

**Yong Chen, Ph.D., DABR**  
Department of Radiation Oncology  
Stephenson Oklahoma Cancer Center  
The University of Oklahoma Health Sciences Center (OUHSC)  
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**EDUCATION & TRAINING**

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<b>Ph.D. in Radiological Sciences</b> Department of Radiological Sciences University of Oklahoma Health Sciences Center, Oklahoma City, OK	Dec 2010
<b>M.S. in Health Physics</b> Department of Nuclear Engineering Texas A&M University, College Station, TX	Dec 2006
<b>M.S. in Radiation Protection</b> Department of Engineering Physics Tsinghua University, Beijing, China	August 2002
<b>B.S. in Nuclear Engineering</b> Department of Engineering Physics Tsinghua University, Beijing, China	August 2000

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**PROFESSIONAL EXPERIENCE**

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<b>Associate Professor</b> Department of Radiation Oncology, OUHSC, Oklahoma City, USA 73104	Since July 2018
<b>Assistant Professor</b> Department of Radiation Oncology, OUHSC, Oklahoma City, USA 73104	July 2011 – July 2018
<b>Adjunct Professor</b> Department of Radiological Sciences, OUHSC, Oklahoma City, USA 73104	Since August 2011

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**BOARD CERTIFICATION**

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**American Board of Radiology – Therapeutic Medical Physics** 2014

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**Award**

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<b>Superior Teaching Award in Medical Physics</b> Department of Radiological Sciences, OUHSC, Oklahoma City, OK	2017
<b>Young Investigator Symposium Award</b> American College of Medical Physics	2008

## PUBLICATIONS

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### Peer Reviewed Paper Publications (\* as first or senior author)

1. L. Muller, M. Prusator, S. Ahmad and **Y. Chen**, A complete workflow for utilizing Monte Carlo toolkits in clinical cases for a Double Scattering proton system, *Journal of Applied Clinical Medical Physics*. Accepted (2018)
2. S. Tang, K. Yang, **Y. Chen** and L. Xiang, X-ray-induced acoustic computed tomography for 3D breast imaging: A simulation study, *Medical Physics* 45(4) (2018) 1662-1672
3. M. Prusator, S. Ahmad and **Y. Chen\***, TOPAS Simulation of the Mevion S250 compact proton therapy unit, *Journal of Applied Clinical Medical Physics* 18(3) (2017) 88-95
4. L. Ren, D. Wu, Y. Li, B. Zheng, **Y. Chen**, K. Yang and H. Liu, Practical alignment method for x-ray spectral measurement in micro-CT system based on 3D printing technology, *Biomedical Physics & Engineering Express* Epub (2016) Jul 15
5. Dosimetric evaluation of tissue heterogeneity for electronic brachytherapy (EBT) source in high dose rate gynecological (GYN) irradiation, William Taylor, Daniel Johnson, Mark Johnson, Salahuddin Ahmad, and **Yong Chen\***, *AIP Conf. Proc.* 1747, 020003 (2016); <http://dx.doi.org/10.1063/1.4954090>.
6. L. Ren, M. Ghani, D. Wu, B. Zheng, **Y. Chen**, K. Yang, X. Wu and H. Liu, The impact of spectral filtration on image quality in micro-CT system, *Journal of Applied Clinical Medical Physics* 17(1) (2016) 301-315
7. A. Lau, S. Ahmad and **Y. Chen\***, A simulation study investigating a Cherenkov material for use with the prompt gamma range verification in proton therapy, *Journal of X-ray Science and Technology* 24(4) (2016) 565-582
8. D. Johnson, **Y. Chen** and S. Ahmad, Dose and linear energy transfer distributions of primary and secondary particles in carbon ion radiation therapy: A Monte Carlo simulation study in water, *Journal of Medical Physics* 40(4) (2015) 214-219
9. A. Lau, **Y. Chen** and S. Ahmad, Range verification of proton radiotherapy with prompt gamma rays, *Journal of X-ray Science and Technology* 21(4) (2013) 507-514
10. A. Lau, **Y. Chen** and S. Ahmad, Yields of positron and positron emitting nuclei for proton and carbon ion radiation therapy: A simulation study with GEANT4, *Journal of X-ray Science and Technology* 20(3) (2012) 317-329
11. **Y. Chen\*** and S. Ahmad, Empirical model estimation of relative biological effectiveness for proton beam therapy, *Radiation Protection Dosimetry* 149(2) (2012) 116-123
12. **Y. Chen\*** and S. Ahmad, Evaluation of inelastic hadronic processes for 250 MeV proton interactions in tissue and iron using GEANT4, *Radiation Protection Dosimetry* 136(1) (2009) 11-16
13. Q. Guo, J. Cheng, and **Y. Chen\***, "Dose evaluation of indoor thoron progeny in some areas in China", *Radioactivity in the Environment*, 7, (2005), 506-511
14. Q. Su, R. Zheng, **Y. Chen**, and J. P. Cheng, Possibility of rapidly reporting <sup>226</sup>Ra activity in <sup>226</sup>Ra-<sup>222</sup>Rn samples with unknown equilibrium factor by  $\gamma$  spectrometer, *Nuclear Science and Techniques (in Chinese)*, 28 (11), (2006), 826-832
15. **Y. Chen\***, J. Cheng, Q. Guo, and W. Zhuo, Integrating measurement of <sup>220</sup>Rn Progeny in the environment, *Journal of Radiation Protection (in Chinese)*, 22(3), (2002), 147-152

### Peer Reviewed Conference Publications (Abstracts, Posters, and Oral Presentations (\* presenter))

1. E. Kendall, **Y. Chen**, K. Hibbitts, O. Algan, L. Muller and S. Ahmad. Radiation Treatment Management for Young and Pregnant Female Patients Using Photons From Gamma Knife Perfexion and Varian TrueBeam LINAC. – General Poster at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017

2. J. Herrington, **Y. Chen**, S. Ahmad and C. Ferreira. Susceptibility of Microcomputers to Malfunction Induced by Neutron Radiation Exposure in Proton Therapy Environments. – General Poster at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017
3. M. Prusator, S. Ahmad and **Y. Chen**. Determination of Compensator and Patient Scattered Factors Using Monte Carlo Simulation Techniques for Passively Scattered Proton Beams. – General Poster at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017
4. \*S. Tang, K. Yang, **Y. Chen** and L. Xiang. 3D XACT Breast Imaging for Microcalcifications. – Oral Presentation at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017
5. \*P. Nebah, **Y. Chen**, M. Prusator, J. Bae, S. Ahmad, H. Jin and J. Cho. Energy Spectra Measurements of Therapeutic Proton Beams Using Proton-Copper Activation Leading to Multiple Positron Emitting Progenies. – General Poster at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017
6. \*S. Bastani, R. Mangaiyarkarasi, **Y. Chen**, H. Jin, S. Ahmad and J. Cho. Feasibility for Creating Self-Illuminating Quantum Dots (QDs) Using Therapeutic Proton Beams. – Oral Presentation at the 59th Annual meeting of the American Association of Physicists in Medicine (AAPM), Denver, CO, July 30 – August 3, 2017
7. A. Lau, L. Ren, H. Liu, S. Ahmad, Y. Chen. Absorbed dose estimation for a commercially available microCT scanner with various filtration techniques. – General Poster at the 58th Annual meeting of the American Association of Physicists in Medicine (AAPM), Washington, DC, July 31 – August 4, 2016. Medical Physics, 43(3402) 2016
8. H. Jin, S. Ahmad, Y. Chen, C. Ferreira, M. Islam, V. Keeling, A. Lau and S. Ferguson, Commissioning of a single-room double-scattering proton therapy system – General Poster at the 58th Annual meeting of the American Association of Physicists in Medicine (AAPM), Washington, DC, July 31 – August 4, 2016. Medical Physics, 43(3498) 2016
9. S. Tang, **Y. Chen**, S. Ahmad, K. Yang, R. Laaroussi, J. Chen, P. Samant, L. Xiang. 3D Breast Digital Phantom for XACT Imaging – General Poster at the 58th Annual meeting of the American Association of Physicists in Medicine (AAPM), Washington, DC, July 31 – August 4, 2016. Medical Physics, 43(3389) 2016
10. \*S. Tang, **Y. Chen**, J. Chen, P. Samant, S. Ahmad, H. Liu, L. Xiang. Next Generation Dedicated 3D Breast Imaging with XACT – Oral Presentation at the 58th Annual meeting of the American Association of Physicists in Medicine (AAPM), Washington, DC, July 31 – August 4, 2016. Medical Physics, 43(3865) 2016
11. W. Taylor, D. Johnson, S. Ahmad, **Y. Chen**. Dosimetric Evaluation of Breast Tissue Composition for Electronic Brachytherapy (BET) source In High Dose Rate Accelerated Partial Breast (APBI) Irradiation – General Poster at the 58th Annual meeting of the American Association of Physicists in Medicine (AAPM), Washington, DC, July 31 – August 4, 2016. Medical Physics, 43( 3474) 2016
12. E. Kendall, O. Algan, S. Ahmad, **Y. Chen**, and S. Hossain. Treatment Plan Quality Comparison of Gamma Knife 4C and Perfexion for Brain Metastatic Tumors and Meningioma, accepted as E-poster presentation for the Leksell Gamma Knife Society Meeting in Amsterdam, (2016)
13. O. Algan, R. Sabater, B. Tsai, M. Sughrue, **Y. Chen**, S. Ahmad, S. Hossain. Surrounding Normal Tissue Doses from Gamma Knife (GK) Treatment for Acoustic Neuroma, E-poster presentation for the Leksell Gamma Knife Society Meeting in Amsterdam, (2016)
14. **Y. Chen**, M. Prusator, M. Islam, D. Johnson and S. Ahmad. Neutron Dose Survey of a Compact Single Room Proton Machine – General Poster at the 57th Annual meeting of the American Association of Physicists in Medicine (AAPM), Anaheim, CA, July 12-16, 2015. Medical Physics, 42(3466) 2015
15. M. Newpower, S. Ahmad and **Y. Chen**, Microscopic Dose Enhancement of Gold Nanoparticles in Water for Proton Therapy: A Simulation Study. – General Poster at the 57th Annual meeting of the American Association of Physicists in Medicine (AAPM), Anaheim, CA, July 12-16, 2015. Medical Physics, 42(3460) 2015
16. \*A. Lau, **Y. Chen** and S. Ahmad. A feasibility study of using a Cherenkov detector material with the prompt gamma range verification technique in proton therapy – Oral Presentation at the 57th Annual meeting of the American Association of Physicists in Medicine (AAPM), Anaheim, CA, July 12-16, 2015. Medical Physics, 42(3567) 2015

17. M. Newpower, S. Ahmad and **Y. Chen**. A Simulation of X-Ray Emission with Gold Nanoparticle Irradiated by Energetic Proton Beam. General Poster at the 56th Annual meeting of the American Association of Physicists in Medicine (AAPM), Austin, Texas, July 20 -24, 2014. *Medical Physics* 41(6), 214-215. 2014
18. A. Lau, **Y. Chen** and S. Ahmad. Emission of Secondary particles From a PMMA Phantom During Proton Irradiation: A Simulation Study with the Geant4 Monte Carlo Toolkit. General Poster at the 56th Annual meeting of the American Association of Physicists in Medicine (AAPM), Austin, Texas, July 20 -24, 2014. *Medical Physics* 41(6), 346-346. 2014.
19. A. Lau, **Y. Chen** and S. Ahmad. Feasibility Study of Glass Cherenkov Detector for Prompt Gamma Detection in Proton Therapy. General Poster at the 56th Annual meeting of the American Association of Physicists in Medicine (AAPM), Austin, Texas, July 20 -24, 2014. *Medical Physics* 41(6), 265-265. 2014
20. M. Prusator, S. Ahmad and **Y. Chen**. Neutron Shielding Assessment for a Compact Proton Therapy Vault. General Poster at the 56th Annual meeting of the American Association of Physicists in Medicine (AAPM), Austin, Texas, July 20 -24, 2014. *Medical Physics* 41(6), 113-113. 2014.
21. M. Prusator, S. Ahmad and **Y. Chen**. Modeling of a Compact Proton Therapy System Using TOPAS Monte Carlo Code. Poster presentation at the 55th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Indiana, August 04 - 08, 2013. *Medical Physics* 40 (6), 326-326. 2013.
22. A. Lau, **Y. Chen**, S. Ahmad. Tissue Specific Characteristics of Prompt Gamma in Proton Radiotherapy: A GEANT4 Simulation Study. Poster presentation at the 55th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Indiana, August 04 - 08, 2013. *Medical Physics* 40 (6), 263-263. 2013
23. D. Johnson, **Y. Chen**, E. Schnell, S. Ahmad. A Monte Carlo Simulation Study of Photon Beam with Energies 6X, 10X, 6FFF, 10FFF From a TrueBeam Linear Accelerator. Poster presentation at the 55th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Indiana, August 04 - 08, 2013. *Medical Physics* 40 (6), 263-263. 2013
24. D. Johnson, **Y. Chen**, S. Ahmad. A Monte Carlo Simulation Study for Production and Subsequent Interaction of Secondary Particles From Carbon-Ion Radiation Therapy in Water. Poster presentation at the 55th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Indiana, August 04 - 08, 2013. *Medical Physics* 40 (6), 373-373. 2013.
25. A. Lau, **Y. Chen**, S. Ahmad. Proton Therapy Range Verification Using Prompt Gamma Rays: A Simulation Study with the Geant4 Monte Carlo Toolkit. Poster presentation at the 55th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Indiana, August 04 - 08, 2013. *Medical Physics* 40 (6), 415-416. 2013.
26. **\*Y. Chen** and S. Ahmad. Dose Enhancement Effect of Golden Nanoparticles in a Realistic Voxellized Cell Phantom for Proton Radiation: A simulation Study with GEANT4. Oral presentation at the 54th Annual Meeting of the American Association of Physicists in Medicine (AAPM), July 29- Aug 02, 2012. *Medical physics* 39 (6), 3901. 2012.
27. D. Johnson, **Y. Chen**, E. Schnell and S. Ahmad. A Preliminary Monte Carlo Simulation Study of the TrueBeam Linear Accelerator. Poster presentation at the 54th Annual Meeting of the American Association of Physicists in Medicine (AAPM), July 29- Aug 02, 2012. *Medical physics* 39 (6), 3820. 2012.
28. A. Lau, **Y. Chen** and S. Ahmad. A Simulation Study with Geant4 Investigating the Secondary Prompt Gamma Emissions from Incident 40 MeV Protons Onto Various Materials. Poster presentation at the 54th Annual Meeting of the American Association of Physicists in Medicine (AAPM), July 29- Aug 02, 2012. *Medical physics* 39 (6), 3773. 2012.
29. D. Johnson, **Y. Chen** and S. Ahmad. Secondary Light-Ions in Carbon-Ion Therapy: A GEANT4 Simulation of LET and Dose Contributions. Poster presentation at the 54th Annual Meeting of the American Association of Physicists in Medicine (AAPM), July 29- Aug 02, 2012. *Medical physics* 39 (6), 3768. 2012.
30. **Y. Chen** and S. Ahmad. Nanoscale proton dose distributions using GEANT4-DNA simulations. *Medical Physics* 38, 3489. Poster presentation at the 53rd Annual Meeting of the American Association of Physicists in Medicine (AAPM) and 2011 Joint AAPM/COMP meeting, Vancouver, B. C., Canada July 31- Aug 04, 2011. *Medical Physics* 38(3489) 2011
31. **\*Y. Chen** and S. Ahmad. Relative Biological effectiveness for proton – an empirical model prediction. Oral Presentation at the 52st Annual AAPM meeting, Philadelphia, Pennsylvania, July 18- 22, 2010. *Medical Physics* 37, 3356. 2010.

32. **\*Y. Chen** and S. Ahmad. Model prediction for relative biological effectiveness (RBE) in proton beam. Oral Presentation at SWAAPM annual meeting, Baton Rouge, LA, Young Investigators Symposium. 2010.
33. S. Handley, **Y. Chen** and S. Ahmad. Normalized Bragg Peak Curves for Various Proton Energies in a Cylindrical Water Phantom: A Simulation with MCNPX and GEANT4 Monte Carlo Code. Poster Presentation at the 52st Annual AAPM meeting, Philadelphia, Pennsylvania, July 18- 22, 2010. Medical Physics 37, 3285. 2010.
34. **Y. Chen** and S. Ahmad. Ambient dose equivalent per therapeutic dose for 250 MeV proton interactions in tissues using GEANT4 Monte Carlo code. American Society for Radiation Oncology (ASTRO) 51st Annual Meeting. November 01 - 05, 2009. International Journal of Radiation Oncology\* Biology\* Physics 75 (3), S704-S705. 2009.
35. **Y. Chen** and S. Ahmad. Neutron and Photon fluence distributions and ambient dose equivalents for 250 MeV proton interactions in tissue using GEANT4 Monte Carlo code. Presentation at the 51st Annual AAPM meeting, Anaheim, California, July 26- 30, 2009. Medical Physics 36, 2622. 2009.
36. **\*Y. Chen** and S. Ahmad. Effect of hadronic process differences on fluence distributions of particles generated from proton interactions in tissues - A GEANT4 Monte Carlo simulation. ACMP 26th annual conference. Young Investigators Symposium. Virginia Beach, VA from May 2-5, 2009.
37. **Y. Chen** and S. Ahmad. Energy distributions of particles generated for proton interactions in water: A simulation with GEANT4 Monte Carlo code. Poster presentation at the 50th Annual American Association of Medical Physicists (AAPM) meeting in Houston, Texas, July 27-31, 2008. Medical Physics 35, 2803. 2008.
38. **Y. Chen** and S. Ahmad. Neutron yield and angular distribution from the 250 MeV proton interactions in water: A GEANT4 Monte Carlo study. Poster presentation at the 50th Annual American Association of Medical Physicists (AAPM) meeting in Houston, Texas, July 27-31, 2008. Medical Physics 35, 2802. 2008.
39. **\*Y. Chen** and S. Ahmad. Normalized Bragg Peak curves of various proton incident energies in water phantom: A simulation with GEANT4 Monte Carlo Code. ACMP 25th annual conference. Young Investigators Symposium. Seattle, WA May 5 2008.
40. **\*Yong Chen**, Qiuju Guo. The exhalation rates of  $^{222}\text{Rn}$  and  $^{220}\text{Rn}$  in the soils in ZhuaHai city. The International Symposium of Environmental Rn\Tn measurement and assessment. Hengyang City, China. 2002.
41. Qiuju Guo, Jianping Cheng, **Yong Chen**. Dose Evaluation of Indoor Thoron Progeny in China. Seventh International Symposium on the Natural Radiation Environment (NRE-VII). Greece. 2002
42. **\*Yong Chen**, Qiuju Guo, JianYong Sun. The research on the measurement of  $^{220}\text{Rn}$ \ $^{222}\text{Rn}$  and their decay products in environment. The National Symposium of natural environmental exposure and control. Beijing, China. 2000.

## PRESENTATIONS

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### International

- XIV Mexican Symposium on Medical Physics. “Dosimetric evaluation of tissue heterogeneity for electronic brachytherapy (EBT) source in high dose rate gynecological (GYN) irradiation”. Mexico City, Mexico, March 18-21, 2016.
- 57th Annual meeting of the American Association of Physicists in Medicine (AAPM), “A feasibility study of using a Cherenkov detector material with the prompt gamma range verification technique in proton therapy”. Anaheim, CA, July 12-16, 2015
- 54th Annual Meeting of the American Association of Physicists in Medicine (AAPM),” Dose Enhancement Effect of Golden Nanoparticles in a Realistic Voxelized Cell Phantom for Proton Radiation: A simulation Study with GEANT4”. Charlotte, NC July 29- Aug 2, 2012
- 52th Annual Meeting of the American Association of Physicists in Medicine (AAPM),” Relative Biological effectiveness for proton – an empirical model prediction”. Philadelphia, Pennsylvania, July 18- 22, 2010

### National

- Southwest American Association of Physicists in Medicine (SWAAPM) 2010 annual meeting. “Model prediction for relative biological effectiveness (RBE) in proton beam”. Baton Rouge, LA May 2010.
- 26th Annual meeting of the American College of Medical Physics (ACMP). “Effect of hadronic process differences on fluence distributions of particles generated from proton interactions in tissues - A GEANT4 Monte Carlo simulation”. Virginia Beach, VA from May 2, 2009.
- 25th Annual meeting of the American College of Medical Physics (ACMP). “Normalized Bragg Peak curves of various proton incident energies in water phantom: A simulation with GEANT4 Monte Carlo Code”. Seattle, WA from May 25, 2008.

## ACADEMIC INVOLVEMENT

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### TEACHING:

#### **Didactic Activities in the Department of Radiological Sciences, University of Oklahoma HSC**

- **RADI 5824:** Production and Absorption of Ionizing Radiation- Graduate Core course (4 Credit hours). Teaching in collaboration with other faculty members Since 2011
- **RADI 6864:** Radiological Physics I (Therapy) - Graduate Core Course (4 Credit hours). Teaching in collaboration with other faculty members Since 2012
- **RADI 5102:** Radiation Protection and Shielding in Medical Installations - Graduate Core Course (2 Credit hours). Teaching in collaboration with other faculty members Since 2015
- **RADI 6960** – Directive Reading for Advanced Topics

#### **Didactic Activities in the Department of Radiation Oncology, University of Oklahoma HSC**

- **Radiation Oncology Residency:** Radiation Oncology Clinical Physics Lectures. Teaching collaboration with other faculty members

### MENTORING AND SUPERVISING:

#### **Graduate Student under my supervision**

Department of Radiological Sciences, The University of Oklahoma HSC, Oklahoma City

- Michael Prusator, Doctor of Philosophy (Ph.D.) Graduate of 2018
- Michael Prusator, Master of Science, (M.S.) Graduate of 2014
- Mark Newpower, Master of Science, (M.S.) Graduate of 2015
- William Taylor, Master of Science, (M.S.) Graduate of 2016

#### **Graduate Supervisory Committee Membership**

Department of Radiological Sciences, The University of Oklahoma HSC, Oklahoma City

- Johnson Daniel, Doctor of Philosophy (Ph.D.) Graduate of 2013
- Any Lau, Doctor of Philosophy (Ph.D.) Graduate of 2014
- Mark Johnson, Master of Sciences, (M.S.) Graduate of 2015
- Sven Ferguson, Master of Sciences (M.S.) Graduate of 2016
- Kristyn Harpool, Master of Sciences (M.S.) Graduate of 2017
- James Pruett, Master of Sciences (M.S.) Expected to graduate of 2017
- Michael Prusator, Doctor of Philosophy (Ph.D.) Expected to graduate of 2018

#### **CAMPEP Accredited Radiological Sciences Graduate Program Committees**

- Admission Committee Chair 2013 - 2017
- Awards Committee Member since 2011
- Grievance Committee Member since 2011

#### **CAMPEP Accredited Radiation Oncology Clinical Medical Physics Residency Program**

- Orientation and Appeal Committee Member since 2011
- Curriculum and Rotations Committee Member 2011 -2014, Chair Since 2015
- Physics Residency Rotation Supervision
  - Rotation 3: Linac acceptance and commission, quality assurance, annual calibration, IMRT quality assurance measurements with film and ionization chambers Since 2011
  - Rotation 7 : Radiation protection, survey, and shielding Since 2011
- Physics Resident Mentorship
  - Leland Muller, M.S., Sven Ferguson, M.S. 2016
  - Steven Schultz. M.S. 2015
  - M. Rafiq Islam, Ph.D., Andy Lau, Ph.D., Maria Clara Ferreira, Ph.D. 2014
  - Vance Keeling, M.S. 2013
  - Frederick Jesseph, M.S. 2012

## PROFESSIONAL SERVICE

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### Journal Reviewer

Medical Physics, International Journal of Radiation Oncology \* Biology \* Physics, Journal of Applied Clinical Medical Physics (JACMP), Journal of X-ray Sciences and Technology, International Journal of Cancer Therapy and Oncology, Physics in Medicine and Biology

### Memberships

American Association of Physicists in Medicine (AAPM)	Since 2006
American College of Medical Physics (ACMP)	2008-2011
American Society for Therapeutic Radiology and Oncology (ASTRO)	Since 2011
Oklahoma State Radiological Society	Since 2006

## CLINICAL SERVICE

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### Stereotactic Radiosurgery/Gamma Knife

- Gamma Knife 4C/Perfexion, quality assurance, and treatment delivery- Primary Physicist

### Brachytherapy

- High Dose Rate (HDR with Ir-192) Interstitial for GYN, Quality assurance, and Procedure – Primary Physicist

### Proton Therapy

- Monte Carlo simulation for dose calculation and quality assurance – Primary Physicist

### Daily, Monthly and Annual Quality Assurance and Commissioning

- Varian Linear Accelerators
- GE Light Speed and Discovery CT Simulators
- Gamma Knife 4C/Perfexion
- Mevion S250 Proton therapy system

### Additional Clinical Involvement

- External Beam Radiation Therapy (EBRT)
  - Intensity Modulated Radiation Therapy (IMRT) Treatment Delivery Verification
  - Intensity Modulated Arc Therapy (IMAT) Treatment Delivery Verification
  - Electron Cutout Calibrations
- Total Body Irradiation (TBI) Patient Measurements, Treatment Planning, and In-Vivo Measurement Verification
- Stereotactic Body Radiation Therapy (SBRT) and Stereotactic Radiation Surgery (SRS) Treatment Verification
- Prostate Seed Implant (PSI)
- Xofig HDR (Partial Breast and Tandem and Ovoids for Cervical Cancer Treatment)
- Post-planning and Weekly Chart Check Reviews
- Varian Eclipse Treatment Planning

- Oncentra and NPS Brachytherapy Treatment Planning Systems
- Varian Eclipse Record & Verify

**Veterans Administration Department of Radiation Oncology (Contractor)**

- External Beam Radiation Therapy (EBRT)
  - Intensity Modulated Radiation Therapy (IMRT) Treatment Delivery Verification
  - Intensity Modulated Arc Therapy (IMAT) Treatment Delivery Verification
  - Electron Cutout Calibrations
- Monthly Quality Assurance (QA)
  - Monthly mechanical QA on a Trilogy Varian Linear Accelerator
  - Monthly mechanical and image quality QA on GE Discovery Computed Tomography (CT) unit