

*Ph.D. Dissertation Students*

1. Dissertation advisor of Luo Ouyang, Radiological Sciences Graduate Program, University of Texas Southwestern Medical Center, January 2010-May 2014 (Position after training, Medical Physics Resident, Department of Radiation Oncology, UTSW)
2. Dissertation advisor of Xiaokun Huang, Biomedical Engineering Graduate Program, University of Texas Southwestern Medical Center, June 2015-present

*Junior/Visiting Faculty*

1. Shulong Li, Visiting Assistant Professor, Department of Biomedical Engineering, Southern Medical University, Guangzhou, China, July 2016-
2. Hongxia Hao, Ph.D., Visiting Assistant Professor, School of Computer Science and Technology, Xidian University, Xi'an, China, March 2016-
3. Yuncheng Zhong, Ph.D., Instructor, (co-supervise with Dr. Yiping Shao), Department of Radiation Oncology, University of Texas Southwestern Medical Center, November 2015-present
4. Xi Chen, Ph.D., Visiting Assistant Professor, Department of Radiation Oncology, University of Texas Southwestern Medical Center, April 2015- present
5. Bin Li, Visiting Assistant Professor, Department of Biomedical Engineering, Southern Medical University, Guangzhou, China, December 2014-August 2015
6. Qingwen Lyu, Visiting Assistant Professor, Department of Biomedical Engineering, Southern Medical University, Guangzhou, China, December 2014-February 2015

*Visiting Graduate Students*

1. Hua Zhang, Department of Biomedical Engineering, Southern Medical University, Guangzhou, China, April 2013-April 2014
2. Cong Zhao, Department of Physics, University of Texas at Arlington, May 2014 - August 2014

*Graduate Rotation Student*

## *Curriculum Vitae for Jing Wang, Ph.D.*

1. Yesenia Gonzalez, Biomedical Engineering Graduate Program, University of Texas Southwestern Medical Center, October 2016-December 2016
2. Xiaokun Huang, Biomedical Engineering Graduate Program, University of Texas Southwestern Medical Center, March 2015-May 2015

### *Medical Students*

William Chance, University of Texas Southwestern Medical Center, Summer, 2010

## **Clinical Service**

2010-2012 Weekly chart check  
2011- Present Oversee CT simulators, develop QA procedures  
2015-present Gamma Knife Clinical Physics

## **Patents**

1. **J. Wang** and L. Xing, "Accurate determination of the shape and localization of metallic object(s) in X-ray CT imaging", issued on 7/30/2013, Patent No. 8498465 (Stanford Office of Technology Licensing, Disclosure# S09-061, 2009)

## **Publications**

### *Book Chapters*

1. Y. Zhang, and **J. Wang**, "Chapter 64: Kilovoltage and Megavoltage radiotherapy imaging devices", in Handbook of X-ray Imaging: Physics and Technology, CRC Press, 2017
2. L. Ren, M. Descovich, and **J. Wang**, "Chapter 15: Advances in Verification and Delivery Techniques", in Principles and Practice of Image-Guided Radiation Therapy of Lung Cancer, Taylor & Francis Books, Inc., 2017

### *Peer-reviewed Journal Papers*

1. Y. Zhang, J. Nasehi, and **J. Wang**, A Biomechanical Modeling Guided CBCT Estimation Technique, *IEEE Trans. on Medical Imaging*, vol. , pp. , 2016, accepted
2. H. Zhang, D. Zeng, J. Ma, H. Zhang, **J. Wang**, and Zhengrong Liang "Applications of nonlocal means algorithm in low-dose X-ray CT image processing and reconstruction: a review", accepted, 2016
3. F. Kalantari , and **J. Wang** "Attenuation correction in 4D-PET using a single-phase attenuation map", *Medical Physics*, accepted, 2016
4. J. Nasehi, A. McEwan, and **J. Wang**, Lung Surface Deformation Prediction from Spirometry Measurement and Chest Wall Surface Motion, *Medical Physics*, vol. 43, pp. 5493-5502, 2016
5. J. Dang, F-F Yin, T. You, C. Dai, D. Chen and **J. Wang**, Simultaneous 4D-CBCT reconstruction with sliding motion constraint, *Medical Physics*, , vol. 43, pp. 5453-5463, 2016
6. Q. Shi, N. Sun, T. Sun, **J. Wang\***, and S. Tan, "Structure Adaptive CBCT Reconstruction Using Weighted Total Variation and Hessian Penalty", *Biomedical Optics Express*, vol. 7, pp. 3299-3322, 2016(\*co-corresponding author)
7. F. Kalantari, T. Li, M Jin, **J. Wang**, Respiratory Motion Correction in 4D-PET by Simultaneous Motion Estimation and Image Reconstruction (SMEIR), *Physics in Medicine and Biology*, vol. 61, pp. 5639-5661, 2016
8. Z. Zhou, M. Folkert, N. Cannon, P. Iyengar, K. Westover, Y. Zhang, H. Choy, R. Timmerman, S. Jiang, J. Yan, X-J Xie, and **J. Wang**, Predicting distant failure in early stage NSCLC treated with SBRT using clinical parameters, *Radiotherapy and Oncology*, vol. 119, pp. 501-504, 2016



9. B. Li, Q. Lyu, J. Ma, and **J. Wang**, Iterative Reconstruction for CT Perfusion with a Prior-image Induced Hybrid Nonlocal Means Regularization, *Medical Physics*, vol. 43, pp. 1688-1699, 2016
10. Z. Zhong, X. Gu, W. Mao, and **J. Wang**, 4D Cone-Beam CT Reconstruction Using Multi-Organ Meshes for Sliding Motion Modeling, *Physics in Medicine and Biology*, vol. 61, pp. 996-1020, 2016
11. Z. Zhong, X. Guo, Y. Cai, Y. Yang, **J. Wang**, X. Jia and W. Mao, 3D-2D Deformable Image Registration Using Feature-Based Non-uniform Meshes, *BioMed Research International*, volume 2016, Article ID 4382854, 19 pages, 2016
12. J. Nasehi, Y. Yang, R. Werner, W. Lu, D. Low, X. Guo, and **J. Wang**, "Sensitivity of Tumor Motion Simulation Accuracy to Lung Biomechanical Modeling Approaches and Parameters", *Physics in Medicine and Biology*, vol. 60, pp. 8833-8849, 2015
13. L. Ouyang, P. Lee, and **J. Wang**, "A moving-blocker-based strategy for simultaneous megavoltage and kilovoltage scatter correction in cone-beam computed tomography image acquired during volumetric modulated arc therapy", *Radiotherapy and Oncology*, vol. 115, pp. 425-430, 2015
14. Y. Xu, H. Yan, L. Ouyang, **J. Wang**, L. Zhou, L. Cervino, S. Jiang and X. Jia, "A method for volumetric imaging in radiotherapy using single x-ray projection", *Medical Physics*, vol.42, pp. 2498-2509, 2015
15. Y. Xu, T. Bai, H. Yan, L. Ouyang, Luo, A. Pompos, **J. Wang**, L. Zhou, S. Jiang, and X. Jia, "A practical cone-beam CT scatter correction method with optimized Monte Carlo simulations for image-guided radiation therapy", *Physics in Medicine and Biology*, vol. 60, pp. 3567-3587, 2015
16. H. Zhang, J. Ma, **J. Wang**, Y. Liu, H. Han, H. Lu, W. Moore and Z. Liang, "Statistical image reconstruction for low-dose CT using nonlocal means-based regularization. Part II: An adaptive approach", *Computerized Medical Imaging and Graphics*, vol. 43, pp. 26-35, 2015
17. T. Sun, N. Sun, **J. Wang\***, and S. Tan, "Iterative CBCT reconstruction using hessian penalty", *Physics in Medicine and Biology*, vol. 60, pp.1965-1987, 2015 (\*co-corresponding author)
18. V. Kearney, X. Gu, T. Chiu, H. Liu, S. Chen, **J. Wang**, J. Yordy, L. Nedzi, M. Mao, "Landmark-guided deformable image registration", *Physics in Medicine and Biology*, vol. 60, pp. 101-116, 2015
19. J. Dang, X. Gu, T. Pan and **J. Wang**, "A pilot clinical evaluation of a 4D-CBCT scheme based on Simultaneous Motion Estimation and Image Reconstruction", *Int J Radiat Oncol Biol Phys*, vol. 91, pp. 410-418, 2015
20. J. Dang, L. Ouyang, X. Gu and **J. Wang**, "Deformation vector fields (DVF)-driven image reconstruction for 4D-CBCT", *Journal of X-ray Science and Technology*, vol. 23, pp. 11-23, 2015
21. H. Zhang, L. Ouyang, J. Huang, J. Ma, W. Chen, and **J. Wang**, "Few-view cone-Beam CT Reconstruction with Deformed Prior Image", *Medical Physics*, vol. 41, 121905 (9 pp) 2014
22. W. Lu, H. Yan, X. Gu, Z. Tian, L. Ouyang, L. Yang, L. Zhou, L. Cervino, **J. Wang**, S. Jiang, and X. Jia, Reconstructing cone-beam CT with spatially varying quality for adaptive radiotherapy, a proof-of-principle study, *Physics in Medicine and Biology*, vol. 59, pp. 6251-6266, 2014
23. Y. Liu, J. Ma, H. Zhang, **J. Wang** and Z. Liang, "Low-mAs X-ray CT image reconstruction by adaptive-weighted TV constrained penalized re-weighted least-squares", *Journal of X-ray Science and Technology*, vol. 22, pp. 437-457, 2014
24. H. Zhang, J. Ma, **J. Wang**, J. Huang, Y. Liu, H. Han, and Z. Liang, "Statistical iterative reconstruction for low-dose CT using nonlocal means-based regularization", *Computerized Medical Imaging and Graphics*, vol.38, pp. 423-435, 2014

25. H. Zhang, H. Han, **J. Wang**, J. Ma, Y. Liu, W. Moore, Z. Liang, "Deriving adaptive MRF coefficients from previous normal-dose CT scan for low-dose image reconstruction via penalized weighted least-squares minimization", *Medical Physics*, vol. 41, 041916 (15 pp), 2014
26. H. Zhang, L. Ouyang, J. Ma, J. Huang, W. Chen, and **J. Wang**, "Noise Correlation in CBCT Projection Data and its Application for Noise Reduction in Low-dose CBCT", *Medical Physics*, vol. 41, 031906 (10 pp), 2014
27. **J. Wang**, "Iterative image reconstruction algorithms for CT metal artifacts reduction: a review", *Recent patents on Medical Imaging*, vol. 3, pp. 111-117, 2013 (Invited Review)
28. **J. Wang** and X. Gu, "Simultaneous motion estimation and image reconstruction (SMEIR) for 4D cone-beam CT", *Medical Physics*, vol. 40, pp. 101912 (11 pp), 2013
29. L. Ouyang, K. Song, and **J. Wang**, "A moving blocker system for cone-beam computed tomography scatter correction", *Medical Physics*, vol. 40, pp. 071903 (9pp), 2013
30. X. Gu, B. Dong, **J. Wang**, J. Yordy, L. Mell, X. Jia, and S. Jiang, "A contour-Guided deformable image registration algorithm for adaptive radiotherapy", *Physics in Medicine and Biology*, vol. 58, pp. 1889-1901, 2013
31. **J. Wang** and X. Gu, "High quality four dimensional cone-beam CT by deforming prior images", *Physics in Medicine and Biology*, vol. 58, pp. 231-246, 2013
32. **J. Wang**, J. Robar, and H. Guan, "Noise suppression in reconstruction low-Z target MV CBCT images", *Medical Physics*, vol. 39, pp 5111-5117, 2012
33. L. Ouyang, T. Solberg, and **J. Wang**, " Noise reduction in low-dose cone beam CT by incorporating prior volumetric image information", *Medical Physics*, vol. 39, pp. 2569-2577, 2012
34. Y. Yang, Z. Zhong, G. Rong, X. Guo, **J. Wang**, T. Solberg, and W. Mao, "A novel markerless technique to evaluate daily lung tumor motion based on conventional cone-beam CT projection data", *Int J Radiat Oncol Biol Phys*, vol.75, pp 749-756, 2012
35. L. Ouyang, T. Solberg, and **J. Wang**, " Effects of the penalty to penalized weighted least-squares image reconstruction for low-dose CBCT", *Physics in Medicine and Biology*, vol. 56, pp. 5535-5552, 2011
36. **J. Wang**, H. Guan and T. Solberg, "Inverse determination of the penalty parameter in penalized weighted least-squares algorithm for noise reduction of low-dose CBCT", *Medical Physics*, vol. 38, pp. 4066-4072 , 2011
37. X. Zhang, **J. Wang**, and L. Xing, "Metal artifact reduction in x-ray computed tomography (CT) by constrained optimization", *Medical Physics*, vol. 38, pp. 701-711, 2011
38. **J. Wang**, W. Mao, and T. Solberg, " Scatter correction for cone-beam computed tomography using one-dimensional moving blocker strips: a preliminary study", *Medical Physics*, vol. 37, pp. 5792-5800, 2010
39. **J. Wang**, and L. Xing, "A binary image reconstruction technique for Accurate determination of the shape and location of metal objects in x-ray computed tomography", *Journal of X-ray Science and Technology*, vol. 18, pp 403-414, 2010
40. **J. Wang**, H. Lu, Z. Liang and L. Xing, "Recent development of low-dose cone-beam computed tomography", *Current Medical Imaging Reviews*, vol. 6 pp 72-81, 2010, (Invited Review)
41. B. Meng, **J. Wang**, and L. Xing, " Sinogram pre-processing and binary reconstruction for determination of the shape and location of metal objects in Computed Tomography (CT)", *Medical Physics*, vol. 37, pp. 5867-5875, 2010
42. K. Choi , **J. Wang** , L. Zhu , T. Suh , S. Boyd, L. Xing, "Compressed sensing with a first-order method for cone-beam CT dose reduction", *Medical Physics*, vol. 37, pp. 5113-5125, 2010.
43. L. Zhu, **J. Wang**, Y. Q. Xie, J. Starman, R. Fahrig and L. Xing, "A patient set-up protocol based on partially blocked cone-beam CT," *Technology in Cancer Research & Treatment* vol. 9, pp. 191-198, 2010.

*Curriculum Vitae for Jing Wang, Ph.D.*

44. **J. Wang**, L. Zhu, and L. Xing, “Noise reduction in low-dose X-ray fluoroscopy for Image Guided Radiation Therapy (IGRT)”, *Int J Radiat Oncol Biol Phys*, vol.72, pp.637-643, 2009
45. L. Zhu, Y. Xie, **J. Wang**, and L. Xing “Scatter correction for cone-Beam CT in radiation therapy”, *Medical Physics*, vol. 36, pp. 2258-2268, 2009
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*Conference Abstracts:*

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2. Y Zhang, J Nasehi Tehrani, and **J Wang**, "A Biomechanical Modeling Guided CBCT Reconstruction Technique (Bio-recon)", *ASTRO Annual Meeting*, 2016, (**Oral** presentation, **Winner of Basic/Translational Science - Junior Investigator Radiation Physics**)
3. Y Zhang, J Ma, and **J Wang**, "Development and Evaluation of an Adaptive Deformation-recovery and Intensity-correction (ADRIC) CT Reconstruction Technique", *AAPM Annual Meeting*, 2016 (**Oral** presentation)
4. Y Zhang, J Nasehi Tehrani, and **J Wang**, "Development and Evaluation of a Biomechanical Modeling-Assisted CBCT Reconstruction Technique (Bio-Recon)", *AAPM Annual Meeting*, 2016 (**Oral** presentation, **John R. Cameron Junior Investigator Competition Finalist**, one of top 10 scored abstracts from 392 submissions)
5. Z Zhou, M Folkert, P Iyengar, Y Zhang, and **J Wang**, "Predicting Distant Failure in Lung SBRT Using Multi-Objective Radiomics Model", *AAPM Annual Meeting*, 2016
6. J Nasehi Tehrani, A McEwan, and **J Wang**, "Lung surface displacement vector fields motion prediction by monitoring respiratory surrogate signals", *AAPM Annual Meeting*, 2016 (**Oral** presentation)
7. S Niu, Y Zhang, J Ma, and **J Wang** "Iterative reconstruction via prior image constrained total generalized variation for spectral CT", *AAPM Annual Meeting*, 2016 (**Oral** presentation)
8. L. Chen, Z. Zhou, and **J Wang**, "Constrained Chan-Vese algorithm for tumor segmentation in PET images", *AAPM Annual Meeting*, 2016 (**Snap Oral** presentation)
9. X. Chen, L Ouyang, H. Yan, X. Jia, and J. Wang, "Optimization of the design of a moving blocker for cone-beam CT scatter correction: experimental evaluation" *AAPM Annual Meeting*, 2016 (**Oral** presentation)
10. X. Chen, K. Thomas, R Hannan, and **J Wang**, Predicting gene Mutations in Renal Cell Carcinoma by analyzing contrast-enhance CT: validation with TCGA datasets, *AAPM Annual Meeting*, 2016 (**Oral** presentation)
11. F Kalantari, and **J Wang**, "Attenuation correction in 4D-PET using a single phase matched attenuation map using a penalized non-rigid transformation", *AAPM Annual Meeting*, 2016 (**Oral** presentation)
12. D Shrestha, N Qin, Y Zhang, X Jia, and **J Wang**, "Toward heavy ion computed tomography with Carbon ions: A Monte Carlo Study", *AAPM Annual Meeting*, 2016

13. Y Zhong, Y Zhang, Y Shao ,and **J Wang**, “Feasibility of Applying SMEIR Method On Small Animal 4D Cone Beam CT”, *AAPM Annual Meeting*, 2016 (**Oral** presentation)
14. Z Zhong, L Zhuang , X Gu, **J Wang**, H Chen, X Zhen, “GPU-Based 4D Deformable Image Registration Using Adaptive Tetrahedral Mesh Modeling”, *AAPM Annual Meeting*, 2016 (**Oral** presentation)
15. Y Zhong, X Sun, W Lu, X Jia, **J Wang**, Y Shao, “On-Line Beam Range Verification with Multiple Scanning Particle Beams: Initial Feasibility Study with Simulations”, *AAPM Annual Meeting*, 2016 (**Snap Oral** presentation)
16. L Chen, C Shen, **J Wang**, S Jiang , X Jia, “Progressive Dose Control for Cone Beam CT with Deformation Assisted Temporal Nonlocal Means Method”, *AAPM Annual Meeting*, 2016 (**Oral** presentation)
17. M Naseri, H Rajabi, **J Wang**, F Kalantari, “Respiratory Motion Correction in 4D-Multi Pinhole Small Animal SPECT”, *AAPM Annual Meeting*, 2016 (**Oral** presentation)
18. Q Shi, P Cheng, **J Wang**, S Tan, S Tan, “Multiple Penalties with Different Orders for Structure Adaptive CBCT Reconstruction”, *AAPM Annual Meeting*, 2016 (ePoster Campus Discussion)
19. Z. Zhou, N. Cannon, M. Folkert, P. Iyengar, H. Choy, R. Timmerman, S. Jiang, and **J. Wang**, "Predicting Distant Failure in Lung SBRT Using Clinical Parameters", *ASTRO Annual Meeting*, 2015 (**Oral** presentation)
20. Z. Zhong, X. Gu, P. Iyengar, W. Mao, X. Guo, and **J. Wang**, "A Multi-organ Meshing Method for Sliding Motion Modeling in 4D-CBCT Reconstruction", *ASTRO Annual Meeting*, 2015 (**Oral** presentation)
21. J Nasehi Tehrani, Y. Yang, R. Werner, W. Lu, D. Low, X. Guo, **J. Wang**, Sensitivity of Tumor Motion Simulation Accuracy to Lung Biomechanical Modeling Approaches and Parameters, *AAPM Annual Meeting*, vol. 42, pp. 3729 ,2015 (**Oral** presentation)
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27. Q. Lyu, B. Li, J. Ma, **J. Wang**, Iterative CBCT Reconstruction with a Feature-Preserving Penalty, *AAPM Annual Meeting*, vol. 42, pp. 3241 ,2015
28. D. Staub, R. Hannan, K. Thomas, S. Jiang, I. Pedrosa, P. Kapur, J. Brugarolas , **J. Wang** , Predicting Gene Mutations in Renal Cell Carcinoma Using Machine Learning, *AAPM Annual Meeting*, vol. 42, pp. 3586, 2015 (**Oral** presentation)
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40. J. Nasehi Tehrani<sup>1</sup>, X. Guo, Y. Yang, and **J. Wang**, 3D Markerless Registration of Lung Based On Coherent Point Drift: Application in Image Guided Radiotherapy, *AAPM Annual Meeting*, vol. 41, pp. 101, 2014 (**Oral** presentation)
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50. **J. Wang**, J. Robar, and H. Guan, "Noise Suppression in Reconstruction Low-Z Target MV CBCT Images", *AAPM Annual Meeting*, vol. 38, pp. 3879, 2011 (**Oral** presentation)
51. **J. Wang**, L. Ouyang, W. Lu, and T. Solberg, "Low-Dose CBCT by Iterative Image Reconstruction Using Non-Local Edge-Preserving Prior", *AAPM Annual Meeting*, vol. 38, pp. 3403, 2011
52. L. Ouyang, W. Chance, T. Solberg, and **J. Wang**, "Dose Reduction for CBCT by Incorporating Prior Volumetric Image Information", *AAPM Annual Meeting*, vol. 38, pp. 3714, 2011 (**Oral** presentation)
53. W. Lu, W. Yao, **J. Wang** and D. Yang "Noise Reduction with Detail Preservation for Low-Dose KV CBCT Using Non-Local Means: Simulated Patient Study", *AAPM Annual Meeting*, vol. 38, pp. 3445, 2011
54. B. Meng, **J. Wang**, and L. Xing, "Metal Artifacts Reduction Using Sinogram Pre-Processing and Post-Processing in Computed Tomography (CT)", *AAPM Annual Meeting*, vol. 38, pp. 3404, 2011
55. X. Zhang, L. Xing, and **J. Wang**, "CT Metal Artifact Reduction by Dual Constrained Optimizations", *ASTRO Annual Meeting*, 2010
56. **J. Wang**, W. Mao, and T. Solberg, "A novel scatter correction scheme for cone-beam computed tomography using moving 1D blocker strips", *AAPM Annual Meeting*, vol. 37, pp. 3443, 2010 (**Oral** presentation)
57. **J. Wang**, H. Guan, and T. Solberg, "Optimize the smoothing parameter in penalized weighted least-squares algorithm for noise reduction of low-dose CBCT", vol. 37, pp. 3352, *AAPM Annual Meeting*, 2010
58. L. Ouyang, T. Solberg, and **J. Wang**, "Penalized weighted least-squares image reconstruction for low-dose CBCT: a comparison study of different edge-preserving penalties", *AAPM Annual Meeting*, vol. 37, pp. 3093, 2010
59. W. Lu, D. Yang, and **J. Wang**, "Noise reduction with detail preservation for low-dose kilovoltage CBCT using nonlocal means algorithm", *AAPM Annual Meeting*, vol. 37, pp. 3394, 2010 (**Oral** presentation)
60. W. Mao, **J. Wang**, R. Foster, K Song, and T. Solberg, "Direct investigation of geometric coincidence among Calypso system, onboard kV imaging, and MV treatment beam imaging", *AAPM Annual Meeting*, vol. 37, pp. 3149, 2010
61. B. Meng, **J. Wang**, S. Boyd, and L. Xing, "Binary CT image reconstruction with limited number of projections for metal artifacts removal", *AAPM Annual Meeting*, vol. 37, pp. 3111, 2010
62. X. Zhang, **J. Wang**, and L. Xing, "A Constrained Optimization Algorithm for CT Metal Artifact Reduction", *AAPM Annual Meeting*, vol. 37, pp. 3379, 2010 (**Oral** presentation)
63. K. Choi, **J. Wang**, L. Zhu, T. Suh, S. Boyd, and L. Xing, "Compressed Sensing with a First-Order Method for Low-Dose Cone-Beam CT Reconstruction", *AAPM Annual Meeting*, vol. 37, pp. 3342, 2010
64. **J. Wang**, and L. Xing, "Incorporation of Prior Volumetric Image Information into Cone-beam CT (CBCT) Reconstruction: a Novel Strategy of Imaging dose Reduction for Daily Patient Setup and Adaptive Radiation Therapy", *ASTRO Annual Meeting*, 2009 (**Oral** presentation)
65. K. Choi, **J. Wang**, L. Zhu, Y. Ye and L. Xing, "CBCT Image Reconstruction via Anisotropic Total-Variation Regularization", *ASTRO Annual Meeting*, 2009
66. X. Zhang, **J. Wang**, and L. Xing, "Metal Artifact Reduction in Cone-Beam CT by Constrained Optimization", *ASTRO Annual Meeting*, 2009
67. **J. Wang** and L. Xing, "Accurate noise modeling of cone-beam CT projection data", *AAPM Annual Meeting*, vol. 36, pp. 2696, 2009 (**Oral** presentation)

*Curriculum Vitae for Jing Wang, Ph.D.*

68. **J. Wang**, T. Li, and L. Xing, “Iterative image reconstruction for CBCT using edge-preserving prior”, *AAPM Annual Meeting*, vol. 36, pp. 2444, 2009
69. L. Xing, **J. Wang**, and L. Zhu, “Noise suppression in scatter correction for Cone-Beam CT”, *AAPM Annual Meeting*, vol. 36, pp. 2697, 2009 (**Oral presentation**)
70. **J. Wang**, T. Li, and L. Xing, “Low-dose CBCT Imaging for External Beam Radiotherapy”, *ASTRO Annual Meeting*, 2008 (**Oral presentation**)
71. X. Zhang, **J. Wang**, L. Zhu, and L. Xing, “Low-dose X-ray fluoroscopy for Image Guided Radiation Therapy (IGRT)”, *ASTRO Annual Meeting*, 2008
72. **J. Wang**, T. Li, Z. Liang and L. Xing, “Dose reduction for kilovoltage cone-beam computed tomography in radiation therapy”, *AAPM Annual Meeting*, vol. 35, pp. 2938, 2008 (**selected for long presentation at the John S. Laughlin Science Council Research Symposium**)
73. **J. Wang**, L. Zhu, A. Chai, and L. Xing, “Temporal filtering of noise in low-dose x-ray fluoroscopy”, *AAPM Annual Meeting*, vol. 35, pp. 2660, 2008
74. L. Zhu, **J. Wang**, Y. Xie, J. Starman, R. Fahrig, and L. Xing, “A patient set-up protocol based on partially blocked cone-beam CT”, *AAPM Annual Meeting*, vol. 35, pp. 2645, 2008
75. **J. Wang**, T. Li, and L. Xing, “Iterative image reconstruction for on-board CBCT”, *Electronic Portal Imaging & Positioning Devices*, 2008
76. **J. Wang**, M. Cao, and L. Xing, “Toward Clinical Implementation of Adaptive Treatment Planning: Auto-Propagation of Contours from Planning CT to Cone Beam CT Images”, *ASTRO Annual Meeting*, 2007 (**Oral presentation**)
77. J. You, **J. Wang**, and Z. Liang, “An investigation on FBP reconstruction for attenuated Radon transform with partial data”, *The Annual Meeting of Society of Nuclear Medicine*, 2007.