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### ACADEMIC APPOINTMENTS

1975-1977 Research Associate, Old Dominion University, Norfolk, VA.  
1977-1978 Assistant Professor, Old Dominion University, Norfolk, VA.  
1978-1979 Research Associate, Physics Department, Old Dominion University, Norfolk, VA.  
1979-1980 Assistant Professor, Physics Department, Old Dominion University, Norfolk, VA.  
1980-1982 Postdoctoral Fellow, University of Chicago, Medical Physics Section, Chicago, IL.  
1982-1988 Clinical Medical Physicist, Michael Reese/University of Chicago Center for Radiation Therapy, Medical Physics Section, Chicago, IL.  
1988-2011 Assistant Professor of Clinical Radiation Oncology, Department of Radiation and Cellular Oncology, The University of Chicago, Chicago, IL.  
2011-present Associate Professor of Clinical Radiation Oncology, Department of Radiation and Cellular Oncology, The University of Chicago, Chicago, IL.

### ACADEMIC TRAINING

1962-1966 B.S., Physics. Carnegie Institute of Technology (Carnegie-Mellon University), Pittsburgh, PA  
1966-1973 Ph.D., Physics. University of Pittsburgh, Pittsburgh, PA.  
1980-1982 Postdoctoral Fellow, Medical Physics. The University of Chicago, Chicago, IL.

### BOARD CERTIFICATION AND LICENSURE

1984 American Board of Radiology in Therapy Physics

### SCHOLARSHIP

#### *(a) Peer-reviewed publications in the primary literature, exclusive of abstracts:*

1. Townsend J, M. Schildcrout, and C. Reft. Mechanical studies of irradiation-induced defects in Cu and W. *Physics Review B*, 14:500-516 (1976).  
<http://journals.aps.org/prb/abstract/10.1103/PhysRevB.14.500>
2. Reft C., J. Becher, and L. Kernell. Proton-induced degradation of VUV transmission of LiF and  $MgF_n$ . *Applied Optics* 19 (24): 4156 (1981).  
<http://www.ncbi.nlm.nih.gov/pubmed/20309030>
3. Becher J., R. Kernell, and C. Reft. Proton-induced F-Centers in LiF and MgF. *Journal of Physical and Chemical Solids* 10:365 (1983).

4. Kernell R., J. Becher, and C. Reft. Ultraviolet converter transients induced by electrons. *Applied Optics* 23 (16): 2788 (1984).  
<http://www.ncbi.nlm.nih.gov/pubmed/18213077>
5. Reft C., J. Becher, and R. Kernell. PIN photodiodes irradiated with 40 and 85 MeV protons. *IEEE Trans. Nuclear Science NS-32* (5): 3873 (1985).  
<http://onlinelibrary.wiley.com/doi/10.1288/00005537-198805000-00017/epdf>
6. Jamshidi A., F. Kuchnir, and C. Reft. Determination of the source position for the electron beams from a Varian Clinac-2500 accelerator. *Medical Physics* 14:282 (1987). <http://www.ncbi.nlm.nih.gov/pubmed/3796494>
7. Jamshidi A., F. Kuchnir, and C. Reft. Characteristic parameters of 6-22 MeV electron beams from a 25 MeV linear accelerator. *Medical Physics* 14:282 (1987). <http://www.ncbi.nlm.nih.gov/pubmed/3587156>
8. Scher N., D. Pie, F. Kuchnir, C. Reft, R. Weichselbaum, and W. Panje. Radiotherapy of the resected mandible following stainless steel plate fixation. *Laryngoscope* 98:561 (1988).  
<http://onlinelibrary.wiley.com/doi/10.1288/00005537-198805000-00017/abstract>
9. Reft C. and F. Kuchnir. Experience in neutron-dose output measurements with mailable PIN diodes. *Radiation Protection Dosimetry* 23:437-439 (1988).
10. Kuchnir F., C. Pelizzari, and C. Reft. Experimental verification of the accuracy of a 2-D dose calculation algorithm for beams incident on curved surfaces. *Radiation Protection Dosimetry* 23:479-481 (1988).  
<http://rpd.oxfordjournals.org/content/23/1-4/479>
11. Chen G., C. Reft, D. Spelbring, F. Kuchnir, I. Rosenberg, and H. Sutton. Treatment planning comparison of low and high energy neutron therapy. *Radiation Protection Dosimetry* 23:483-486 (1988).  
<http://rpd.oxfordjournals.org/content/23/1-4/483.full.pdf+html>
12. Reft C. Output calibration in solid water for high energy photon beams. *Medical Physics* 16 (2): 299-301 (1989).  
<http://www.ncbi.nlm.nih.gov/pubmed/2497318>
13. Reft C., F. Kuchnir, I. Rosenberg, and L. Myrianthopoulos. Dosimetry of Sr-90 ophthalmic applicators. *Medical Physics* 17:641-646 (1990).  
<http://www.ncbi.nlm.nih.gov/pubmed/2215409>
14. Reft C. and F. Kuchnir. Measurement of the replacement correction factor for parallel-plate chambers in electron fields. *Medical Physics* 18:1237-1243 (1991). <http://www.ncbi.nlm.nih.gov/pubmed/1753910>
15. Kuchnir F.T. and C.S. Reft. Experimental values for  $P_{wall,x}$  and  $P_{repl,E}$  for five parallel-plate, ion chambers - a new analysis of previously published data, A Letter to the Editor. *Medical Physics* 18:367 (1992)  
<http://www.ncbi.nlm.nih.gov/pubmed/1584134>
16. Kuchnir F.T., S.W. Bullock, C.S. Reft and D.H. Hallahan. 3D Treatment Planning and Dose Delivery Verification: A Case Report, *Medical Dosimetry* 16:225 (1991). <http://www.ncbi.nlm.nih.gov/pubmed/1764174>
17. Kuchnir F.T. and C. Reft. Experimental determination of fluence perturbation factors for five parallel-plate ionization chambers. *Medical Physics* 20:331 (1993). <http://www.ncbi.nlm.nih.gov/pubmed/8497218>
18. Reft C., Kuchnir F.T., L. Dewerd, J. Micka, and F. Attix. A comparison of methods for calibrating parallel-plate chambers. *Medical Physics* 21:1953 (1994).  
<http://www.ncbi.nlm.nih.gov/pubmed/7700203>
19. Li S., C. Pelizzari, C. Reft, H. Sutton, and G.T.Y. Chen. Computer-aided geometric

- reconstruction of Fletcher-Suit source positions. Medical Physics 21:1123 (1994). <http://www.ncbi.nlm.nih.gov/pubmed/7968844>
20. Dewerd L., J. Micka, C. Reft, and F. Kuchnir. Values of  $N_{\text{gas}}/N_{\text{x}}A_{\text{ion}}$  and  $N_{\text{gas}}/N_{\text{k}}A_{\text{ion}}$  for parallel plate chambers. Medical Physics 22:481 (1995).
  21. Sibley G., A. Mundt, S. Goldman, J. Nachman, C. Reft, R. Weichselbaum, D. Hallahan, and L. Johnson. Patterns of failure following total body irradiation and bone marrow transplantation with or without a radiotherapy boost for advanced neuroblastoma. Int. J. Radiat. Oncol. Biol. Phys. 32:1127 (1995).  
<http://www.sciencedirect.com/science/article/pii/S036030169500011M>
  22. Li S, Chen GT, Pelizzari CA, Reft C, Roeske JC, Lu Y. [A new source localization algorithm with no requirement of one-to-one source correspondence between biplane radiographs](http://www.ncbi.nlm.nih.gov/pubmed/8798162). Med Phys. 1996 Jun;23(6):921-7.  
<http://www.ncbi.nlm.nih.gov/pubmed/8798162>
  23. Reft C., C. Rash, J. Dabrowski, J. Roeske and D. Hallahan. Eye shielding for patients treated with total body irradiation. Med. Dosim. 21: 73-78 (1996).  
<http://www.ncbi.nlm.nih.gov/pubmed/8807606>
  24. Bradley J., C. Reft, S. Goldman, C. Rubin, J. Nachman, R. Larson and D. Hallahan. High-energy total body irradiation as preparation for bone marrow transplantation in leukemia patients: treatment technique and related complications. Int. J. Radiat. Oncol. Biol. Phys. 40: 391-396 (1998).  
<http://www.sciencedirect.com/science/article/pii/S0360301697005786>
  25. Reft C. and F. Kuchnir. Measured overall perturbation factors at depths greater than  $d_{\text{max}}$  for ionization chambers in electron beams. Med. Phys. 26: 208-213 (1999). <http://www.ncbi.nlm.nih.gov/pubmed/10076976>
  26. McGinley P.H., A. H. Dhaba'an, and C. S. Reft. Evaluation of the contribution of capture gamma rays, x-ray leakage, and scatter to the photon dose at the maze door for a high energy medical electron accelerator using a Monte Carlo particle transport code. Med. Phys. 27: 225-230 (2000).  
<http://www.ncbi.nlm.nih.gov/pubmed/10659761>
  27. Reft C. and F. T. Kuchnir. Experimental determination of the overall perturbation factor for the NACP chamber in electron beams. Phys. Med. Biol. 46, N49-N55 (2001) <http://iopscience.iop.org/0031-9155/46/2/404/>
  28. Reft C. et. al. Dosimetric Considerations for Patients with Hip Prostheses Undergoing Pelvic Irradiation. Report of the AAPM Radiation Therapy Committee Task Group 63. Med. Phys. 30: 1162-1182 (2003).  
<http://www.ncbi.nlm.nih.gov/pubmed/12852541>
  29. Su A., C.S. Reft, C. Rash, J. Price and A. B. Jani, A Case Study of Radiotherapy Planning for Bilateral Metal Hip Prosthesis Prostate Cancer Patient, Med. Dosimetry, 30, 169-175 (2005).  
<http://www.sciencedirect.com/science/article/pii/S0958394705001020>
  30. Al-Hallaq H.A., C. S. Reft and J.C. Roeske, The Dosimetric effects of tissue heterogeneities in intensity-modulated radiation therapy (IMRT) of the head and neck. Phys. Med. Biol. 51, 1145-1156 (2006)  
<http://iopscience.iop.org/0031-9155/51/5/007/>
  31. Yousefzadeh D.K., M.B. Ward and C.S. Reft, Internal Barium Shielding to minimize Fetal Irradiation in Spiral Chest CT: A Phantom Simulation Experiment, Radiology 239, 751-758 (2006)  
<http://pubs.rsna.org/doi/pdf/10.1148/radiol.2393042198>
  32. Reft C., R. Runkel-Muller and L. Myrianthopoulos, In vivo and phantom measurements of the secondary photon and neutron doses for prostate

- patients undergoing 18 MV IMRT, *Med. Phys.* 33, 3734-3742 (2006)  
<http://www.ncbi.nlm.nih.gov/pubmed/17089839>
33. Reft C., The energy dependence and dose response of a commercial optically stimulated luminescent detector for kilovoltage photon, megavoltage photon and electron, proton, and carbon beams, *Med. Phys.* 36, 1690-1699 (2009) <http://www.ncbi.nlm.nih.gov/pubmed/19544786>
34. Altman M., B. Vesper, B. Smith, M. Stinauer, C. Pelizzari, B. Aydogan, C. Reft, J. Radosevich, S. Chmura and J. Roeske, Characterization of a novel phantom for three-dimensional in vitro cell experiments. *Phys. Med. Biol.* 54N 75 (2009) <http://iopscience.iop.org/0031-9155/54/5/N02/>
35. Thomadsen B., H. Heaton et al, Off label use of medical products used in radiation therapy: Summary report of AAPM TG 121, *Med. Phys.* 37, 2300-2312 (2010) [http://www.aapm.org/pubs/reports/RPT\\_121ExecSummary.pdf](http://www.aapm.org/pubs/reports/RPT_121ExecSummary.pdf)
36. Mijnheer B, Beddar S, Izewska J, Reft C. *In vivo dosimetry in external beam radiotherapy*. *Med Phys.* 2013 Jul;40(7):070903.  
<http://scitation.aip.org/content/aapm/journal/medphys/40/7/10.1118/1.4811216>

*(b) Peer-reviewed works in 'non-traditional' outlets:*

*(c) Peer-reviewed works accepted or in press*

*(d) Non-peer-reviewed original articles*

1. Becher J., Reft C.S., Kernell R.L., Clay F.P. NASA-Goddard Space Flight Center. *Radiation studies of optical and electronic components used in astronomical satellite studies*. Tech. Report PGSTR-PH77 (1977).  
<http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19810007568.pdf>
2. Smith, L.C., Becher J., Reft C. NASA-Goddard Space Flight Center. *Radiation effects studies for the high-resolution spectrograph*. Tech. Report PTR-80-2 (1980).  
<http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19820023785.pdf>
3. Reft, C.S., Becher J., Kernell R.L. Proton-induced degradation of VUV transmission of LiF and MgF<sub>2</sub>. *Applied Optics*, 1980;19:4156-4158.  
<http://ntrs.nasa.gov/search.jsp?R=19810035453&hterms=Reft&qs=N%3D0%26Ntk%3DAuthor-Name%26Ntt%3DReft%26Ntx%3Dmode%2520matchall>
4. Powell G, C. Reft, R. Schuchard, and P. Harper. Beta dose to the upper airways from labeled gases. *Annual Neurology* 15:5107-5109 (1983).
5. Powell GF, Schuchard RA, Reft CS, Harper PV. Radiation absorbed dose to tracheal mucosa from inhaled oxygen-15-labeled carbon dioxide. *Ann Neurol.* 1984;15 Suppl:S107-9. <http://www.ncbi.nlm.nih.gov/pubmed/6430214>
6. Kernell R.L., Becher J., Reft, C.S. Ultraviolet converter transients induced by electrons. *Applied Optics.* 1984;23:2788-2790.  
<http://ntrs.nasa.gov/search.jsp?R=19840061800&hterms=Reft&qs=N%3D0%26Ntk%3DAuthor-Name%26Ntt%3DReft%26Ntx%3Dmode%2520matchall>
8. Becher J., Kernell R.L., Reft, C.S. Radiation effects induced in pin photodiodes by 40- and 85-MeV protons. NASA-CR-175678: Progress Report; period ending 31 Jan. 1985.  
<http://ntrs.nasa.gov/search.jsp?R=19850016649&hterms=Reft&qs=N%3D0%26Ntk%3DAuthor-Name%26Ntt%3DReft%26Ntx%3Dmode%2520matchall>

9. Kuchnir F. and C. Reft. Reply to comments on the experimental determination of the replacement correction factor for parallel-plate ionization chambers in high energy electron beams. Medical Physics 20:739 (1993).

(e) Books:

(f) Book chapters:

1. Reft, C. 1982. Physics of electron beam therapy. In: Syllabus - Management of lymphomas, refresher course 718C, RSNA (1982).
2. Reft C.S. and F.T. Kuchnir. 2002. Overall Perturbation Factor for Parallel-Plate Chambers in Electron Beams at Depths Greater than  $d_{max}$ . In: Seuntjens J.P. and Mobit, P.N. 2002. Recent Developments in Accurate Radiation Dosimetry. Medical Physics Publishing Company, Madison, WI.
3. Reft C.S. 2013. In-vivo dosimetry for patients undergoing external beam radiotherapy. In: Proceedings of the AAPM Summer School on Uncertainties in External Beam Radiotherapy. Medical Physics Publishing Company, Madison, WI.

(g) Other works that are publically available (websites, interviews, publications in the popular press, testimony, computer programs, protocols, reagents, inventions, patents not listed above, etc.)

(h) Clinical trials that are ongoing and unpublished

(j) Works in review, in preparation, etc. not yet publically available [list ONLY if available for BSD review]

**FUNDING**

(a) Past:

(b) Current:

(c) Pending:

## HONORS, PRIZES, AND AWARDS

1959	Calgon Corporation Scholarship (3 years).
1963	National Defense Educational Award (3 years) - graduate school.
1962-1966	Dean's List for four semesters - undergraduate.
2003	Elected Fellow of the AAPM
2004	Teacher of year award in medical physics residency program
2006	Teacher of year award in medical physics residency program
2009	Kurt Rossman Award for Excellence in Teaching
2009	Teacher of year award in medical physics residency program

## INVITED SPEAKING

1994	Research Lecture: " <i>Parallel-Plate Chambers – their calibration and their use in photon and electron dosimetry.</i> " University of Wisconsin, Department of Medical Physics.
2013	Research Lecture: <i>In-Vivo Dosimetry Uncertainties.</i> AAPM Summer School on "Uncertainties in External Beam Radiotherapy," at Simon Fraser University, BC, Canada.
2014	Indiana University Colloquium: " <i>Using TLDs in proton radiotherapy</i> " Indiana University, Bloomington, IN.

## INVITED, ELECTED, OR APPOINTED EXTRAMURAL SERVICE

1985	AAPM Radiation Therapy Committee, Task Group #30, Total Skin Electron Dosimetry.
1999	AAPM Radiation Therapy Committee, Co-Chairperson of Task Group #63, Management of Radiation Oncology Patients with Implanted High-Z Materials
1996-2000	President Elect / President Midwest Chapter of the AAPM
2009-2013	Chairman of AAPM subcommittee on Radiation Dosimetry
2009-present	Member of AAPM Task Group 155 on Small Field and Non-Equilibrium Condition Photon Beam Dosimetry
2009-present	Member of Therapy Physics Committee of AAPM
2010-present	Member of AAPM Task Group 191 on AAPM Recommendations on the clinical use of Luminescent Dosimeters
2010-present	Member of AAPM Task Group 203 on the Management of radiotherapy patients with implanted cardiac pacemakers and defibrillators
2011-present	Member, Review Committee for Medical Physics Residency programs for the Commission on Accreditation of Medical Physics Education Programs (CAMPEP)
2013-present	Chair of the Residency Education Program Review Committee (CAMPEP)
Various	Reviewer for Medical Physics Journal and International Journal of Radiation Oncology, Biology, and Physics

## PROFESSIONAL SOCIETIES

### Elected or invited membership:

American Association of Physicists in Medicine  
American Physical Society

## **EDUCATION**

The College (B.A., B.S.):

Graduate programs (Ph.D.):

1995 Thesis Committee Member – Shidong Li – Ph.D.

Pritzker School of Medicine (M.D.):

Graduate medical education (residency and clinical fellowships):

2011-present Lecturer / Co-Coordinator in Rad Onc 344 – Practicum in Physics of  
Radiation Oncology

1991-present Lecturer – Resident's Summer Physics Course

1998-2001 Lecturer in RT-435 – Dosimetry and Treatment Planning

Continuing medical education:

Research trainees:

## **SERVICE**

**University of Chicago**

Committee membership:

1998-present Member of the Clinical Regulatory Compliance Subcommittee of the  
RADRAC

2000-present Representative from Department of Radiation and Cellular Oncology to  
the Radiation Research Advisory Committee

**Extramural (not indicated above)**