


# CURRICULUM VITAE FOR ACADEMIC PROMOTION

The Johns Hopkins University School of Medicine

(Signature)  \_\_\_\_\_ 5/24/2010 \_\_\_\_\_  
(Typed Name) Eric Ford, PhD (Date of this version)

## DEMOGRAPHIC AND PERSONAL INFORMATION

### Current Appointments

Assistant Professor  
Department of Radiation Oncology and Molecular Radiation Sciences  
Johns Hopkins University, Baltimore, MD

### Personal Data

Suite 1440, Weinberg Building, 401 North Broadway, Baltimore, MD 21231  
Tel: 410-502-1477, Fax: 410-502-1419, email: eric.ford@jhmi.edu

### Education and Training (in chronological order):

Year	Degree/Certificate Institution	Discipline
1992	B.S./Massachusetts Institute of Technology (MIT)	Physics
1994	B.A./Columbia University	Physics
1997	Ph.D./Columbia University	Physics/Astrophysics
1997-2000	Post-doctoral fellow/Univ. of Amsterdam	Astrophysics
2000-2002	Post-doctoral fellow/ Memorial Sloan-Kettering Cancer Center	Radiation Oncology Physics

### Professional Experience (in chronological order, earliest first)

2002-2003, Medical Physicist, Seattle VA  
2002-2003, Adjunct Assistant Professor, Radiation Oncology, Univ. of Washington  
2003-2005, Assistant Professor, Radiation Oncology, Univ. of Washington  
2005-present, Assistant Professor, Radiation Oncology, Johns Hopkins University

## RESEARCH ACTIVITIES

### Publications: Peer-reviewed Original Science Research

1. **Ford, E**, Kaaret, P, Tavani, M, Harmon, BA, Zhang, SN. A Search For Hard X-ray Emission from Globular Clusters: Constraints from BATSE. *Astrophysical Journal*. 1996; 467: 272-279.
2. **Ford, EC**, Kaaret, P, Tavani, M, Harmon, BA, Zhang, SN, Barret, D, Grindlay, J, Bloser, P, Remillard, R. Anticorrelated Hard/Soft X-ray Emission from the X-Ray Burster 4U 0614+091. *Astrophysical Journal*. 1996; 469: L37-40.
3. **Ford, EC**, Kaaret, P, Tavani, M, Barret, D, Bloser, P, Grindlay, J, Harmon, BA, Paciesas, WS, Zhang, SN. Evidence from quasi-periodic oscillations for a millisecond pulsar in the low mass x-ray binary 4U 0614+091. *Astrophysical Journal*. 1997; 475: L123-126.
4. Kaaret, P, **Ford, E**, Chen, C. Strong-field general relativity and quasi-periodic oscillations in x-ray binaries. *Astrophysical Journal*. 1997; 480: L27-29.
5. Kaaret, P, **Ford, EC**. Using neutron stars and black holes in x-ray binaries to probe strong gravitational fields. *Science*. 1997; 276: 1386-1391.
6. Yu, W, Zhang, SN, Harmon, BA, Paciesas, WS, Robinson, CR, Grindlay, JE, Bloser, P, Barret, D, **Ford, EC**, Tavani, M, Kaaret, P. Kilo-hertz QPO in Island State of 4U1608-52 as Observed with RXTE/PCA. *Astrophysical Journal*. 1997; 490: L153-165.
7. **Ford, EC**, Kaaret, P, Tavani, M, Barret, D, Bloser, P, Grindlay, J, Harmon, BA, Paciesas, WS, Zhang, SN. Energy Spectra and High Frequency Oscillations in 4U 0614+091. *Astrophysical Journal*. 1997; 486: L45-50.

8. Soffitta, P, Tomsick, JA, Harmon, BA, Costa, E, **Ford, EC**, Tavani, M, Zhang, SN, Kaaret, P. Identification of the Periodic Hard X-Ray Transient GRO J1849-03 with the X-Ray Pulsar GS -1843-02 = X1845-024: A New Be/X-Ray Binary. *Astrophysical Journal*. 1998; 494: L203-206.
9. Kaaret, P, Yu, W, **Ford, EC**, Zhang, SN. Correlation Between Fast Quasi-Periodic Oscillations and X-Ray Spectral Shape in Atoll Sources. *Astrophysical Journal*. 1998; 497: L93-96.
10. **Ford, EC**, van der Klis, M, Kaaret, P. Discovery of Kilohertz QPOs in the Atoll X-Ray Binary 4U 1705-44. *Astrophysical Journal*. 1998; 498: L41-44.
11. Mendez, M, van der Klis, M, Wijnands, R, **Ford, EC**, van Paradijs, J, Vaughan, BA. Kilohertz Quasi-Periodic Oscillation Peak Separation is not Constant in the Atoll Source 4U 1608-52. *Astrophysical Journal*. 1998; 505: L23-26.
12. **Ford, EC**, van der Klis, M. Strong correlation between noise features at low frequency and the kilohertz QPOs in the x-ray binary 4U 1728-34. *Astrophysical Journal*. 1998; 506: L39-42.
13. **Ford, EC**. Fast X-Ray Oscillations: Probes of an Accreting Neutron Star. *Proc. Astronomical Society of the Pacific*. 1998; 110: 635-636.
14. Piraino, S, Santangelo, A, **Ford, EC**, Kaaret, P. BeppoSAX Observations of the Atoll X-Ray Binary 4U0614+091. *Astronomy & Astrophysics*. 1999; 349: L77-80.
15. **Ford, EC**, van der Klis, M, van Paradijs, J, Mendez, M, Wijnands, R, Kaaret, P. Discovery of a second kilohertz QPO in the x-ray binary 4U 1735-44. *Astrophysical Journal*. 1998; 508: L155-158.
16. Piraino, S, Santangelo, A, **Ford, EC**, Kaaret, P. BeppoSAX observations of the atoll X-ray binary 4U 0614+091. *Astronomy & Astrophysics*. 1999; 349: 77-88.
17. Mendez, M, van der Klis, M, **Ford, EC**, Wijnands, R, van Paradijs, J. Dependence of the Frequency of the Kilohertz Quasi-Periodic Oscillations on X-ray Count Rate and Colors in 4U 1608-52. *Astrophysical Journal*. 1999; 511: L49-52.
18. **Ford, EC**, van der Klis, M, Mendez, M, van Paradijs, J, Kaaret, P. Measurement of hard lags and coherences in the x-ray flux of accreting neutron stars and comparison with accreting black holes. *Astrophysical Journal*. 1999; 512: L31-34.
19. Kaaret, P, Piraino, S, **Ford, EC**, Santangelo, A. Discovery of Microsecond Soft Lags in the X-Ray Emission of the Atoll Source 4U1636-536. *Astrophysical Journal*. 1999; 514: L31-33.
20. **Ford, EC**. Lag of low-energy photons in x-ray burst oscillations: doppler delays. *Astrophysical Journal*. 1999; 519: L74-75.
21. Kaaret, P, Piraino, S, Bloser, PF, **Ford, EC**, Grindlay, JE, Santangelo, A, Smale, AP, Zhang, W. Strong Field Gravity and X-Ray Observations of 4U1820-30. *Astrophysical Journal*. 1999; 520: L37-40.
22. Reig, P, Mendez, M, van der Klis, M, **Ford, EC**. Correlated Timing and Spectral Variations of the Soft X-Ray Transient Aquila X-1: Evidence for an Atoll Classification. *Astrophysical Journal*. 2000; 530: 916-924.
23. Jonker, PG, van der Klis, M, Homan, J, Wijnands, R, van Paradijs, J, Mendez, M, Kuulkers, E, **Ford, EC**. Discovery of a  $\sim 1$  HZ Quasi-periodic Oscillation in the Low-Mass X-Ray Binary 4U 1746-37. *Astrophysical Journal*. 2000; 531: 453-459.
24. **Ford, EC**. Relativistic effects in the pulse profile of the 2.5 msec x-ray pulsar SAX J1808.4-3658. *Astrophysical Journal*. 2000; 535: L119-122.
25. Jonker, PG, van der Klis, M, Wijnands, R, Homan, J, van Paradijs, J, Mendez, M, **Ford, EC**, Kuulkers, E, Lamb, F. The Power Spectral Properties of the Z Source GX 340+0. *Astrophysical Journal*. 2000; 537: 374-382.
26. **Ford, EC**, van der Klis, M, Mendez, M, Wijnands, R, Homan, J, Jonker, PG, van Paradijs, J. Simultaneous measurements of x-ray luminosity and kilohertz quasi-periodic oscillations in low mass x-ray binaries. *Astrophysical Journal*. 2000; 537: 368-373.
27. van Straaten, S, **Ford, EC**, van der Klis, M, Mendez, M, Kaaret, P. Relations between Timing Features and Colors in the X-Ray Binary 4U 0614+09. *Astrophysical Journal*. 2000; 540: 1049-1062.
28. Reig, P, Belloni, T, van der Klis, M, Mendez, M, Kylafis, ND, **Ford, EC**. Phase Lag Variability Associated with the 0.5-10 HZ Quasi-Periodic Oscillations in GRS 1915+105. *Astrophysical Journal*. 2000; 541: 883-889.

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29. Oosterbroek, T, Barret, D, Guainazzi, M, **Ford, EC**. Simultaneous Beppo-SAX and RXTE observations of the X-ray burst sources GX 3+1 and Ser X-1. *Astronomy & Astrophysics*. 2001; 366: 1380-1385.
30. Di Salvo, T, Mendez, M, van der Klis, M, **Ford, EC**, Robba, NR. Study of the Temporal Behavior of 4U 1728-34 as a Function of Its Position in the Color-Color Diagram. *Astrophysical Journal*. 2001; 546: 1007-1118.
31. Jonker, PG, van der Klis, M, Homan, J, Mendez, M, van Paradijs, J, Belloni, T, Kouveliotou, C, Lewin, W, **Ford, EC**. Discovery of a Kilohertz Quasi-periodic Oscillation in 2S 0918-549. *Astrophysical Journal*. 2001; 553: 335-341.
32. Mendez, M, van der Klis, M, **Ford, EC**. The Amplitude of the Kilohertz Quasi-periodic Oscillations in 4U 1728-34, 4U 1608-52, and Aquila X-1, as a Function of X-Ray Intensity. *Astrophysical Journal*. 2001; 561: 1016-1026.
33. Nehmeh, SA, Erdi, YE, Rosenzweig, KE, Humm, JL, Yorke, ED, Squire, OD, **Ford, EC**, Sidhu, K, Mageras, G, Braban, LE, Larson, SM, Ling, CC. Effect of respiratory gating on reducing lung motion artifacts in PET imaging of lung cancer. *Medical Physics*. 2002; 29(3): 366-371.
34. **Ford, EC**, Mageras, GS, Yorke, E, Rosenzweig, KE, Wagman, R, Ling, CC. Evaluation of respiratory movement during gated radiotherapy using film and electronic portal imaging. *Int Journal Rad Oncol Biol Phys*. 2002; 52: 522-531.
35. **Ford, EC**, Chang, J, Mueller, K, Sidhu, K, Todor, D, Mageras, G, Yorke, E, Ling, CC, Amols, H. Cone-Beam CT with megavoltage beams and an amorphous silicon electronic portal imaging device: potential for verification of radiotherapy of lung cancer. *Medical Physics*. 2002; 29(12): 2913-2924.
36. Wagman, R, Yorke, E, **Ford, EC**, Giraud, P, Mageras, G, Minsky, B, Rosenzweig, K. Respiratory gating for liver tumors: use in dose escalation. *Int Journal Rad Oncol Biol Phys*. 2003; 55(3): 659-668.
37. Sidhu, K, **Ford, EC**, Spirou, S, Yorke, E, Chang, J, Mueller, K, Todor, D, Rosenzweig, K, Mageras, G, Chui, C, Ling, CC, Amols, H. Optimization of conformal thoracic radiotherapy using cone-beam CT imaging for treatment verification. *Int Journal Rad Oncol Biol Phys*. 2003; 55(3): 757-767.
38. **Ford, EC**, Mageras, G, Yorke, E, Ling, CC. Respiration-correlated spiral CT: a method of measuring respiratory-induced anatomic motion for radiation treatment planning. *Medical Physics*. 2003; 30(1): 88-97.
39. Mageras, GS, Pevsner, A, Yorke, ED, Rosenzweig, KE, **Ford, EC**, Hertanto, A, Larson, SM, Lovelock, DM, Erdi, YE, Nehmeh, SA, Humm, JL, Ling, CC. Measurement of lung tumor motion using respiration-correlated CT. *Int J Radiat Oncol Biol Phys*. 2004; 60(3): 933-941.
40. **Ford, EC**, Lutz, W. A block design for split-field tests of accelerator alignment. *Medical Physics*. 2004; 31(8): 2331-2334.
41. Sherertz, T., Wallner, K., Merrick, G., **Ford, E.**, Sutlief, S., Cavanagh, W., Butler, W., True, L., Factors predictive of rectal bleeding after 103Pd and supplemental beam radiation for prostate cancer, *Brachytherapy*. 2004; 3(3).
42. Mueller, A, Wallner, K, Merrick, G, **Ford, E**, Sutlief, S, Cavanagh, W, Butler, W. Perirectal seeds as a risk factor for prostate brachytherapy-related rectal bleeding. *Int Journal Rad Oncol Biol Phys*. 2004; 59(4): 1047-1052.
43. Schwartz, DL, **Ford, E**, Rajendran, J, Yueh, B, Coltera, MD, Virgin, J, Haynor, D, Lewellyn, B, Mattes, D, Meyer, J, Phillips, M, Leblanc, M, Kinahan, P, Krohn, K, Eary, J, Laramore, GE. FDG-PET/CT imaging for preradiotherapy staging of head-and-neck squamous cell carcinoma. *Int J Radiat Oncol Biol Phys*. 2005; 61(1): 129-136.
44. Schwartz, D.L., **Ford, E.C.**, Rajendran, J., Yueh, B., Coltrera, M.D., Virgin, J., Anzai, Y., Haynor, D., Lewellen, B., Mattes, D., Kinahan, P., Meyer, J., Phillips, M., Leblanc, M., Krohn, K., Eary, J., Laramore, G.E. FDG-PET/CT-guided intensity modulated head and neck radiotherapy: A pilot investigation. *Head Neck*. 2005; 27(6): 478-487.
45. Giraud, P., Yorke, E., **Ford, E.C.**, Wagman, R., Mageras, G.S., Amols, H., Ling, C.C. and Rosenzweig, K.E., Reduction of organ motion in lung tumors with respiratory gating. *Lung Cancer*. 2005; 51: 41-51.

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46. Sillanpaa, J., Chang, J., Mageras, G., Reim, H., **Ford, E.C.**, Todor, D., Ling, C.C., Amols, H. Developments in megavoltage cone-beam CT with an amorphous silicon EPID: Reduction of exposure and synchronization with respiratory gating. *Med Phys.* 2005; 32: 819.
47. Reed, D.R., Wallner, K., **Ford, E.C.**, Mueller, A., Merrick, G., Maki, J., Sutlief, S., Butler, J., Effect of post-implant edema on prostate brachytherapy treatment margins, *Int J Radiat Oncol Biol Phys.* 2005; 63(5): 1469-1473.
48. Reed D.R., Wallner K.E., Narayanan S., Sutlief S.G., **Ford E.C.**, Cho P.S., Intraoperative fluoroscopic dose assessment in prostate brachytherapy patients, *Int J Radiat Oncol Biol Phys.* 2005; 63(1): 301-307.
49. **Ford E.C.**, Kinahan P.E., Hanlon L., Alessio A., Rajendran J., Schwartz D.L. and Phillips M., Tumor delineation using PET in head and neck cancers: Threshold contouring and lesion volumes. *Med Phys.* 2006; 33: 4280-4288.
50. **Ford E.**, Technical Aspects of Respiration-Correlated 4D-CT for Radiation Therapy, *J Am Clin Radiol.* 2006; 10: 192-194.
51. Deng H., Kennedy C.W., Armour E., McNutt T., Tryggestad E., **Ford E.**, Huang J., Wong, J., Iordachita I., Kazanzides P., Jiang L., The Small-Animal Radiation Research Platform (SARRP): dosimetry of a focused lens system. *Phys Med Biol.* 2007; 52(10): 2729-2740.
52. Nimmagadda S., **Ford E.C.**, Wong J.W., Pomper M.G., Targeted Molecular Imaging in Oncology: focus on Radiation Therapy, *Semin Radiat Oncol.* 2008; 18(2): 136-148.
53. Duan, W., Peng, Q., Masuda, N., **Ford, E.**, Tryggestad, E., Ladenheim, B., Zhao, M., Cadet, J.L., Wong, J., Ross, C.A., Sertraline Slows Disease Progression and Increases Neurogenesis in N171-82Q mouse model of Huntington's Disease. *Neurobiology of Disease.* 2008; 30(3): 312-322.
54. **Ford E.C.**, Lavelly W.C., Frassica D.A., Myers L.T., Asrari F., Wahl R.L., Zellars R.C., Comparison of FDG-PET/CT and CT for Delineation of Lumpectomy Cavity for Partial Breast Irradiation, *Int J Radiat Oncol Biol Phys.* 2008; 71(2): 595-602.
55. Wong, J., Armour, E., Kazanzides, P., Iordachita, I., Tryggestad, E., Deng, H., Kennedy, C., Liu, Z., Chan, T., Gray, O., Verhaegan, F., McNutt, T., **Ford, E.**, DeWeese, T.L., A high resolution small animal radiation research platform (SARRP) with x-ray tomographic guidance capabilities, *Int J Radiat Oncol Biol Phys.* 2008; 71(5): 1591-1599.
56. **Ford E.**, Purger D., Tryggestad E., McNutt T., Christodouleas J., Rigamonti D., Shokek O., Won S., Zhou J., Lim M., Wong J., Kleinberg L., A Virtual Frame System for Stereotactic Radiosurgery Planning, *Int J Radiat Oncol Biol Phys.* 2008; 72(4): 1244-1249.
57. Anderson, W.S.; Moore, L.E.; Ford, E.; Rigamonti, D., A Fatal Case of Intercerebral hemorrhage during Gamma Knife Treatment for Metastases. *Clin Neurol and Neurosurg.* 2008; 110: 838-842.
58. Matinfar M., **Ford E.**, Iordachita I., Wong J., Kazanzides P., Image-Guided Small Animal Radiation Research Platform: Calibration of Treatment Beam Alignment. *Phys Med Biol.* 2009; 54(4): 891-905.
59. Fox J., **Ford E.**, Redmond K., Zhou J., Wong J., Song D., Quantification of Tumor Volume Changes During Radiation Therapy for Non-Small Cell Lung Cancer, *Int J Radiat Oncol Biol Phys.* 2009; 74(2), 341-348.
60. **Ford E.C.**, Herman J., Yorke E., Wahl R.L., FDG-PET/CT for Image-guided and Intensity Modulated Radiotherapy. *J Nucl Med.* 2009; 50(10), 1655-1666.
61. **Ford E.C.**, Gaudette R., Myers L., Vanderver B., Engineer L., Zellars R., Song D., Wong J., DeWeese T.L., Evaluation of Safety in a Radiation Oncology Setting Using Failure Mode and Effects Analysis, *Int J Radiat Oncol Biol Phys.* 2009; 74(3), 852-858.
62. Goldstein S., **Ford, E.C.**, Duhon, M., McNutt, T., Wong, J., Herman, J.H., Use of respiration-correlated four-dimensional Computed Tomography to Determine Acceptable Treatment Margins for Locally Advanced Pancreatic Adenocarcinoma, *Int J Radiat Oncol Biol Phys.* 2009; 76(2), 597-602.
63. Redmond, K., Song, D.Y., Fox, J.L., Zhou, J., Rosenzweig, C.N., **Ford, E.**, Respiratory Motion Changes of Lung Tumors Over the Course of Radiation Therapy Based on Respiration-Correlated Four-Dimensional Computed Tomography Scans, *Int J Radiat Oncol Biol Phys.* 2009; 75(5), 1605-1612.

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64. Purger, D., McNutt, T., Achanta, P., Quinones-Hinojosa, A., **Ford, E.**, A histology-based atlas of the C57BL/6J mouse brain deformably registered to in vivo MRI for localized radiation and surgical targeting, *Phys Med Biol.* 2009; 54, 7315-7327.
65. Armour, M., **Ford, E.**, Iordachita, I., Wong, J., CT Guidance is Needed to Achieve Reproducible Positioning of the Mouse Head for Repeat Precision Cranial Irradiation, *Rad Res.* 2010; 173, 119-123.
66. Terezakis, S.A., Pronovost, P., DeWeese, T., **Ford, E.**, Systematic prospective safety measures in a large academic radiation oncology department, *Joint Commission Journal on Quality and Safety.* 2010; in press.
67. **Ford, E.C.**, Terezakis, S., How Safe is Safe?: Risk in Radiotherapy, *Int J Radiat Oncol Biol Phys.* 2010; in press.
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**Inventions, Patents, Copyrights (pending, awarded)**

Date	Title
2008	Small Animal Radiation Research Platform

**Extramural Funding (current, pending, previous)**

Current

Agency: NIH/NCI R21 EB009112-01  
P.I.: Jinyuan Zhou, PhD  
Role: Co-investigator (0.24 calendar months)  
Project Title: High-resolution DT-MRI for differentiation of malignant glioma from radiation necrosis  
Start Date: 8/1/2009 End Date: 7/31/2011  
Level of funding: \$125,000 per year

Agency: James S McDonnell Foundation, Brain Tumor Funders' Collaborative  
P.I.: Alena Horska, PhD  
Role: Co-investigator (0.36 calendar months)  
Project Title: Non-Invasive Assessment of glutamate in glioblastoma multiforme: effect of treatment  
Start Date: 1/1/2010 End Date: 12/31/2010  
Level of funding: \$100,000 per year

Agency: Elekta Oncology Systems  
P.I.: John Wong, PhD  
Role: Co-investigator (0.60 calendar months)  
Project Title: Optimizing the Methods and Infrastructure for IGRT  
Start Date: 5/1/2008 End Date: 4/30/2011  
Level of funding: \$170,000 per year

Agency: IMPAC Medical Systems  
P.I.: Eric Ford, PhD (0.12 calendar months)  
Project Title: Identifying and Preventing Computer-Related Errors in Radiotherapy  
Start Date: 7/1/2010 End Date: 6/31/2011  
Level of funding: \$18,000

Pending

Agency: James S. McDonnell Foundation  
Status: under review  
P.I.: Eric Ford, PhD (2.4 calendar months)  
Project Title: Effect of Localized Radiation on Neural Stem Cells and Migrating Neural Progenitor Cells in the Brain  
Start Date: 9/1/2010 End Date: 8/31/2013  
Funding level: \$150,000 per year

Agency: Agency for Healthcare Research and Quality (AHRQ) R18  
Status: under review  
P.I.: Eric Ford, PhD (2.4 calendar months)  
Project Title: Deployable Strategies for Improving Patient Safety in Radiation Oncology  
Start Date: 12/1/2010 End Date: 11/31/2013  
Level of funding: \$300,000 per year total costs

Agency: NIH/NCI 1R01CA155138-01  
Status: under review  
P.I.: Robert Ivkov, PhD  
Role: Co-investigator (1.8 calendar months)  
Project Title: Trastuzumab-nanoparticle device for combined therapy and imaging of metastatic cancer  
Start Date: 1/1/2011 End Date: 12/31/2015  
Level of funding: \$250,000 per year

Completed

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Project Number: R01CA108449      Project Period: 5/1/05-5/30/09  
P.I.: John Wong, PhD  
Role: Co-investigator (current effort: 0%)  
Project Title: An Image Guided Small Animal Radiation Research Platform  
Source: NIH/NCI

**Research Program Building / Leadership**

Dates, name of research / basic science program, role

**EDUCATIONAL ACTIVITIES**

**Educational Publications**

Invited Review Articles

**Ford E.**, Technical Aspects of Respiration-Correlated 4D-CT for Radiation Therapy, J Am Clin Radiol. 2006; 10: 192-194.

**Ford E.C.**, Herman J., Yorke E., Wahl R.L., FDG-PET/CT for Image-guided and Intensity Modulated Radiotherapy. J Nucl Med. 2009; 50(10), 1655-1666.

Terezakis, S.A., Pronovost, P., DeWeese, T., **Ford, E.**, Systematic prospective safety measures in a large academic radiation oncology department, Joint Commission Journal on Quality and Safety. 2010; in press.

**Teaching**

Director, medical physics residency program, Johns Hopkins, 2008-present  
Radiation Therapy Physics, co-instructor, Johns Hopkins Medical Center, 2005-2008  
Advisor, Kristin Redmond, MD, Award winner, ASTRO 2007: residents basic science paper  
physics. Respiratory motion changes of lung tumors over the course of radiation therapy  
Radiation Therapy Physics, co-instructor, University of Washington, 2004  
Radiation Therapy Physics, instructor, Memorial Sloan-Kettering Cancer Center, 2001-2002  
Overview of Astrophysics, instructor, Columbia University, 1996-1997

**Mentoring (pre- and post-doctoral)**

2009-present, mentor, Medical Physics Residency, Current residents: Jun Kang, PhD. Past residents: Don Engel, PhD.

2006-2010 student mentor, David Purger, MIT, BS Brain and Cognitive Science and Laboratory research assistant with Dr. Alfredo Quinones-Hinojosa.

Student co-mentor, Dan Smith, AAPM, Summer Undergraduate Fellowship Program, 2009

Student mentor award, ASTRO 2007: residents basic science paper, physics. Kristin Redmond, MD, Respiratory motion changes of lung tumors over the course of radiation therapy

**Educational Program Building / Leadership**

Director, medical physics residency program, Johns Hopkins, 2008-present  
AAPM working group on error prevention, Member, 2009-present  
ASTRO multidisciplinary QA subcommittee, Member, 2009-present

**Educational Extramural Funding (current, pending, previous)**

None

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## CLINICAL ACTIVITIES

### **Certification**

American Board of Radiology (ABR), Therapeutic Radiation Oncology Physics, 2003-present.

### **Clinical (Service) Responsibilities** (dates, specialty, role, time commitment)

Clinical medical physics support, Radiation Oncology, 60%

### **Clinical Program Building / Leadership**

Stereotactic radiosurgery and image-guided radiation therapy, co-leader.

### **Clinical Extramural Funding** (current, pending, previous)

None

## ORGANIZATIONAL ACTIVITIES

### **Institutional Administrative Appointments** (date, committees)

#### **Editorial Activities** (dates, role)

Manuscript Reviewer, Medical Physics, Int Journal Radiat Oncol Biol Phys, 2003-present

Abstract Reviewer, AAPM meeting, 2006-present

Abstract Reviewer, ASTRO meeting, 2010

Associate Editor, Medical Physics, 2006

#### **Advisory Committees, Review Groups/Study Sections** (date, sponsor, role)

2009-present, NIH study section review panel RTB for SBIR grants

2009, NIH RCI challenge grant review committee, RTB study section

2009-present, Working Groups for the Prevention of Errors, AAPM, member

2008-present, Subcommittee on Quality Assurance, ASTRO, member

2008-present, Working Group in Small Animal Image-Guide Irradiation  
AAPM, member

2005-present, Joint Working Group for Research Seed Funding Initiative,  
AAPM, grant reviewer

2007, Alberta Cancer Board, grant reviewer

#### **Professional Societies** (date, membership, committees, role)

2007-present, American Society of Therapeutic Radiation Oncology (ASTRO), member

2000-present, American Association of Physicists in Medicine (AAPM), member

#### **Conference Organizer, Session Chair** (date, sponsor, role)

2009, AAPM, Session Chair.; Joint Imaging/Therapy: Target Localization

#### **Consultantships** (date, organization/agency, role)

## RECOGNITION

Association of Radiation Oncology Residents teaching award, Johns Hopkins, 2009

Invited faculty lecturer, AAPM 2009, Patient safety improvement in radiation oncology using the FMEA tool

Invited faculty lecturer, Association of Radiation Research, Glasgow, Scotland, June 2009, "Ablation of neural progenitor cells in the brain with localized radiation"

Invited faculty lecturer, University College London, June 2009, From lab to linac: developments in precision radiation

Invited faculty lecturer, Johns Hopkins, May 8, 2009, DNA Damage Control: from Cancer to Therapeutics, Radiation damage in neural stem cells

Invited faculty lecturer, January 2009, Brigham and Women's Hospital, Effects of Radiation on Neural Stem cells

Invited faculty lecturer, ASTRO 2008, Engineering approaches to patient safety improvement

Young Investigator Awards 2001, American Association of Physicists in Medicine (AAPM). Top-ten finalist: "Cone-Beam CT for Radiation Treatment Verification with Megavoltage Beams and an Amorphous-Silicon Imager"

Graduate Research Award Grant, NASA. 1994-1997, full-support

## OTHER PROFESSIONAL ACCOMPLISHMENTS

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