

CONTACT
INFORMATION

Snail Mail and Email Address

Online Profiles

University of Texas Southwestern Medical Center
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www: Google Scholar
www: ResearchGate
www: Mendeley
www: Scopus

CURRENT
ACADEMIC
APPOINTMENTS

Current Academic Appointments

- Associate Professor** September 2017 to present
 ◇ UTSW Medical Center, Dallas, TX, Department of Radiation Oncology
 Division of Medical Physics and Engineering
- Adjunct Faculty** September 2009 to present
 ◇ UTSW Medical Center, Dallas, TX, School of Health Professions
 Department of Health Care Sciences

PREVIOUS
ACADEMIC
APPOINTMENTS

Previous Academic Appointments

- Assistant Professor** July 2008 to September 2017
 ◇ UT Southwestern Medical Center, Dallas, TX
 Department of Radiation Oncology
- Medical Physics Resident** July 2006 to July 2008
 ◇ Virginia Commonwealth University, Richmond, VA
 Department of Radiation Oncology
- Postdoctoral Researcher** January 2005 to June 2006
 ◇ Washington University School of Medicine, Saint Louis, MO
 Department of Radiation Oncology

EDUCATION

Education

- Ph.D. Physics** December 2004
 ◇ Kent State University, Kent, OH
 Doctor of Philosophy Experimental solid-state physics
 ◇ Thesis: *Light Scattering Studies of Dynamics of Bent-Core Liquid Crystals*
- B.S. Physics** July 1998
 ◇ University of Belgrade, Belgrade, Serbia
 Bachelor of Science Physics, Experimental Physics

**CERTIFICATION
AND LICENSURE**

Certification and Licensure

- Diplomate of American Board of Radiology (DABR)** June 2009 to present
- ◇ **The American Board of Radiology**
 - ★ Board Certified in Therapeutic Radiologic Physics
- TX Medical Physics License** July 2008 to present
- ◇ **The Texas Medical Board Regulatory Programs**
 - ★ Texas Medical Physics License FMP00010227

**PROFESSIONAL
MEMBERSHIPS**

Professional Memberships

- The American Association of Physicists in Medicine (AAPM)**
- ★ Junior Membership January 2004 to December 2005
 - ★ Full Membership January 2006 to present
- The American Society for Radiation Oncology (ASTRO)**
- ★ Associate Membership October 2008 to present
- The American Physical Society (APS)**
- ★ Regular Membership January 2001 to present

**AWARDED
GRANTS**

Awarded Grants

- [1] **Grantor: National Institutes of Health (NIH)**
Project Title: 1R01CA214639-01A1 Next Generation Small Animal Radiation Research Platform
Role: Co-Investigator
Annual amount: \$545,755 February 2018
Total amount of award: \$2,728,755 February 2018 to January 2023
- [2] **Grantor: Cancer Prevention and Research Institute of Texas (CPRIT)**
Project Title: RP140285 Noninvasive Identification of Prostate Tumor Hypoxia as a Prognostic Biomarker
Role: Co-Investigator
Annual amount: \$298,606 August 2014
Total amount of award: \$895,820 August 2014 to August 2018
- [3] **Grantor: Cancer Prevention and Research Institute of Texas (CPRIT)**
Project Title: RP120670-C3 Image guided irradiation of small animals - Exploiting the radiobiology of stereotactic ablative radiotherapy for lung cancer
Role: Co-Investigator
Annual amount: \$177,582 August 2012
Total amount of award: \$887,912 August 2012 to August 2017
- [4] **Grantor: Radiological Society of North America**
Project Title: Local Hypothermia as a Radioprotector during Prostate Stereotactic Body Radiotherapy

Awarded Grants

Role: Co-Investigator
Annual amount: \$20,000 July 2014
Total amount of award: \$40,000 July 2014 to July 2016

- [5] **Grantor: National Institutes of Health (NIH)**
Project Title: S10 RR028011-01 XRad 225Cx Image Guided Biological Irradiator System
Role: Co-Investigator
Annual amount: \$550,000 August 2010

RESEARCH INTERESTS

Radiation Oncology Physics

Preclinical Radiotherapy Delivery Technologies
Stereotactic Radiotherapy
Intensity Modulated Radiation Therapy (IMRT)
Brachytherapy
Radiotherapy Quality Assurance (QA)

REFEREED JOURNAL PUBLICATIONS

Published Articles

- [1] **Improved Survival Outcomes for Kidney Cancer Patients With Brain Metastases**
Isaac Alex Bowman, Alisha Bent, Tri Le, Alana Christie, Zabi Wardak, Yull Arriaga, Kevin Courtney, Hans Hammers, Samuel Barnett, Bruce Mickey, Toral Patel, Tony Whitworth, Strahinja Stojadinovic, Raquibul Hannan, Lucien Nedzi, Robert Timmerman, James Brugarolas; *Clinical Genitourinary Cancer*, November 2018
doi:10.1016/j.clgc.2018.11.007
- [2] **Stereotactic Radiosurgery for Multiple Brain Metastases From Renal-Cell Carcinoma**
Zabi Wardak, Alana Christie, Alex Bowman, Strahinja Stojadinovic, Lucien Nedzi, Sam Barnett, Toral Patel, Bruce Mickey, Tony Whitworth, Raquibul Hannan, James Brugarolas, Robert Timmerman; *Clinical Genitourinary Cancer*, November 2018
doi:10.1016/j.clgc.2018.11.006
- [3] **MR-CBCT image-guided system for radiotherapy of orthotopic rat prostate tumors**
Tsuicheng D. Chiu, Tatsuya J. Arai, James Campbell III, Steve B. Jiang, Ralph P. Mason, Strahinja Stojadinovic; *PloS one*, May 2018
doi:10.1371/journal.pone.0198065
- [4] **Real-Time Whole-Brain Radiation Therapy: A Single-Institution Experience**
Anh H Le, Strahinja Stojadinovic, Robert Timmerman, Hak Choy, Romona

Published Articles Continued

- L Duncan, Steve B Jiang, Arnold Pompos; *International Journal of Radiation Oncology* Biology* Physics*, December 2017
doi:10.1016/j.ijrobp.2017.12.282
- [5] **Effects of clinical X-ray irradiation on UHMWPE films**
Nenad Stojilovic, Sasa V Dordevic, Strahinja Stojadinovic; *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, November 2017
doi:10.1016/j.nimb.2017.08.023
- [6] **A deep convolutional neural network-based automatic delineation strategy for multiple brain metastases stereotactic radiosurgery**
Yan Liu, Strahinja Stojadinovic, Brian Hrycushko, Zabi Wardak, Steven Lau, Weiguo Lu, Yulong Yan, Steve B Jiang, Xin Zhen, Robert Timmerman, Lucien Nedzi, Xuejun Gu; *PloS one*, October 2017
doi:10.1371/journal.pone.0185844
- [7] **Reduced toxicity with equivalent outcomes using three-dimensional volumetric (3DV) image-based versus nonvolumetric point-based (NV) brachytherapy in a cervical cancer population**
Kimberly M Thomas, Genevieve Maquilan, Strahinja Stojadinovic, Paul Medin, Michael R Folkert, Kevin Albuquerque; *PloS one*, June 2017
doi:10.1016/j.brachy.2017.05.001
- [8] **Tumor physiological changes during hypofractionated stereotactic body radiation therapy assessed using multi-parametric magnetic resonance imaging**
Heling Zhou, Zhang Zhang, Rebecca Denney, Jessica S Williams, Jeni Gerberich, Strahinja Stojadinovic, Debabrata Saha, John M Shelton, Ralph P Mason; *Oncotarget*, June 2017
doi:10.18632/oncotarget.16395
- [9] **Technical Note: System for evaluating local hypothermia as a radioprotector of the rectum in a small animal model**
Brian A Hrycushko, Chenchen Bing, Cecil Futch, Michelle Wodzak, Strahinja Stojadinovic, Paul M Medin, Rajiv Chopra; *Medical Physics*, May 2017
doi:10.1002/mp.12353
- [10] **Automated high-dose rate brachytherapy treatment planning for a single-channel vaginal cylinder applicator**
Yuhong Zhou, Peter Klages, Jun Tan, Yujie Chi, Strahinja Stojadinovic, Ming Yang, Brian Hrycushko, Paul Medin, Arnold Pompos, Steve Jiang, Kevin Albuquerque, Xun Jia; *Physics in Medicine and Biology*, May 2017
doi:10.1088/1361-6560/aa637e
- [11] **Automatic metastatic brain tumor segmentation for stereotactic radiosurgery applications**

Published Articles Continued

- Yan Liu, Strahinja Stojadinovic, Brian Hrycushko, Zabi Wardak, Weiguo Lu, Yulong Yan, Steve B Jiang, Robert Timmerman, Ramzi Abdulrahman, Lucien Nedzi, Xuejun Gu; *Physics in Medicine and Biology*, November 2016
doi:10.1088/0031-9155/61/24/8440
- [12] **Developing oxygen-enhanced magnetic resonance imaging as a prognostic biomarker of radiation response**
Derek A White, Zhang Zhang, Li Li, Jeni Gerberich, Strahinja Stojadinovic, Peter Peschke, Ralph P Mason; *Cancer letters*, September 2016
doi:10.1016/j.canlet.2016.06.003
- [13] **The step-and-shoot IMRT overshooting phenomenon: a novel method to mitigate patient overdosage**
Heming Zhen, Luo Ouyang, Qinan Bao, Nan Qin, Strahinja Stojadinovic, Arnold Pompos; *Journal of applied clinical medical physics*, July 2016
doi:10.1120/jacmp.v17i4.6101
- [14] **Effective Rat Lung Tumor Model for Stereotactic Body Radiation Therapy**
Zhang Zhang, Michelle Wodzak, Olivier Belzile, Heling Zhou, Brock Sishc, Hao Yan, Strahinja Stojadinovic, Ralph P Mason, Rolf A Brekken, Rajiv Chopra, Michael D Story, Robert Timmerman, Debabrata Saha; *Radiation research*, May 2016
doi:10.1667/RR14382.1
- [15] **Tumor radio-sensitivity assessment by means of volume data and magnetic resonance indices measured on prostate tumor bearing rats**
Antonella Belfatto, Derek A White, Ralph P Mason, Zhang Zhang, Strahinja Stojadinovic, Guido Baroni, Pietro Cerveri; *Medical physics*, April 2016
doi:10.1118/1.4941746
- [16] **Dosimetric comparison of Acuros XB with collapsed cone convolution/superposition and anisotropic analytic algorithm for stereotactic ablative radiotherapy of thoracic spinal metastases**
Heming Zhen, Brian Hrycushko, Huichen Lee, Robert Timmerman, Arnold Pompos, Strahinja Stojadinovic, Ryan Foster, Steve B Jiang, Timothy Solberg, Xuejun Gu; *Journal of Applied Clinical Medical Physics*, July 2015
doi:10.1120/jacmp.v16i4.5493
- [17] **Breaking bad IMRT QA practice**
Strahinja Stojadinovic, Luo Ouyang, Xuejun Gu, Arnold Pompos, Qinan Bao, Timothy D Solberg; *Journal of Applied Clinical Medical Physics*, May 2015
doi:10.1120/jacmp.v16i3.5242

Published Articles Continued

- [18] **Genome-Wide Association Analysis of Radiation Resistance in *Drosophila melanogaster***
Mahesh Vaisnav, Chao Xing, Hung-Chih Ku, Daniel Hwang, Strahinja Stojadinovic, Alexander Pertsemlidis, John M Abrams; *PloS one*, August 2014
doi:10.1371/journal.pone.0104858
- [19] **Correlations of noninvasive BOLD and TOLD MRI with pO2 and relevance to tumor radiation response**
Rami R Hallac, Heling Zhou, Rajesh Pidikiti, Kwang Song, Strahinja Stojadinovic, Dawen Zhao, Timothy Solberg, Peter Peschke, Ralph P Mason; *Magnetic resonance in medicine*, May 2014
doi:10.1002/mrm.24846
- [20] **The importance of dosimetry standardization in radiobiology**
Marc Desrosiers, Larry DeWerd, James Deye, Patricia Lindsay, Mark K Murphy, Michael Mitch, Francesca Macchiarini, Strahinja Stojadinovic, Helen Stone; *Journal of research of the National Institute of Standards and Technology*, December 2013
doi:10.6028/jres.118.021
- [21] **Partial depletion of regulatory T cells does not influence the inflammation caused by high dose hemi-body irradiation**
Shihong Ma, James A Richardson, Andrew Bitmansour, Timothy D Solberg, Rajesh Pidikiti, Kwang Song, Strahinja Stojadinovic, Ellen S Vitetta, Jeffrey J Meyer; *PloS one*, November 2013
doi:10.1371/journal.pone.0056607
- [22] **An athymic rat model of cutaneous radiation injury designed to study human tissue-based wound therapy**
Lucas H Rifkin, Strahinja Stojadinovic, Collin H Stewart, Kwang H Song, Michael C Maxted, Marcus H Bell, Natalie S Kashefi, Michael P Speiser, Michel Saint-Cyr, Michael D Story, Rod J Rohrich, Spencer A Brown, Timothy D Solberg; *Radiation Oncology*, May 2012
doi:10.1186/1748-717X-7-68
- [23] **Dosimetric characterization of an image-guided stereotactic small animal irradiator**
Rajesh Pidikiti, Strahinja Stojadinovic, Michael P Speiser, Kwang H Song, Frederick Hager, Debabrata Saha, Timothy D Solberg; *Physics in medicine and biology*, March 2011
doi:10.1088/0031-9155/56/8/016
- [24] **An x-ray image guidance system for small animal stereotactic irradiation**
Kwang H Song, Rajesh Pidikiti, Strahinja Stojadinovic, Michael P Speiser, Serguei Seliounine, Debabrata Saha, Timothy D Solberg; *Physics in*

Published Articles Continued

medicine and biology, November 2010
doi:10.1088/0031-9155/55/23/011

- [25] **Feasibility of small animal cranial irradiation with the microRT system**
Erich L Kiehl, Strahinja Stojadinovic, Kathleen T Malinowski, David Limbrick, Sarah C Jost, Joel R Garbow, Joshua B Rubin, Joseph O Deasy, Divya Khullar, Enrique W Izaguirre, Parag J Parikh, Daniel A Low, Andrew J Hope; *Medical physics*, October 2008
doi:10.1118/1.2977762
- [26] **MicroRT-Small animal conformal irradiator**
Strahinja Stojadinovic, Daniel A Low, Andrew J Hope, Milos Vicic, Joseph O Deasy, Jing Cui, Divya Khullar, Parag J Parikh, Kathleen T Malinowski, Enrique W Izaguirre, Sasa Mutic, Perry W Grigsby; *Medical physics*, November 2007
doi:10.1118/1.2799887
- [27] **Progress toward a microradiation therapy small animal conformal irradiator**
Strahinja Stojadinovic, Daniel A Low, Milos Vicic, Sasa Mutic, Joseph O Deasy, Andrew J Hope, Parag J Parikh, Perry W Grigsby; *Medical physics*, October 2006
doi:10.1118/1.2349693
- [28] **Critical behavior at the isotropic-to-nematic phase transition in a bent-core liquid crystal**
David Wiant, Strahinja Stojadinovic, Krishna Neupane, Sunil Sharma, Katalin Fodor-Csorba, Antal Jakli, Jim T Gleeson, Samuel Sprunt; *Physical Review E*, March 2006
doi:10.1103/PhysRevE.73.030703
- [29] **Optically isotropic liquid-crystal phase of bent-core molecules with polar nanostructure**
Guangxun Liao, Strahinja Stojadinovic, Gerhard Pelzl, Wolfgang Weissflog, Samuel Sprunt, Antal Jakli; *Physical Review E*, August 2005
doi:10.1103/PhysRevE.72.021710
- [30] **Optical studies of the nematic phase of an oxazole-derived bent-core liquid crystal**
Jose A Olivares, Strahinja Stojadinovic, Theo Dingemans, Samuel Sprunt, Antal Jakli; *Physical Review E*, October 2003
doi:10.1103/PhysRevE.68.041704
- [31] **Light scattering study of a twist grain boundary liquid crystal**
Anthony Adorjan, Strahinja Stojadinovic, Ludmila Sukhomlinova, Robert Twieg, Samuel Sprunt; *Physical review letters*, January 2003
doi:10.1103/PhysRevLett.90.035503

Published Articles Continued

- [32] **Dynamics of the nematic phase of a bent-core liquid crystal**
Strahinja Stojadinovic, Anthony Adorjan, Samuel Sprunt, Hans Sawade, Antal Jakli; *Physical Review E*, December 2002
doi:10.1103/PhysRevE.66.060701

CONFERENCE PUBLICATIONS

Published Abstracts

- [1] AAPM 60th Annual Meeting, Nashville, TN July 29 - August 2 2018
A Web-Based Treatment Planning System for Low-Energy X-Ray Units *Medical Physics*, June 2018
- [2] AAPM 60th Annual Meeting, Nashville, TN July 29 - August 2 2018
Investigation of Small Field Electron Beams for Preclinical Irradiation *Medical Physics*, June 2018
- [3] AAPM 60th Annual Meeting, Nashville, TN July 29 - August 2 2018
Online Automatic Brain Metastases Segmentation Web Platform for Stereotactic Radiosurgery *Medical Physics*, June 2018
- [4] AAPM 59th Annual Meeting, Denver, CO July 30 - August 3 2017
SU-E-FS1-07: MR-CBCT Image-Guided System for Radiotherapy of Orthotopic Rat Prostate Tumors *Medical Physics*, June 2017
- [5] AAPM 59th Annual Meeting, Denver, CO July 30 - August 3 2017
SU-K-FS4-06: Automatic Delineation Strategy for Brain Metastases Using Deep Convolutional Neural Network *Medical Physics*, June 2017
- [6] ISMRM 25th Annual Meeting, Honolulu, HI April 22-27 2017
4364: Evaluation of tumor oxygenation following radiation and PS-targeting antibody therapy in an orthotopic lung cancer model *Magnetic Resonance in Medicine*, April 2017
doi:10.1118/1.4955567
- [7] AAPM 58th Annual Meeting, Washington, DC July 31 - August 4 2016
SU-C-BRA-06: Automatic Brain Tumor Segmentation for Stereotactic Radiosurgery Applications *Medical Physics*, June 2016
doi:10.1118/1.4955567
- [8] World Congress of Brachytherapy, San Francisco, CA June 27-29 2016
Reduced Toxicity with Equivalent Outcomes Using Three-Dimensional (3D) Image-Based versus Two-Dimensional (2D) Brachytherapy in an Indigent Cervical Cancer Population *Brachytherapy*, June 2016
doi:10.1016/j.brachy.2016.04.164
- [9] ESTRO 35 Annual Meeting, Turin, Italy April 29 - May 3 2016
EP-1718: Estimation of tumor radio-sensitivity using mathematical models and analysis of the oxygenation role *Radiotherapy and Oncology*, April 2016
doi:10.1016/S0167-8140(16)32969-3

Published Abstracts Continued

- [10] 2016 Spring Meeting of the APS Region Section, Dayton, OH April 8-9 2016
B1.00012: Effects of low-dose high-energy photon irradiation on UHMWPE films
- [11] RSNA 2015 101st Scientific Assembly and Annual Meeting, Chicago, IL November 29 - December 4 2015
MSRO22-02: A Survival and Dosimetric Evaluation of Non Volumetric (Two-Dimensional) versus Volumetric (Three-Dimensional) Brachytherapy Among an Indigent Cervical Cancer Population
- [12] ASTRO 57th Annual Meeting, San Antonio, TX October 18-21 2015
Stereotactic Treatment of Multiple Brain Metastasis: Pseudo In Vivo Evaluation of Three Different Techniques *International Journal of Radiation Oncology * Biology * Physics*, November 2015
doi:10.1016/j.ijrobp.2015.07.2010
- [13] AAPM 57th Annual Meeting, Anaheim, CA July 12-16 2015
TU-AB-201-02: An Automated Treatment Plan Quality Assurance Program for Tandem and Ovoid High Dose-Rate Brachytherapy *Medical Physics*, June 2015
doi:10.1118/1.4925540
- [14] AAPM 57th Annual Meeting, Anaheim, CA July 12-16 2015
SU-C-213-07: Fabrication and Testing of a 3D-Printed Small Animal Rectal Cooling Device to Evaluate Local Hypothermia as a Radioprotector During Prostate SBRT *Medical Physics*, June 2015
doi:10.1118/1.4923788
- [15] AAPM 57th Annual Meeting, Anaheim, CA July 12-16 2015
SU-D-BRD-02: Auto Weekly-An Automated Online Weekly Chart Check System for Medical Physics *Medical Physics*, June 2015
doi:10.1118/1.4923868
- [16] AAPM 57th Annual Meeting, Anaheim, CA July 12-16 2015
SU-E-T-184: Clinical VMAT QA Practice Using LINAC Delivery Log Files *Medical Physics*, June 2015
doi:10.1118/1.4924545
- [17] ABS 36th Annual Meeting, Orlando, FL April 9-11 2015
Commissioning and Acceptance Testing of a High Dose-Rate ³²P Plaque for Intraoperative Brachytherapy of the Spinal Dura *Brachytherapy*, May-June 2015
doi:10.1016/j.brachy.2015.02.307
- [18] ABS 36th Annual Meeting, Orlando, FL April 9-11 2015
An Automated Treatment Plan Quality Assurance Program for Tandem and Ovoid High Dose-Rate Brachytherapy *Brachytherapy*,

Published Abstracts Continued

May-June 2015

doi:10.1016/j.brachy.2015.02.312

- [19] ABS 36th Annual Meeting, Orlando, FL April 9-11 2015
Inferior Critical Organ Dose-Profile in Non-Volumetric (Two-Dimensional) Versus Volumetric (Three-Dimensional) Brachytherapy May Predict for Greater Toxicity *Brachytherapy*, May-June 2015
doi:10.1016/j.brachy.2015.02.338
- [20] ASTRO 56th Annual Meeting, San Francisco, CA September 14-17 2014
Initial Experience with VMAT Plan and Delivery Verification Using a DICOM-RT Framework and Linac Delivery Log Files *International Journal of Radiation Oncology * Biology * Physics*, September 2014
doi:10.1016/j.ijrobp.2014.05.2528
- [21] AAPM 56th Annual Meeting, Austin, TX July 20-24 2014
WE-A-17A-04: Development of An Ultra-Fast Monte Carlo Dose Engine for High Dose Rate Brachytherapy *Medical Physics*, June 2014
doi:10.1118/1.4889374
- [22] AAPM 56th Annual Meeting, Austin, TX July 20-24 2014
SU-E-T-213: Initial Experience with VMAT Plan and Delivery Verification Using a DICOM-RT Framework and Linac Delivery Log Files *Medical Physics*, June 2014
doi:10.1118/1.4888543
- [23] ASTRO 55th Annual Meeting, Atlanta, GA September 22-25 2013
Evaluation of Acuros XB for SABR Planning of Thoracic Spinal Tumors *International Journal of Radiation Oncology * Biology * Physics*, September 2013
doi:10.1016/j.ijrobp.2013.06.1942
- [24] AAPM 55th Annual Meeting, Indianapolis, IN August 4-8 2013
SU-E-T-575: Independent Verification of VMAT Treatment Plans Using a DICOM-RT Framework *Medical Physics*, June 2013
doi:10.1118/1.4815003
- [25] AAPM 55th Annual Meeting, Indianapolis, IN August 4-8 2013
SU-E-T-381: The Step-And-Shoot IMRT Overshooting Phenomena: A Novel Method to Mitigate Patient Overdosage *Medical Physics*, June 2013
doi:10.1118/1.4814815
- [26] AAPM 55th Annual Meeting, Indianapolis, IN August 4-8 2013
SU-E-T-556: Verification and Evaluation of Acuros XB Dose Calculations for Stereotactic Ablative Radiotherapy of the Thoracic Spine *Medical Physics*, June 2013
doi:10.1118/1.4814985

Published Abstracts Continued

- [27] AAPM 55th Annual Meeting, Indianapolis, IN August 4-8 2013
WE-E-108-06: Demonstration of a CBCT Based Monte Carlo Model for Small Animal Treatment Planning *Medical Physics*, June 2013
doi:10.1118/1.4815584
- [28] AAPM 55th Annual Meeting, Indianapolis, IN August 4-8 2013
WE-E-108-05: Evaluation of the XRAD 225Cx MC Source Model in Heterogeneous Media *Medical Physics*, June 2013
doi:10.1118/1.4815583
- [29] ISRS 2013 - the 20th International Symposium on Radiopharmaceutical Sciences, Jeju Island, South Korea May 12-17 2013
Experience in preclinical, high dose stereotactic irradiation *Journal of Radiosurgery and SBRT*, March 2013
- [30] ISRS 2013 - the 20th International Symposium on Radiopharmaceutical Sciences, Jeju Island, South Korea May 12-17 2013
Development of a monte carlo treatment planning system for small animal stereotactic irradiation *Journal of Radiosurgery and SBRT*, March 2013
- [31] 2nd ESTRO Forum 2013, Geneva, Switzerland April 19-23 2013
EP-1299: Various preclinical studies using image-guided small animal irradiators *Radiotherapy and Oncology*, March 2013
doi:10.1016/S0167-8140(15)33605-7
- [32] 2nd ESTRO Forum 2013, Geneva, Switzerland April 19-23 2013
OC-0063: Commissioning CBCT based Monte Carlo treatment planning system for small animal stereotactic irradiation *Radiotherapy and Oncology*, March 2013
doi:10.1016/S0167-8140(15)32369-0
- [33] ASTRO 54th Annual Meeting, Boston, MA October 28-30 2012
Gamma Analysis of Normalized and Un-normalized Dose Distributions *International Journal of Radiation Oncology * Biology * Physics*, November 2012
doi:10.1016/j.ijrobp.2012.07.2157
- [34] ASTRO 54th Annual Meeting, Boston, MA October 28-30 2012
Depletion of Regulatory T Cells Does Not Influence the Inflammatory Response Induced by High-dose Irradiation *International Journal of Radiation Oncology * Biology * Physics*, November 2012
doi:10.1016/j.ijrobp.2012.07.1842
- [35] AAPM 54th Annual Meeting, Charlotte, NC July 29 - August 2 2012
SU-E-T-274: Monte Carlo Simulations of Output Factors for a Small Animal Irradiator *Medical Physics*, June 2012
doi:10.1118/1.4735342

Published Abstracts Continued

- [36] AAPM 54th Annual Meeting, Charlotte, NC July 29 - August 2 2012
SU-E-T-386: Gamma Analysis of Normalized and Un-Normalized Dose Distributions *Medical Physics*, June 2012
doi:10.1118/1.4735475
- [37] AAPM 52nd Annual Meeting, Philadelphia, PA July 18-22 2010
SU-GG-J-06: Optical and X-Ray Image Guided Stereotactic Body Irradiator Dedicated to Small Animals *Medical Physics*, June 2010
doi:10.1118/1.3468229
- [38] AAPM 52nd Annual Meeting, Philadelphia, PA July 18-22 2010
TH-C-204B-08: Energy Dependency and Dosimetric Modeling in Small Animal Stereotactic Irradiation *Medical Physics*, June 2010
doi:10.1118/1.4794896
- [39] ASTRO 51st Annual Meeting, Chicago, IL November 1-5 2009
Dosimetric Characterization of Stereotactic Small Animal Irradiator *International Journal of Radiation Oncology * Biology * Physics*, November 2009
doi:10.1016/j.ijrobp.2009.07.1532
- [40] World Congress on Medical Physics and Biomedical Engineering, Munich, Germany September 7-12 2009
Image-Guided Stereotactic Small Animal Irradiator *The International Federation for Medical and Biological Engineering (IFMBE) Proceedings*, September 2009
doi:10.1007/978-3-642-03895-2_17
- [41] World Congress on Medical Physics and Biomedical Engineering, Munich, Germany September 7-12 2009
Optical Enhancement of DNA-Base Radio-Resistivity *The International Federation for Medical and Biological Engineering (IFMBE) Proceedings*, September 2009
doi:10.1007/978-3-642-03902-7_36
- [42] 10th Biennial ESTRO Conference on Physics and Radiation Technology for Clinical Radiotherapy, Maastricht, The Netherlands August 30 - September 3 2009
Small Animal SBRT Irradiator *Radiotherapy and Oncology*, August 2009
doi:10.1016/S0167-8140(12)72897-9
- [43] AAPM 51st Annual Meeting, Anaheim, CA July 26-30 2009
TH-C-BRC-04: Small Animal Stereotactic Irradiator *Medical Physics*, June 2009
doi:10.1118/1.3182618
- [44] AAPM 51st Annual Meeting, Anaheim, CA July 26-30 2009
TU-C-BRD-04: Development and Application of a Pre-Clinical

Published Abstracts Continued

- Stereotactic Irradiator** *Medical Physics*, June 2009
doi:10.1118/1.3182322
- [45] AAPM 51st Annual Meeting, Anaheim, CA July 26-30 2009
SU-FF-T-483: Optical Enhancement of DNA-Base Radio-Resistivity
Medical Physics, June 2009
doi:10.1118/1.3181981
- [46] AAPM 51st Annual Meeting, Anaheim, CA July 26-30 2009
SU-FF-J-157: A Monte Carlo Model for Small Animal Stereotactic Irradiation *Medical Physics*, June 2009
doi:10.1118/1.3181450
- [47] ASTRO 50th Annual Meeting, Boston, MA September 21-25 2008
Errors and Uncertainties in Accelerated Partial Breast Irradiation (APBI) with Balloon Brachytherapy: Are Current Target Coverage Goals Adequate? *International Journal of Radiation Oncology * Biology * Physics*, September 2008
doi:10.1016/j.ijrobp.2008.06.033
- [48] ASTRO 50th Annual Meeting, Boston, MA September 21-25 2008
Potential Effect of Inherent Treatment Planning Uncertainties on Expected vs. Actual Dose to Skin and Chest Wall with the Mammosite (MS) for Accelerated Partial Breast Irradiation *International Journal of Radiation Oncology * Biology * Physics*, September 2008
doi:10.1016/j.ijrobp.2008.06.758
- [49] AAPM 50th Annual Meeting, Huston, TX July 27-31 2008
TU-C-AUD C-03: Teletherapy MicroRT Using a Commercial ¹⁹²Ir Source *Medical Physics*, June 2008
doi:10.1118/1.2962449
- [50] AAPM 50th Annual Meeting, Huston, TX July 27-31 2008
TH-C-AUD A-01: A Systematic Analysis of Errors and Uncertainties in Partial Breast Irradiation Using the MammoSite Balloon Catheter *Medical Physics*, June 2008
doi:10.1118/1.2962836
- [51] AAPM 50th Annual Meeting, Huston, TX July 27-31 2008
TH-C-351-01: Design of the Washington University Small Animal Conformal Micro Irradiator *Medical Physics*, June 2008
doi:10.1118/1.2962857
- [52] 2008 World Congress of Brachytherapy, Boston, MA May 4-6 2008
Probabilistic analysis of the planning and delivery of partial breast irradiation with balloon brachytherapy: Unsettling uncertainty
Brachytherapy, April-June 2008
doi:10.1016/j.brachy.2008.02.145

Published Abstracts Continued

- [53] AAPM 49th Annual Meeting, Minneapolis, MN July 22-26 2007
SU-FF-T-183: Dosimetric Verification of a Commercial Research Irradiator *Medical Physics*, June 2007
doi:10.1118/1.2760842
- [54] AAPM 49th Annual Meeting, Minneapolis, MN July 22-26 2007
SU-EE-A1-01: Dosimetric Comparisons of DMPO and Two-Step Approach Step-And-Shoot IMRT Plans *Medical Physics*, June 2007
doi:10.1118/1.2760364
- [55] ASTRO 48th Annual Meeting, Philadelphia, PA November 5-9 2006
2647 Xenografted Human Mesenchymal Stem Cells Migrate To Irradiated Murine Lung *International Journal of Radiation Oncology * Biology * Physics*, November 2006
doi:10.1016/j.ijrobp.2006.07.1062
- [56] 21st International Liquid Crystal Conference, Keystone, CO July 2-7 2006
FERRP-53 Critical behavior at the isotropic to nematic phase transition in a bent-core liquid crystal
- [57] AAPM 48th Annual Meeting, Orlando, FL July 30 - August 3 2006
TH-C-230A-08: A Prototype Rotational Immobilization System for a Proposed Static-Gantry MicroRT Device with Tomographic Capabilities *Medical Physics*, June 2006
doi:10.1118/1.2241871
- [58] AAPM 48th Annual Meeting, Orlando, FL July 30 - August 3 2006
TH-C-224C-02: MicroRT/microRTP: A Conformal Small Animal Planning and Irradiation System *Medical Physics*, June 2006
doi:10.1118/1.2241875
- [59] 3rd International Conference on Translational Research, Lugano, Switzerland March 12-15 2006
141 Targeted sub-total irradiation of mouse models for normal tissue complication modeling using a prototype microRT device *Radiotherapy and Oncology*, March 2006
doi:10.1016/S0167-8140(06)80620-1
- [60] 2006 Annual APS March Meeting, Baltimore, MD March 13-17 2006
J1.00202: Critical behavior at the isotropic to nematic phase transition in a bent-core liquid crystal
- [61] AAPM 47th Annual Meeting, Seattle, WA July 24-28 2005
TSU-FF-T-262: Advanced Irradiator for the Small Animal Conformal Treatment *Medical Physics*, June 2005
doi:10.1118/1.1997991
- [62] AAPM 47th Annual Meeting, Seattle, WA July 24-28 2005
MO-D-T-6E-09: Progress Towards a MicroRT Small Animal

Published Abstracts Continued

Conformal Irradiator *Medical Physics*, June 2005
doi:10.1118/1.1998279

- [63] APS Ohio Section Fall Meeting, Cleveland, OH October 17-18 2003
P.006: A Comparative Dynamic Light Scattering Study of Several Bent Core Nematic Liquid Crystals
- [64] APS Ohio Section Fall Meeting, Cleveland, OH October 17-18 2003
P.011: Virtual Light Scattering Lab based on LabView Software
- [65] 2002 Annual APS March Meeting, Indianapolis, IN March 18-22 2002
M26.005: Dynamic light scattering study of the N* to NL* transition in a chiral liquid crystal
- [66] 2002 Annual APS March Meeting, Indianapolis, IN March 18-22 2002
M26.002: Dynamics of the nematic phase of a bent-core liquid crystal
- [67] APS Ohio Section Spring Meeting, Kent, OH April 20-21 2001
H2.004: Dynamic Light Scattering Studies of Twist Grain Boundary Liquid Crystals

INVITED TALKS

National and International Talks

- * **ASTRO 57th Annual Meeting, San Antonio, TX** October 18-21 2015
 - ◇ Converting to phantomless IMRT QA with Mobius3D at UT Southwestern
- * **AAPM Delaware Valley Chapter Spring Symposium, Philadelphia, PA**
May 16 2014
 - ◇ IMRT/VMAT QA: Is measurement with a phantom necessary?
- * **Texas Radiological Society 98th Annual Scientific Meeting, Austin, TX**
April 8-10 2011
 - ◇ Brachytherapy Dosimetry

CLINICAL SERVICES AND INNOVATIONS

Clinical Services and Innovations

- Lead Physicist Gamma Knife ICON** December 2016 to present
- * Commissioned Gamma Knife ICON - UT Southwestern Medical Center Stereotactic Radiosurgery Program December 2016
- Lead Physicist for Mobius3D/MobiusFX - no phantom IMRT/VMAT Patient Specific Quality Assurance** January 2013 to December 2018
- Lead Physicist for Superficial Radiotherapy** October 2015 to present
- * Commissioned XStrahl 150 Superficial Radiotherapy Unit March 2013
 - * Recommissioned XStrahl 150 Superficial Radiotherapy Unit March 2017
- Lead Physicist Gamma Knife Perfexion** August 2011 - December 2016

Clinical Services and Innovations

★ Commissioned Gamma Knife Perfexion - UT Southwestern Medical Center Stereotactic Radiosurgery Program	August 2011
Started High Dose Rate (HDR) Brachytherapy Service	August 2008
★ Lead HDR Physicist 3 years	August 2008 - August 2011
★ Support HDR Physicist 6 years	August 2011 - August 2017
Compiled UTSW Clinical Linear Accelerator Data Book	October 2013
Commissioned four ¹³⁷Cs Research Irradiators	2012
Primary Physicist for Eclipse Treatment Planning System	August 2008 - January 2016
Commissioned XRad 225Cx Image Guided Small Animal Irradiator Platform	2011
Commissioned XRad320 Research Orthovoltage Irradiator	2009

ADVISING AND MENTORING

Mentoring

Postdoctoral Scholars

★ Nima Hassan-Rezaeian Ph.D.	April 2019 - June 2019
★ Faraz Kalantari Mahmoudabadi Ph.D.	January 2019 - March 2019
★ Matthew Brenner Ph.D.	January 2019 - March 2019
★ Alfonso Rodriguez Ph.D.	October 2018 - December 2018
★ Tsuicheng (David) Chiu Ph.D.	July 2018 - September 2018
★ Zhan Tian Ph.D.	April 2018 - June 2018
★ You Zhang Ph.D.	October 2017 - December 2017
★ Reza Taleei Ph.D.	July 2017 - September 2017
★ Luo Ouyang Ph.D.	January 2016 - March 2016
★ Matthew Webster Ph.D.	April 2015 - June 2015
★ Holly Johnston Ph.D.	July 2014 - September 2014
★ Heming Zhen Ph.D.	January 2014 - March 2014
★ Robert Reynolds Ph.D.	October 2013 - December 2013
★ Travis Jacobson Ph.D.	July 2013 - September 2013
★ Brian Hrycushko Ph.D.	January 2013 - March 2013
★ Qinan Bao Ph.D.	January 2012 - March 2012
★ Joseph Dugas Ph.D.	April 2011 - June 2011
★ Michael Speiser Ph.D.	January 2010 - March 2010
★ Michael Speiser Ph.D.	January 2009 - March 2009

Graduate Students

★ Rajesh Pidikiti , PhD Student, Biomedical Engineering	2010 - 2012
Co-advised by: Timothy Solberg	
◇ Thesis: <i>Development of Monte Carlo Treatment Planning and Dosimetry System for Small Animal Irradiator</i>	

**TEACHING
EXPERIENCE**

Lectures in Medical Physics

UTSW Gamma Knife Training Program	2019 to present
<ul style="list-style-type: none"> ◇ Gamma Knife ICON - Lecture 1 ◇ Gamma Knife ICON - Lecture 2 ◇ Gamma Knife ICON - Lecture 3 	
UTSW SBRT Program	2013 to present
<ul style="list-style-type: none"> ◇ Quality Assurance for SBRT 	
Physics of Radiation Oncology for MD Residents	2017 to present
<ul style="list-style-type: none"> ◇ Production of Diagnostic and Therapeutic X-Rays 	
RT course 3413: Radiation Therapy Physics	2009 to present
<ul style="list-style-type: none"> ◇ SI Units, Unit Conversions, Definitions ◇ Interactions of Photons with Matter I ◇ Interactions of Photons with Matter II ◇ Charged Particles Interactions with Matter ◇ Quality of X-Ray Beams 	
Postdoctorate Certificate Program	2013 to present
<ul style="list-style-type: none"> ◇ Calibration of Photon and Electron Beams I ◇ Calibration of Photon and Electron Beams II ◇ IMRT/SBRT Physics Considerations 	
Physics of Radiation Oncology for MD Residents	2009 to 2016
<ul style="list-style-type: none"> ◇ Brachytherapy I-IV Lecture Series 	
Physics of Radiation Oncology for MD Residents	2009 to 2010
<ul style="list-style-type: none"> ◇ Fractionation and Tissue Response 	

**PROFESSIONAL
SERVICE**

Professional Service

Medical Physics Residency Program	
<ul style="list-style-type: none"> ◇ Associate Director UTSW Department of Radiation Oncology 	2018 to present
Committee Service	
<ul style="list-style-type: none"> ◇ Curriculum/Advisory/Interview Committee for the Radiation Therapy and Technology (RTT) Program UTSW School of Health Professions ◇ Medical Physics Residency Annual Review Committee UTSW Department of Radiation Oncology ◇ Medical Physics Residency Advisory Committee UTSW Department of Radiation Oncology ◇ ¹³⁷Cs Irradiators Subcommittee of Radiation Safety Committee UTSW Medical Center 	2009 to present 2018 to present 2009 - 2017

Professional Service

- ◇ Brachytherapy Clinical Protocol Committee 2009 - 2012
GOG 0219, GOG 9918, GOG 0238, GOG 0249
UTSW Medical Center

Ad Hoc Reviewer Service

- ◇ Medical Physics 2006 to present
- ◇ Physics in Medicine and Biology 2009 to present
- ◇ Physica Medica 2012 to present
- ◇ Journal of Applied Clinical Medical Physics (JACMP) 2018 to present

HONORS AND AWARDS

Honors and Awards

- School of Health Professions
- ◇ 2018 Outstanding Educator November 2018
 - ◇ 2015 Outstanding Educator October 2015
- National Instruments
- ◇ Recipient of the 2008 Medical Device Grant Program December 2008

HARDWARE AND SOFTWARE SKILLS

Hardware and Software Expertise

Instrumentation, Control, Data Acquisition, Test, and Measurement:

- Simulink, LabVIEW

Numerical Analysis

- MATLAB, Origin, Mathematica

Desktop Editing and Productivity Software

- Photoshop
- L^AT_EX
- Microsoft Office, Corel WordPerfect, Google Docs

Operating Systems

- Microsoft Windows, Linux, Unix

Monte Carlo Simulation

- EGSnrc

SECURITY CLEARANCE

Security Clearance

Gamma Knife Security Clearance August 2011 - present

REFERENCES AVAILABLE TO CONTACT

References

Available upon request