

BIOGRAPHICAL SKETCH

NAME Harmon, Joseph F., Jr.	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME JHARMON7			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
The Citadel, Charleston, SC	B.S.	1982	Physics (Honors)
Air Force Institute of Technology	M.S.	1984	Nuclear Science
University of Florida	Ph.D.	1994	Medical Physics

A. Positions and Honors.**Positions and Employment**

1984-1988 Nuclear Research Officer, USAF Technical Applications Center, Patrick AFB, FL
1988-1991 Assistant Professor of Physics, USAF Academy, Colorado Springs, CO
1991-1994 Graduate Student, University of Florida, Gainesville, FL
1994-1997 Medical Physicist/Lecturer, David Grant Medical Center, Travis AFB, CA
1997-2001 Chief, Medical Physics, Keesler Medical Ctr, Keesler AFB, MS
2001-2003 Medical Physicist & Adjunct Assistant Professor of Physics, USAFA Hospital, USAFA, CO
1997- Medical Physics Consultant
2003-2005 Director of Clinical Medical Physics/Assistant Professor, Medical University of SC, Charleston, SC
2005-2006 Chief, Medical Physics, Roper Saint Francis Healthcare, Charleston, SC
2007- Medical Physicist/Assistant Professor, Colorado State University, Fort Collins, CO

Other Experience and Professional Memberships

1992- American Association of Physicists in Medicine
1982- National Physics Honor Society, Sigma Pi Sigma
1992- National Nuclear Engineering Honor Society, Alpha Nu Sigma
1994- American College of Radiology: FDA/MQSA qualified mammography physicist, qualified MRI scientist
1997- Diplomat, American Board of Radiology: Therapeutic & Diagnostic Radiologic Physics
1997- Florida: Licensed Therapeutic & Diagnostic Radiological Physicist
2003- South Carolina: Certified Class IX Vendor
2007- Colorado: Qualified Expert/Qualified Inspector

Honors

1982 BS Physics Honor Graduate
1982-2003 Air Force Meritorious Service Medal with oak leaf cluster
1982-2003 Air Force Commendation Medal with oak leaf cluster
1978-1982 USAF ROTC, Broadus R. Littlejohn, and Fred J. Attaway Scholarships
1981-1982 The Citadel Corps of Cadets: President, Society of Physics Students

B. Selected peer-reviewed publications and Presentations.

Publications:

1. Kniedler J, **Harmon JF**, Jordan MS, Wendel A. Chernobyl Data Report. AFTAC-ED 12 June 1987-87-25.
2. **Harmon J**, Bova F, Meeks S. Inverse Radiosurgery Treatment Planning Through Deconvolution and Constrained Optimization. Medical Physics, Oct 1998.
3. Dragun E, Aguero EG, **Harmon JF**, Harper JL, Jenrette JM. Chest Wall Dose in MammoSite™ Breast Brachytherapy: Radiobiologic Estimations of Late Complication Risk Based on Dose-Volume Considerations. Brachytherapy 2005; Vol 4; Issue 4.
4. Meeks SL, **Harmon JF**, Langen K, et al. Performance Characterization of Megavoltage Computed Tomography Imaging on a Helical Tomotherapy Unit. Med Phys 2005; 32(8)
5. Dragun E, **Harmon JF**, Aguero EA, "Defining Targets and Protecting Normal Tissues in Inverse-Planned IMRT for Prostate, Head and Neck, and Gynecologic Cancers: A Comparative Review", Community Oncology, July/Aug 2005
6. **Harmon JF**, Van Uffelen D., LaRue S., Assessment of a Radiotherapy Patient Cranial Immobilization Device Using Daily On-Board Kilovoltage Imaging. Vet Radiol Ultrasound, Vol. 50, No. 2, 2009
7. M. Rowe, C. Chang, D. Thamm, S. Kraft, **J. Harmon**, A. Vogt, B Sumerlin, S. Boyes, Tuning the Magnetic Resonance Imaging Properties of Positive Contrast Agent Nanoparticles by Surface Modification with RAFT Polymers, American Chemical Society, Langmuir, Aug 18; 25(16):9487-99

Presentations/Posters:

1. Bergeron ME, **Harmon JF**, Cherek PA, Rogers ME. Investigation of Third Order Effects in Acetone. LASERS 89 Proceedings, LASERS 89 Conference, New Orleans, LO December 1989.
2. **Harmon JF**, Bergeron ME, Cherek PA, Rogers ME, Kim T, Stauffer CL. The Effect of Pump Coherence Length on Stimulated Light Scattering. Abstract/Summary QPDP4, XVII International Quantum Electronics Conference Digest (IQEC), Anaheim, CA May 1990.
3. **Harmon JF**. Dosimetric Properties and Applications of Radiochromic Film. USAF School of Aerospace Medicine, Health Physics Symposium: Jan 1996.
4. **Harmon JF**. Implementation of a Quality Assurance Protocol for Digital Image Workstations. USAF School of Aerospace Medicine, Health Physics Symposium Jan 1996
5. **Harmon JF**. Radiographic Image Quality, A physicist's Perspective. RADSYP 99, Radiology Symposium, Keesler Medical Center, Keesler AFB, MS 1999.
6. **Harmon JF**. Optimizing Image Quality and Patient Safety in Mammography, Justification for QA Tests. Emerald Coast Society of Radiological Technologists, Fort Walton Bch Hospital, FL. 1999.
7. **Harmon JF**, Medical Physics Activities in the VTH: Highlights of the Trilogy Linac Commissioning and an Overview of Research Interests, CSU VTH ACC Seminar Dec 12, 2007
8. **Harmon JF**, An Overview of CSU/VTH Imaging for Radiotherapy, CSU Symposium on Imaging, Jan 28, 2008
9. Uffelen D., **Harmon JF**, Cranial Fixation Device for use on Dogs and Cats during Radiation Treatment, Celebrate Undergraduate Research & Creativity poster, Apr 2008
10. Touhy J., Ryan S., **Harmon JF**, LaRue S., Clinical Experience with Stereotactic Radiosurgery for Extremity Osteosarcoma, Merk student researcher symposium poster, Aug 2008
11. Ryan S., Touhy J., **Harmon JF**, Arceneaux B., LaRue S., Clinical Experience with Stereotactic Radiosurgery for Curative Intent Treatment of Extremity Osteosarcoma, American College of Veterinary Radiology poster, Oct 2008
12. Ryan S., **Harmon JF**, Touhy J., LaRue S., Development of a Frame-Based Positioning and Immobilization Device for Stereotactic Radiosurgery of Extremity Neoplasia, American College of Veterinary Radiology poster, Oct 2008
13. Walters J., **Harmon JF**, Ryan S., LaRue S., Characterization of Differences in Calculated and Actual Measured Skin Doses to Canine Limbs during Stereotactic Radiosurgery using Gafchromic Film, Colorado State University Veterinary Medicine and Biomedical Sciences 10th Annual CVMBBS Research Day poster, Feb 2009

14. S. Ryan, N. Ehrhart, D. Worley, J. Harmon, J. Custis, J. Tuohy, S. LaRue, Stereotactic Radiation Therapy for Appendicular Bone Tumors, Veterinary Radiology and Ultrasound (abstract), ACVR Annual Scientific Conference, October 20-24, Memphis, TN (Presentation)
15. S. LaRue, J. Harmon, J. Custis and K. Lunn, Endocrine Function in Cats Following Stereotactic Radiation Therapy for Treatment of Acromegaly, Veterinary Radiology and Ultrasound (abstract), ACVR Annual Scientific Conference, October 20-24, Memphis, TN (Presentation)
16. J. Custis, S. Ryan, A. Valdés-Martínez, J. Harmon, S. Kraft, S. LaRue, Identifying Factors Predictive of Osteosarcome Related Pathologic Fracture Following Stereotactic Radiation Therapy , Veterinary Radiology and Ultrasound (abstract), ACVR Annual Scientific Conference, October 20-24, Memphis, TN (Presentation)
17. R. Carsten, J. Custis, J. Harmon, P. Hellyer, A. Bachand, V. Rizzo, S. LaRue, proceedings of the 29th Annual Veterinary Cancer Society Conference (abstract), October 16-19, Austin, Texas, ACVR Annual Scientific Conference, October 20-24, Memphis, TN (Presentation)
18. J. Nieset, J. Harmon, S. LaRue, Use of Image-Guided Radiotherapy to Optimize Canine Bladder Cancer, Veterinary Radiology and Ultrasound (abstract), ACVR Annual Scientific Conference, October 20-24, Memphis, TN (Presentation)

C. Research Support

Ongoing Research Support

Use of Image-Guided Radiotherapy to Optimize Canine Bladder Cancer Treatment (PI)

Source of Funding: N/A

Performance Period: 07/01/2008 – 04/30/2010

Level of Funding: N/A

Project Goals: The first aim of this study is to quantify the size, shape and volume changes of the bladder that occur daily in each of three patient positions (dorsal, sternal and lateral) to determine which provides the best possible treatment scenario. The secondary aim of the study uses this information to determine the optimal planning target volume (PTV) expansion that ensures inclusion of the bladder in the treatment field each day and minimizes irradiation of nearby healthy tissues.

Completed Research Support

Assessment of a Radiotherapy Patient Cranial Immobilization Device using Daily On-board Kilovoltage Imaging (PI)

Source of Funding: Colorado State University College of Veterinary Medicine and Biomedical Sciences, ERHS

Performance Period: 09/01/2007 – 05/30/2008

Level of Funding: \$500

Project Goals: The purpose of this study was to utilize state-of-the-art on-board digital kilovoltage (kV) imaging to determine the systematic and random set-up errors of an immobilization device designed for canine and feline cranial radiotherapy treatments.

Optimizing Canine Limb Radiosurgery: Use of Gafchromic Film for Evaluation of Skin

Dose (PI)

Source of Funding: Colorado State University College of Veterinary Medicine and Biomedical Sciences Research Council

Performance Period: 07/01/2008 – 06/30/2009

Level of Funding: \$20,000

Project Goals: This project aims to assess the accuracy of the current Eclipse radiosurgery skin dose calculations by comparison with measurements utilizing a phantom, cadaver limb and actual clinical patients.