

CURRICULUM VITAE FOR ACADEMIC PROMOTION

The Johns Hopkins University School of Medicine

(Signature)

Todd McNutt

March 9, 2009

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

Assistant Professor
Johns Hopkins University
School of Medicine
Department of Radiation Oncology
And Molecular Radiation Sciences
Baltimore, Maryland
May 2005 to present

Personal Data

Office Address:
Johns Hopkins Medicine
Department of Radiation Oncology
401 North Broadway Suite 1440
Baltimore, MD 21231-2410

Office Telephone: (410) 614-4594

Office Fax: (410) 502-1419

E-mail Address: tmcnutt1@jhmi.edu

Education and Training (in chronological order):

Year	Degree/Certificate	Institution	Discipline
1989	Associate of Science	Front Range Community College Westminster, Colorado	Science
1993	Bachelor's of Arts	University of Colorado Boulder, Colorado	Physics minor: Mathematics
1996	Master's of Science.	University of Wisconsin Madison, Wisconsin	Medical Physics
1997	Doctor of Philosophy	University of Wisconsin Madison, Wisconsin	Medical Physics

Professional Experience (in chronological order, earliest first)

Dates	Positions	Institutions
Oct. 1992- Dec. 1993	Software Developer	Colorado Center for Astrodynamics Research University of Colorado Dept. of Aerospace Engineering Boulder, Colorado
Jan. 1994- Jan. 1996	Research Assistant	University of Wisconsin Dept. of Medical Physics Madison, Wisconsin
Jan. 1995- Jan. 1996	Teaching Assistant	University of Wisconsin Dept. of Medical Physics Madison, Wisconsin

Jan. 1994- May 1997	Resident Med. Physicist Project Assistant	University of Wisconsin Hospital and Clinics Dept. of Human Oncology Madison, Wisconsin
June 1997- Oct. 1999	Research and Develop. Physicist/Programmer	ADAC Laboratories Radiation Therapy Products Division Madison, Wisconsin
Oct. 1999- April 2005	Director of Research and Advance Development	Philips Radiation Oncology Systems Philips Medical Systems Madison, Wisconsin
June 2001- June 2005	Clinical Asst. Professor	University of Wisconsin Department of Human Oncology Madison, Wisconsin
May 2005- present	Assistant Professor	Johns Hopkins University Department of Radiation Oncology Baltimore, Maryland

RESEARCH ACTIVITIES

Publications: Peer-reviewed Original Science Research

1. **T.R. McNutt**, T.R. Mackie, P.J. Reckwerdt, N. Papanikolaou, B.R. Paliwal, "Calculation of portal dose using the convolution/superposition method," *Med. Phys.* 1996; 23-24.
2. T.R. Mackie, P.J. Reckwerdt, **T.R. McNutt**, M. Gehring, C. Sanders, "Photon Dose Computations," *Teletherapy: Proceedings of the 1996 AAPM Summer School*. Ed. Palta J., Mackie T., AAPM-College Park MD 1996; 103-133.
3. **T.R. McNutt**, T.R. Mackie, Paul Reckwerdt, and Bhudatt R. Paliwal, "Modeling Dose Distributions from Portal Dose Images using the Convolution/Superposition Method," *Med. Phys.* 1996; 23-28.
4. Bhudatt R. Paliwal, Mehran Zaini, **Todd McNutt**, E. Jeffrey Fairbanks, and Rebecca Kitchen, "A consistency monitor for radiation therapy treatments," *Med. Phys.* 1996; 23-10.
5. **T.R. McNutt**, T.R. Mackie and B.R. Paliwal, "Analysis and convergence of the iterative convolution/superposition dose reconstruction technique for multiple treatment beams and tomotherapy," *Med. Phys.* 1997; 24-9:1465-1476.
6. T.R. Mackie, et.al., including **T.R. McNutt**, "Tomotherapy: Rethinking the Process of Radiotherapy," XII International Conference on the Use of Computers in Radiation Therapy, Dennis D. Leavitt and George Starkschall, Eds., Madison, WI, 1997, ICCR, pp. 329-331, Medical Physics Publishing 1997.
7. P.J. Reckwerdt, T.R. Mackie, J. Balog, **T.R. McNutt**, "Three Dimensional Inverse Treatment Optimization for Tomotherapy," XII International Conference on the Use of Computers in Radiation Therapy, Dennis D. Leavitt and George Starkschall, Eds., Madison, WI, 1997, ICCR, pp. 420-422, Medical Physics Publishing 1997.
8. **T.R. McNutt**, T.R. Mackie, P.J. Reckwerdt, B.R. Paliwal, "Applications and Implementation of the iterative convolution/superposition dose reconstruction technique," XII International Conference on the Use of Computers in Radiation Therapy, Dennis D. Leavitt and George Starkschall, Eds., Madison, WI, 1997, ICCR, pp. 110--112, Medical Physics Publishing 1997.
9. B.R. Paliwal, M.A. Ritter, **T.R. McNutt**, T.R. Mackie, B.R. Thomadsen, J.A. Purdy, T.J. Kinsella, "A Solid water pelvic and prostate phantom for imaging, volume rendering, treatment planning

- and dosimetry for an RTOG multi institutional, 3-D dose escalation study,” *Int’l. J. Rad. Onc. Bio. Phys.* 1998; Vol. 42, No. 1 pp.205-211.
10. T.R. Mackie, J. Balog, K. Ruchala, D. Shepard, S. Aldridge, E., Fitchard, P. Reckwerdt, G. Olivera, **T. McNutt**, M. Mehta, “Tomotherapy”, *Seminar Radiat Oncol.* 1999 Jan; 9(1): 108-117.
 11. B. Thomadsen, L. DeWerd, **T.R. McNutt**, S. DeWard, D. Schmidt, “Assessment of the strength of individual Ir192 seeds in ribbons”, *Med. Phys.* 26-11, 1999; pp.2471-2475.
 12. W.A. Tome’, S.L. Meeks, **T.R. McNutt**, J.M. Buatti, F.J. Bova, W.A. Friedman, M. Mehta, “Optically guided intensity modulated radiotherapy”, *Radiother Oncol.* 2001; 61(1):33-44.
 13. **T.R. McNutt**, W.A. Tome’, “A method of scaling the 3-dimensional electron pencil beam dose calculation to obtain accurate monitor units for irregularly shaped electron beams.” *Medical Dosimetry.* 2002; 27(3): 209-213.
 14. H.A. Jaradat, W.A. Tome’, **T.R. McNutt**, M.E. Meyerand, “On the incorporation of multi-modality image registration into the radiotherapy planning process”, *Technology in Cancer Research & Treatment*, 2003; 2(1):1-12
 15. S.L. Richardson, W.A. Tome’, N.P. Orton, **T.R. McNutt**, B.R. Paliwal, “IMRT delivery verification using a spiral phantom,” *Med. Phys.* 2003; 30(9):2553-8.
 16. V. Pekar, **T.R. McNutt**, M.R. Kaus, “Automated Model-based Organ Delineation for Radiation Therapy Planning in the Prostate Region,” *Int’l. J. Rad. Onc. Bio. Phys.* 2004;60(3):973-80.
 17. T. Zhang, W. Lu, G.H. Olivera, **T.R. McNutt**, T.R. Mackie, B.R. Paliwal, “Treatment Plan Optimization Incorporating Respiratory Motion”, *Med. Phys.* 2004;31(6):1576-86.
 18. M.R. Kaus, **T.R. McNutt**, V. Pekar, “Automated 3D and 4D organ delineation for radiation therapy planning in the pelvic area”, Proc. of SPIE Medical Imaging, vol. 5370, 346-356 (2004)
 19. M.R. Kaus, T. Netsch, S. Kabus V. Pekar, **T. McNutt**, and B. Fischer, “Estimation of Organ Motion from 4D CT for 4D Radiation Therapy Planning of Lung Cancer,” Proceedings of MICCAI 2004, C. Barillot, D.R. Haynor, and P. Hellier (Eds.): MICCAI 2004, LNCS 3217, pp. 1017–1024, 2004. Springer-Verlag Berlin Heidelberg
 20. D. Ragan, G. Starkschall, **T. McNutt**, M. Kaus, “Semiautomated four-dimensional computed tomography segmentation using deformable models,” *Med Phys* 32(6). 1900 (2005)
 21. P. Cadman, **T.R. McNutt**, K. Bzdusek, ”Validation of physics improvements for IMRT with a commercial treatment planning system,” *J. of Appl. Clinical Med. Phys.* 2005
 22. **T. McNutt**, M. Kaus, L. Spies; “Advances in External Beam Radiation Therapy”, Chapter 13: Advances in Healthcare Technology Shaping the Future of Medical Care; Philips Research Book Series, Vol. 6 Spekowius, Gerhard; Wendler, Thomas (Eds.)
 23. Kim Y., Tome’ W., Bal M., **McNutt T.**, Spies L., “The impact of dental metal artifacts on head and neck IMRT dose distributions”, *Radiother Oncol.* 2006 May;79(2):198-202
 24. Deng H, Kennedy CW, Armour E, Tryggestad E, Ford E, **McNutt T**, Jiang L, Wong J ., ”The Small-Animal Radiation Research Platform (SARRP): dosimetry of a focused lens system,” *Phys. Med. Biol.* 52 (2007) 2729-2740.
 25. Wong J, Armour E, Kazanzides P, Iordachita I, Tryggestad E, Deng H, Matinfar M, Kennedy C, Liu Z, Chan T, Gray O, Verhaegen F, **McNutt T**, Ford E, DeWeese TL, “High resolution small animal radiation research platform with x-ray tomographic guidance capabilities”, *Int J Radiat Oncol Biol Phys.* 2008 Aug 1;71(5):1591-9
 26. Lin SH, Sugar E, Teslow T, **McNutt T**, Saleh H, Song DY, “Comparison of daily couch shifts using MVCT (TomoTherapy) and B-mode ultrasound (BAT System) during prostate radiotherapy.” *Technol Cancer Res Treat.* 2008 Aug;7(4):279-85.

27. 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 Nov 15;72(4):1244-9.
28. Robert Jacques, Russell Taylor, John Wong, **Todd McNutt** ,” Towards Real-Time Radiation Therapy: GPU Accelerated Superposition/Convolution,” MICCAI Sept. 2008 – Buffalo NY
29. Jacques,R.; Taylor,R.; Wong,J.; **McNutt,T.**, “Towards real-time radiation therapy: GPU accelerated superposition/convolution” Comput.Methods Programs Biomed., 2009
30. Michael Kazhdan, Patricio Simari, **Todd McNutt**, Binbin Wu, Robert Jacques, Ming Chuang, and Russell Taylor, “A Shape Relationship Descriptor for RadiationTherapy Planning” MICCAI Sept 2009
31. Binbin Wu, Francesco Ricchetti, Giuseppe Sanguineti, Misha Kazhdan, Patricio Simari, Ming Chuang, Russell Taylor, Robert Jacques, **Todd McNutt**, ”Patient Geometry-Driven Information Retrieval for IMRT Treatment Plan Quality Control”, Medical Physics, 2009 Dec;36(12):5497-505
32. B Wu et al red journal submission on Shape Based IMRT
33. Susil RC, **McNutt TR**, Deweese TL, Song D , “Effects of Prostate-Rectum Separation on Rectal Dose From External Beam Radiotherapy “, Int J Radiat Oncol Biol Phys. . [Epub ahead of print]
34. Seth D. Goldstein, Eric C. Ford, Mario Duhon, **Todd McNutt**, John Wong, Joseph M. Herman, “Use of Respiratory-Correlated Four-Dimensional Computed Tomography to Determine Acceptable Treatment Margins for Locally Advanced Pancreatic Adenocarcinoma”, Corrected Proof, 15 October 2009 International Journal of Radiation Oncology * Biology * Physics

Inventions, Patents, Copyrights (pending, awarded)

- | | |
|-----------------|---|
| Oct. 21, 2003 | Method and Apparatus for Calibration of Radiation Therapy Equipment and Verification of Radiation Treatment, T.R. Mackie, P.J. Reckwerdt, T.R. McNutt. US 6,636,622 and 6345114 |
| May 11, 2004 | Inverse Planning for Intensity Modulated Radiotherapy - T.R. McNutt, K. Tipton, T. Ward, S. Johnson – Philips Medical Systems – US 6,735,277 B2 |
| filed 6/13/03 | 3D Image Segmentation - V. Pekar, M.K.Kaus, T.R. McNutt - Philips Medical Systems DE030206 |
| April 28, 2005 | Manual Tools for Model Based Segmentation - T. McNutt, M.K. Kaus, V. Pekar - Philips Medical Systems US030413 WO/2005/038711 |
| April 7, 2005 | Method and Device for Planning a Radiation Therapy – V. Pekar , T. McNutt, M.K. Kaus - Philips Medical Systems WO/2005/031629 |
| filed 8/9/2004 | Region-Competitive Deformable Mesh Adaptation – M. Kaus, T. McNutt, V. Pekar, M. Meyer - Philips Medical Systems US040319 |
| filed 8/13/2004 | Radiotherapeutic Treatment Plan Adaptation – M. Bal, L. Spies, T. McNutt - Philips Medical Systems US040319 |
| filed 6/8/2005 | Point Subselection For Fast Deformable Point-Based Imaging – Michael Kaus, Todd McNutt, Vladimir Pekar, Philips Medical Systems |
| July 14, 2005 | Method for accounting for tumor motion in radiotherapy treatment – M. Kaus, V. Pekar, T. McNutt-Philips Medical Systems No 60/595551 |

- Oct. 30, 2008 Radio-Therapeutic Treatment Planning Incorporating Functional Imaging Information - Lothar Spies, Matthieu Bal, Todd McNutt
Assignees: KONINKLIJKE PHILIPS ELECTRONICS N.
Origin: CLEVELAND, OH US IPC8 Class: AA61N510FI USPC Class: 378 65
- June 22, 2006 A small animal radiation therapy platform - John Wong, Eric Ford, Todd McNutt, Elwood Armour– Johns Hopkins University
- filed 2006 A virtual frame system for radiosurgical planning - Eric Ford, David Purger, Todd McNutt, Erik Tryggestad, John Wong – Johns Hopkins University
- May 8, 2008 Real-time dose computation for radiation therapy using graphics processing unit acceleration of the convolution/superposition dose computation method – Todd McNutt, Robert Jacques (provisional application number 61/126,936)

Extramural Funding (current, pending, previous)

Title: Image Guided Small Animal Radiation Research Platform
Dates: 2004-2008
Sponsor: National Cancer Institute (USA)
ID#: R01CA108449-01
Total Direct Cost: \$1,530,000
PI: John Wong
Role: Co-investigator

Title: Intracranial Conformal Avoidance Radiation Therapy
Dates: 04/01/05-03/31/08
Sponsor: National Cancer Institute (USA)
ID#: NIH 1R01CA109656-01A1
PI: Wolfgang Tomé
Total Direct Cost: \$675,000
Role: Consultant

Title: E-Science Meets Radiation Oncology: A proposal for information-based closed loop interventional medicine
Dates: 01/01/08-12/31/08
Sponsor: Maritz Foundation
Total Direct Cost: \$150,054
Role: Co-Investigator

Title: Shape Based Correlations to RT Plan Quality and Treatment Outcome Using an On-Line Analytical Processing (OLAP) system
Dates: 10/01/07-09/31/10
Sponsor: Philips Radiation Oncology Systems
PI: Todd McNutt
Total Direct Cost: \$246,768
Role: PI

Title: Dynamic multi-organ anatomical models for hypofractionated RT design and delivery
Dates:
Sponsor: National Cancer Institute (USA)
PI: Kristy Brock
Total Direct Cost:
Role: Consultant

Title: Neurobehavioral Late-Effects in Pediatric Brain Tumors
ID#: Grant # 103023 IO90033485 (CA112182)
Dates:
Sponsor:
PI: Doug Ris via Cincinnati Childrens Hospital
Total Direct Cost:

Role: Sub-contractor

Research Program Building / Leadership

Dates, name of research / basic science program, role

EDUCATIONAL ACTIVITIES

Educational Publications (see notes re: format under Research Publications, above) Peer-reviewed, original, educational publications should be listed first, followed by the remaining categories of publications.

Peer Reviewed Publications (i.e., consensus statements, expert opinions)

Invited Review Articles

Editorials

Case Reports

Letters, correspondence

Book Chapters, Monographs

Books, Textbooks

Other media (films, videos, CD-ROMS, slide sets, etc)

1. T.R. Mackie, P.J. Reckwerdt, **T.R. McNutt**, M. Gehring, C. Sanders, "Photon Dose Computations," *Teletherapy: Proceedings of the 1996 AAPM Summer School*. Ed. Palta J., Mackie T., AAPM-College Park MD 1996; 103-133.
2. **T. McNutt**, M. Kaus, L. Spies; "Advances in External Beam Radiation Therapy Towards Image Guided and Adaptive Radiotherapy using Multi-modal Images", Chapter 13: **Advances in Healthcare Technology** Shaping the Future of Medical Care; Philips Research Book Series, Vol. 6 Spekowius, Gerhard; Wendler, Thomas (Eds.)

Teaching

Classroom instruction (dates, course title, role, location)

2001-2004 Advanced Radiotherapy (Medical Physics 571 – Prof. Bhudatt Paliwal)
Lectures on Imaging and Dose Computation in Radiotherapy Planning Systems

University of Wisconsin-Madison
2005-Pres Radiation Oncology Physics for Residents
Lectures on Dose Computation and IMRT Planning
Johns Hopkins University-Baltimore

2005-Pres. CS 600:445/446 Computer Integrated Surgery (Prof. Russ Taylor)
Guest Lectures on Adaptive Radiation Therapy
Johns Hopkins University-Baltimore

4/23/1998- Transport Theory and Treatment Optimization Methods in EBRT

4/28/1998 Lectures on Convolution/Superposition Dose Computation
Hemaven, Sweden – Umea University and Karolinska Institute

Clinical instruction (dates, course title, role, location)

CME instruction (dates, course title, role, location)

Workshops /seminars (dates, course title, role, location)

Mentoring (pre- and post-doctoral)

- Advisees (provide: dates, name, degree, present position, awards/grants/ degrees received under your direction)

V. Seshadri, Ph.D. Student, University of Wisconsin, 2004-present

H. Jaradat, post-doc, University of Wisconsin, 2000-2002

E. Tryggstad, post-doc, Johns Hopkins University

B. Wu, post-doc, Johns Hopkins University

R. Jacques, PhD student (BME), Johns Hopkins University

- Medical Physics Residents

J. Kang

D. Engel

- Thesis committees (provide: dates, name, title, your role)
- Training grant participation (provide: dates, program)

Educational Program Building / Leadership

Dates, name of educational program or curriculum, role
 4/1/2009 – present Medical Physics Residency Program (Co-Supervisor)

Educational Extramural Funding (current, pending, previous)

Grants or contracts obtained to support an educational initiative.

For each grant or contract please provide the following information in this format:

- Dates, title
- Identification number
- Sponsor
- Total direct cost
- Principal Investigator
- Your role, your percent effort
- Notes

CLINICAL ACTIVITIES

Certification

- 2008 American Board of Radiology – Radiation Oncology Physics – P2901

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

- External Beam Radiotherapy Program Manager
- Manager of Dosimetry Staff
- Treatment Planning System (Pinnacle)
 - Responsible for all aspects of the treatment planning system
 - o Commissioning of new treatment devices
 - o Commissioning of new treatment techniques
 - o Scripting for efficient workflow
 - o Maintenance and upgrades
- Oncology Information System (Impac)
 - Responsible for clinical deployment of system
 - o Treatment Plan documentation
 - o Electronic documentation
 - o Departmental workflow management
 - o Clinical assessment management (Weekly On-Treatment Visits)
 - Maintenance and Upgrades
 - o Commissioning of use for new treatment devices
 - o Quality Control of upgrades
 - o Implementation of new features
- General Physics Duties
 - Chart Checks
 - Machine QA

Clinical Program Building / Leadership(dates, name of clinical program, role)

- Electronic Department with Mosaiq and Pinnacle, Clinical Leader
- Departmental patient research database construction for retrospective analysis of Patients (Oncospace)

Clinical Extramural Funding (current, pending, previous)

Grants or contracts obtained to support a clinical initiative.

For each grant or contract please provide the following information in this format:

- Dates, title
- Identification number
- Sponsor
- Total direct cost
- Principal Investigator
- Your role, your percent effort

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments (date, committees)

Editorial Activities (dates, role)

- Guest Associate Editor – Medical Physics 1998, 2006-2007, 2009
- Referee - Medical Physics 1997,1999,2001, 2005-2009
- Referee - J. of Applied Clinical Medical Physics 2003,2005-2008
- Referee - J. of Applied Physics 2008
- ICCR Abstract Reviewer 2007
- ASTRO Abstract Reviewer 2009

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

- | | |
|--------------|--|
| 2005-present | AAPM Workgroup on Treatment Planning, member, |
| 2007-present | AAPM Workgroup on Vendor Relations & Product Usability, member |
| 2007-present | IHE-RO Planning Committee member (ASTRO) |

Professional Societies (date, membership, committees, role)

- | | |
|-----------|--|
| 1/1/1995 | American Association of Physicist in Medicine, full member, |
| 10/1/2005 | American Society of Therapeutic Radiation Oncology, assoc. member, |

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

- American Association of Medical Physics annual meeting July1998 San Antonio, TX, Session Chair “Intensity Modulated Radiation Therapy II”
- American Association of Medical Physics annual meeting July 2006 Orlando, FL, Session Chair “Image Segmentation and Registration”
- American Society of Therapeutic Radiation Oncology annual meeting Nov. 2009 Chicago, IL, Moderated Poster Session Chair “Medical Informatics”

Consultantships (date, organization/agency, role)

- | | |
|----------------|---|
| 5/1/07-present | Clinical Advisory Board, Impac Medical Systems (Elekta Co.) |
| 10/07- 9/09 | Clinical Advisory Board, Radiation Oncology Resources |

RECOGNITION

Awards, Honors (date, title, description, sponsor)

- Young Investigators Symposium—3rd Place, AAPM Annual Meeting 1996, Philadelphia.
- Cremer Foundation Scholarship. March 1, 1996.
- American College of Medical Physics Scholarship. July 18, 1995.

Invited Talks, Panels (date, title, venue, sponsor)

- Concepts of Intensity Modulated Radiotherapy, Tomotherapy, and Dose Verification – Southeast Chapter of American Association of Medical Dosimetrists, 1997 – Charleston, SC.
- Concepts of Intensity Modulated Radiotherapy, Tomotherapy, and Dose Verification – Radiation Therapists of Wisconsin Annual Meeting, 1997 – Madison, WI.
- Convolution Superposition Dose Computation and Exit Dose Computations for Portal Dosimetry, Radiation Transport Course (Karolinska Institute and Umea University) April, 1999 – Hemaven, Sweden.
- Practical Considerations in Inverse Planning and Intensity Modulated Radiotherapy, Radiation Therapists of Wisconsin Annual Meeting, October 2001 – Stevens Point, WI.
- Superposition Photon Dose Algorithm and Monitor Units, North Central Chapter Meeting AAPM – Minneapolis 2000.

- Implementation of Intensity Modulated Radiotherapy in a Commercial Treatment Planning System, Penn-Ohio Chapter Meeting AAPM – Cleveland 1999.
- Implementation of Intensity Modulated Radiotherapy in a Commercial Treatment Planning System, ADAC User Meeting AAPM 1999.
- Dose Computation for Dynamic and Virtual Wedges, Australian Pinnacle User's Meeting, Melbourne, Australia, Jan 2000.
- Implementation of Intensity Modulated Radiotherapy in a Commercial Treatment Planning System, ADAC User Meeting AAPM 2000.
- Strategy to evolve treatment planning towards treatment management and adaptive radiotherapy – 11th Annual Oncology Symposium – Philips Radiation Oncology Systems, Oct. 1, 2004.
- Strategy to evolve treatment planning towards treatment management and adaptive radiotherapy – Mid-Atlantic AAPM Chapter Meeting, June., 2005.
- Medical Software: A Clinical and Commercial Perspective – Workshop on IMRT Radiation Therapy Treatment Planning: Target Uncertainties, Computational Challenges and Beyond – Fields Institute, Toronto, Ontario Canada, April 4th, 2006
- Grand Rounds – Johns Hopkins Department of Radiation Oncology – Model Based Segmentation (March 12th, 2007) T. McNutt
- Oncospace: eScience technology and opportunities for Oncology - AAPM 2008 Symposium: The Role of Informatics to Foster Research and Clinical Care in Radiation Oncology - (July 2008) Med. Phys. 35 2900 (2008) T McNutt, T Nabhani, A Szalay, T Deweese, and J Wong
- Research Oncology Informatics – Southeast AAPM 2009 Symposium: The Role of Informatics in Radiation Oncology (March 11-13th, 2009) T. McNutt, J. Wong
- Grand Rounds – Johns Hopkins Department of Radiation Oncology – Oncospace: eScience technology for quality control, decision support, and research in oncology (Sept 21st, 2009) T. McNutt

OTHER PROFESSIONAL ACCOMPLISHMENTS

Presentations and Abstracts

1. R.C. Susil, E. Tryggestad, E. Ford, **T. McNutt**, J.M. Herman, J. Wong, "Online Monitoring of Body Stereotactic Treatments with Orthogonal kV-MV Imaging," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Page S673)
2. F. Ricchetti, B. Wu, **T. McNutt**, K. Smith, J. Wong, A. Forastiere, G. Sanguineti, "Volumetric Change of Positive Lymph Nodes during IMRT for HPV-associated Oropharyngeal SCC," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Page S403)
3. Y. Le, E. Tryggestad, E. Ford, **T. McNutt**, L. Kleinberg, M. Lim, D. Rigamonti, J. Wong, "Dosimetric Impact of Intra-fraction Motion on Image Guided Stereotactic Body Radiotherapy of Spinal Metastasis," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Page S689)
4. B. Wu, F. Ricchetti, G. Sanguineti, M. Kazhdan, P. Simari, R. Taylor, R. Jacques, **T. McNutt**, "A Data-driven Approach to Generating Achievable DVH Objectives in IMRT Treatment Planning," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Page S73)

5. O.C. Thomas, F. Ricchetti, B. Wu, **T. McNutt**, K. Smith, J. Wong, G. Sanguineti, "Evaluating Parotid Gland Shrinkage during IMRT for Oropharyngeal SCC," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Page S411)
6. K. Smith, Y. Le, E. Ford, **T. McNutt**, E. Tryggestad, J. Wong, "Image Guided Stereotactic Radiosurgery (SRS) Treatment of Multiple Brain Metastases using Volumetric Modulated Arc Therapy (VMAT)," International Journal of Radiation Oncology * Biology * Physics 1 November 2009 (Vol. 75, Issue 3, Pages S692-S693)
7. R. A. Jacques, R. H. Taylor, J. W. Wong, **T. R. McNutt**, "Real-Time Dose Computation: GPU Accelerated Source Modeling and Superposition/Convolution," Mid-Atlantic AAPM Chapter Meeting , Sept 2009, Young Investigator 1st place award
8. Binbin Wu, Francesco Ricchetti, Giuseppe Sanguineti, Misha Kazhdan, Patricio Simari, Robert Jacques, Russell Taylor and **Todd McNutt** , "A Data-Driven Approach to Generating Achievable DVH Objectives in IMRT Treatment Planning", Mid-Atlantic AAPM Chapter Meeting , Sept 2009, Young Investigators 2nd place award
9. Engel, D., Kang, J., Duhon, M., , Smith, K., Ford, E., and **McNutt, T**, "Clinical commissioning experience with volumetric modulated arc therapy (VMAT)", Mid-Atlantic AAPM Chapter Meeting , Sept 2009
10. J Kang, E. Ford, K. Smith, J. Wong, **T. McNutt**, "A method for optimizing linac parameters for volumetric modulated arc therapy for mutiple brain metastases", Mid-Atlantic Chapter of the AAPM, 2009
11. Binbin Wu, Misha Kazhdan, Francesco Ricchetti, Patricio Simari, Robert Jacques, Giuseppe Sanguineti, Ming Chuang, Russell Taylor, **Todd McNutt**, "The Use of Patient Geometric Information and a Database of Prior Treated Patients for IMRT Treatment Plan Quality Control", Medical Physics June 2009. AAPM annual meeting
12. K Smith, E Ford, J Wong, and T McNutt, "Volumetric Arc Treatment of Multiple Brain Metastases" Med. Phys. 36 2646 (2009)
13. R.A. Jacques, R.H. Taylor, J.W. Wong, **T.R. McNutt**, "Towards Real-time Radiation Therapy: Superposition/Convolution at Interactive Rates" International Journal of Radiation Oncology * Biology * Physics 1 September 2008 (Vol. 72, Issue 1, Page S667)
14. F. Tannazi, **T. McNutt**, S. Ardekani, D.D. Lin, O. Shokek, K. Cohen, M. Wharam, S. Mori, A. Horska Effects of Brain Radiation on Normal Appearing White Matter in Children: A Diffusion Tensor Imaging (DTI) Study International Journal of Radiation Oncology * Biology * Physics 1 September 2008 (Vol. 72, Issue 1, Page S493)
15. Y. Le, G. Sanguineti, **T. McNutt**, "A Dosimetric Study Comparing Different Strategies to De-escalate the Dose for Tonsillar Cancer," International Journal of Radiation Oncology * Biology * Physics 1 September 2008 (Vol. 72, Issue 1, Page S596)
16. C. Min, D. Song, T. Teslow, J.P. Christodouleas, S. Lin, F. Asrari, J. Wong, **T. McNutt** "Determination of Inter-user Image Registration Variability for PTV Margin Determination in MVCT Image Guided Prostate Radiotherapy" International Journal of Radiation Oncology * Biology * Physics 1 September 2008 (Vol. 72, Issue 1, Page S572)
17. E. Tryggestad, E. Ford, **T. McNutt**, R. Susil, J. Wong "Three-dimensional, Real-time Treatment Verification with Simultaneous, Orthogonal kV-MV Imaging" International Journal of Radiation Oncology * Biology * Physics 1 September 2008 (Vol. 72, Issue 1, Page S644)
18. Susil RC, Tryggestad E, Ford E, **McNutt T**, Wong J, "Three-Dimensional, Online Treatment Monitoring with Orthogonal kV-MV Imaging." Fourth International Conference on Translational Research and Pre-Clinical Strategies in Radiation Oncology, March 2009 – Geneva Switzerland

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