CHOONSIK LEE, Ph.D.

Dosimetry Unit Head, Senior Investigator Radiation Epidemiology Branch, DCEG/NCI/NIH/DHHS 9609 Medical Center Drive, Rm 7E448 Rockville, MD 20850 240-276-7374 (Office) 240-381-5474 (Cell) Email: <u>choonsik.lee@nih.gov</u>

Researcher ID: C-9023-2015

EMPLOYMENT HISTORY

2003 - 2004	Researcher, Innovative Technology Center for Radiation Safety, Korea
2005 - 2007	Postdoctoral Scholar, Medical Physics at University of Florida
2008 - 2009	Research Assistant Scientist, Medical Physics at University of Florida
2009 - 2015	Investigator, Tenure-Track
2016 - Present	Dosimetry Unit Head, Senior Investigator
	Division of Cancer Epidemiology & Genetics, National Cancer Institute, National
	Institute of Health

EDUCATION

1991 - 1994	B.S.E. in Nuclear Engineering, Hanyang University, Seoul, South Korea
1995 - 1996	M.S. in Health Physics, Hanyang University, Seoul, South Korea
1997 - 2002	Ph.D., in Health Physics, Hanyang University, Seoul, South Korea

HONORS AND AWARDS

- 2007 Institute of Physics (IOP) Select Paper Award (Phys Med Biol 52:3309-3333, 2007)
- 2008 Nomination for the Robert's Prize for 2007 by Institute of Physics and Engineering in Medicine (IPEM)
- 2012 2011 Robert Prize, The Best Paper in Physics in Medicine and Biology by IPEM
- 2014 Winner of the Division of Cancer Epidemiology and Genetics (DCEG) Informatics Tool Challenge
- 2014 Recipient of the National Cancer Institute (NCI) Director's Award, "Second Gastrointestinal Cancers Study Team"
- 2014 DCEG Outstanding Mentoring Award
- 2016 NCI Director's Innovation Award, "A novel exposure assessment method for normal tissue in proton therapy patients"
- 2017 Winner of the Division of Cancer Epidemiology and Genetics (DCEG) Informatics Tool Challenge
- 2018 NCI Outstanding Mentor Award

COMMITTEE AND OTHER SERVICE

International Commission on Radiological Protection (ICRP)

Member, ICRP C2 Task Group on Computational Phantoms and Radiation Transport (CPRT)

(2008 - Present)
Member, ICRP C2 Task Group on Environmental Dose (ENVIR) (2013 - Present)
Member, ICRP C2 Task Group on Mesh-type Reference Computational Phantoms (MRCP) (2016 - Present)

Radiation Protection Dosimetry Journal

Editorial board (2013 - Present)

Journal of Radiation Protection

Editorial board (2011 - Present)

American Association of Physicists in Medicine (AAPM)

Member (2011 - Present)

Member, Task Group No. 180 (2011 - Present)

Health Physics Society (HPS)

Member (2009 - Present)

National Institutes of Health (NIH) Clinical Center

Consultation on patient dose monitoring in computed tomography (2013 – Present)

MENTORING

Post-doctoral Fellows

Stephanie Lamart, PhD (2010-2014)

Awards Received:

- Conference on Radiation & Health Travel Scholarship (2010)
- o Best Poster Award, Conference on Radiation & Health (2010)
- DCEG Fellows Awards for Research Excellence (2011)
- o NCI Director's Award, "Second Gastrointestinal Cancers Study Team" (2014)

Next Position: Research Engineer, French Alternative Energies and Atomic Energy Commission

Anil Pyakuryal, PhD (2014 – 2016)

Next Position: Research Professor, University of the District of Columbia

Matthew Mille, PhD (2016 – present)

David Borrego, PhD (2016 - present): Co-mentoring with Dr. Cari Kitahara

Award Received:

o 2017 DCEG Intramural Research Award

Daphnée Villoing, PhD (2016 – present): Co-mentoring with Drs. Cari Kitahara and Vladmir Drozdovitch

Award Received:

- Award Received:
 - Early Stage Radiation Investigators Award at 2018 Conference on Radiation and Health

Yeon Soo Yeom, PhD (2018 - present)

Award Received:

Early Stage Radiation Investigators Award at 2018 Conference on Radiation and Health 2018 Charles Land Award for Best Oral Presentation at Conference on Radiation and Health

Pre-doctoral Fellows

Gleb Kuzmin (2015 – 2018)

Doctoral Thesis, Nuclear Engineering, Texas A&M University Next Position: Medical Physics Resident, Cleveland Clinic **Keith Griffin** (July 2017 – present) Doctoral Thesis, Medical Physics, Georgia Institute of Technology

Graduate Students – Master's Level

Artem Morgun (Jun 2011 – Nov 2011) Next Position: Doctoral Student, Taras Shevchenko State University, Kyiv Anna Romanyukha (Jan 2012 – Jan 2014) Next Position: Doctoral Student, University of Wollongong, Australia Dayton McMillan (Mar 2014 – June 2015) Next Position: Medical Student, Harvard University Lienard Chang (Nov 2013 – present) Master's Thesis, Nuclear Engineering, Georgetown University Awards Received:

- o Lutz E. Moritz Award, Health Physics Society (2014)
- Conference on Radiation & Health Travel Scholarship (2014)
- o Radiation Research Society Travel Scholarship (2015)

Next Position: Radiation physicist, Houston Methodist Hospital

Post-baccalaureate Fellows

Rebecca Imran (Jun 2010 – Jul 2011) Next Position: Medical Student, University of Miami Elizabeth Mosher (Sept 2015 – present) Awards Received:

o DCEG Fellows Awards for Research Excellence (2015)

Dissertation Committee

Justin Hanlon (2007 – 2010) Doctoral Thesis, Nuclear Engineering, University of Florida Next Position: Research Scientist, Oraya Therapeutics, Inc. Michael Wayson (2008 – 2011) Doctoral Thesis, Nuclear Engineering, University of Florida Next Position: Medical Physics Resident, University of Florida Shands Hospital Christopher Pelletier (2014 – 2017) Doctoral Thesis, Physics, East Carolina University

Summer Students

Jibby Ani (Sep 2011 – May 2012): Madeira High School Eunah Lee (Jul 2011 – Aug 2011/ May 2012 – August 2012): Richard Montgomery High School, Next Position: Harvard University Michael Choi (June 2014 – August 2014): William and Mary College

Minsoo Choi (June 2015 – August 2015): Thomas Jefferson High School, Next Position: University of Virginia

Elizabeth Mosher (Sep 2010 – May 2011/ July 2015 – August 2015): Madeira High School, Next Position: St. Mary's College of Maryland

Sarah Kim (June 2016 – August 2016): Clarksburg High School, Next Position: Boston College Nikhil Padmanabhan (June 2018 - August 2018): University of Pennsylvania, Next Position: BioTherapeutics

COMPETITIVE OUTSIDE FUNDING AWARD

National Institute of Allergy and Infectious Disease (NIAID)
Development of state-of-the-art computer program for individual organ dose
calculations from radiological accidents or terrorist events
Co-PI
Dr. Steven L. Simon
\$252,700

TEACHING

1997 - 2000	Instructor, Department of Nuclear Engineering, Hanyang University
	Radiation detection and measurement (undergraduate)
2000 - 2004	Korea Radioisotope Association, Korea
	Lecture on radiation measurement (newly employed radiation workers)
	Theory and experiment on radiation detection and measurement
2002 - 2003	Department of Nuclear Engineering, Hanyang University
	Radiation detection and measurement (undergraduate)
	Interaction of radiations with matter (undergraduate)
2006	Department of Radiological and Nuclear Engineering, University of Florida
	Teaching Assistant: Radiation Shielding: Introduction to MCNP code system
(under	graduate)
2007	Department of Radiological and Nuclear Engineering, University of Florida
	Teaching Assistant: Radiation Dosimetry: MCNP code system (graduate)
2008	Department of Radiological and Nuclear Engineering, University of Florida
	Radiation Interaction (undergraduate)

CONSULTING EXPERIENCE

2005	Dosimetry Characterization of 117m Sn-labeled ACS MultiLink® Stent and Comparisons to ^{32}P
	Essex Woodlands Health Ventures, 420 Lexington Ave, Suite 300, NY, USA
2006	Eye dosimetry for macular radiotherapy 40-80 kVp pencil X-ray beams
	GEM BioSystems, CA, USA
2007 - 2009	Dosimetry characterization of a multi-beam radiotherapy for age-related macula
	degeneration
	Oraya Therapeutics, CA, USA

REVIEWS – JOURNALS

Radiology; Medical Physics; Physics in Medicine and Biology; Health Physics; Radiation Protection Dosimetry; Physica Medica; BMC Medical Imaging; journal of Radiological Protection; Australasian Physical & Engineering Sciences in Medicine; IEEE Transaction; Cellular and Molecular Biology; Nuclear Engineering and Technology; Journal of Orthopaedic Trauma

REVIEWS – GRANTS

Foundation KiKa (Children Cancerfree), Netherlands; PSI Foundation, Canada; Breast Cancer Now, United Kingdom; KWF Dutch Cancer Society

INVITED TALKS

- "The evaluation of effective dose of a worker in S/G chamber by Monte Carlo simulation," 9th Nuclear Safety Information Conference at Korea Institute of Nuclear Safety, Daejun, Korea (April 2004)
- 2. "Reference Korean human models: past, present and future," the Monte Carlo Method: Versatility Unbounded in A Dynamic Computing World, American Nuclear Society, Chattanooga, TN (2005)
- 3. "History and current status of the development of computational human phantoms," Korea University, Seoul, Korea (August 2010) (hosted by Dr. Wonho Lee)
- "Organ dose reconstruction for epidemiologic studies on pediatric patients undergoing CT examinations," International Agency for Research on Cancer (IARC), Lyon, France (April 2011) (hosted by Dr. Isabelle Thierry-Chef)
- "Organ dose reconstruction for proton therapy patients using Monte Carlo simulation," Institut de Radioprotection et de Surete Nucleaire (IRSN), Paris, France (April 2011)(hosted by Dr. Laurent Donadille)
- 6. "Organ dose calculation for pediatric and adult patients undergoing CT examination," Public Health England (PHE), UK (October 2011) (hosted by Dr. Paul Shrimpton)
- 7. "Organ dose reconstruction for radiation therapy patients using MC simulation," University of Pennsylvania Proton Center (April 2011) (hosted by Dr. James McDonough)
- 8. "Organ dose calculation for pediatric and adult patients undergoing CT examination," Food and Drug Administration (FDA) (June 2011) (hosted by Dr. Stanley Stern)
- 9. "Computed Tomography dosimetry using computational hybrid phantoms," Radiology Department of Great Ormond Street Hospital, London, UK (May 2012) (hosted by Dr. Kieran McHugh)
- "Development of the hybrid computational human phantoms and their applications to medical dose reconstruction," University of Maryland Radiation Oncology (June 2012) (hosted by Dr. Byungyong Yi)
- "Hybrid computational human phantoms and their applications to radiation treatment dose reconstruction," Massachusetts General Hospital Radiation Oncology (August 2012) (hosted by Dr. Harald Paganetti)
- 12. "NCICT: A dosimetry calculation tool for computed tomography patients," Centre de recerca en epidemiologia ambiental (CREAL), Barcelona, Spain (October 2012) (hosted by Dr. Elizabeth Cardis)
- 13. "A novel dosimetry tool for patients undergoing computed tomography scans," Radiology and Imaging Science, NIH Clinical Center (February 2013) (hosted by Dr. Les Folio)

- 14. "Organ dose reconstructions for patients exposed to medical radiation," East Carolina University (March 2013) (hosted by Dr. John C. Sutherland)
- "Computational human phantoms and their applications to non-ionizing radiation dosimetry (Keynote Speech)", Korean Institute of Electromagnetic Engineering and Science (KIEES), Korea (August 2013)
- 16. "Development of a series of Korean pediatric head phantoms," Electronics and Telecommunications Research Institute (ETRI), Korea (August 2013) (hosted by Dr. Hyungdo Choi)
- 17. "Applications of the computational human phantoms to medical dosimetry," Korea Institute of Radiological * Medical Sciences (KIRAMS), Korea (August 2013) (hosted by Dr. Jaesun Lee)
- 18. "Computational human phantoms and applications to medical radiation dosimetry," University of California San Francisco (UCSF) (March 2014) (hosted by Dr. Bruce Faddegon)
- 19. "Application of computational human phantoms to patient-specific nuclear medicine dosimetry," UCSF (March 2014) (hosted by Dr. Youngho Seo)
- 20. "Calculation of individualized organ dose for CT patients," UCSF (March 2014) (hosted by Dr. Rebecca Smith-Bindman)
- 21. "A computer program for individual organ dose calculations from radiological accidents or terrorist events," National Institute of Allergy and Infectious Diseases (July 2015)
- 22. "Computational human phantoms and applications to radiation dosimetry," National Institute of Standards and Technology (NIST) (September 2015) (hosted by Dr. Brian Zimmerman)
- 23. "A novel method for organ dosimetry for patients undergoing computed tomography examinations," Johns Hopkins University (October 2015) (hosted by Dr. Mahesh Mahadevappa)
- 24. "Dose reconstruction for patients exposed to diagnostic and therapeutic radiation procedures," Radiation and Health Research Institute, Seoul, South Korea (January 2016)
- 25. "Computational phantoms of children and pregnant females," International Commission on Radiological Protection, Tokyo, Japan (February 2016)
- 26. "Computational human phantoms and applications to medical dosimetry," Oak Ridge National Laboratory, Oak Ridge, TN (June 2016)
- 27. "Computational human phantoms and medical dosimetry," Virginia Polytechnic Institute and State University, Arlington, VA (August 2016)
- 28. "Computational approaches to dose reconstruction for epidemiological studies of medical radiation exposure," Georgia Institute of Technology (September 2016)
- 29. "Radiation Protection Research Needs in Radiation Epidemiology and Dosimetry at NCI," Oak Ridge National Laboratory, Oak Ridge, TN (June 2017)
- "Occupational dosimetry for the United States Radiologic Technologists Study," Korea Institute of Radiological & Medical Sciences, Seoul, South Korea (July 2017)
- 31. "Estimation of normal tissue dose in pediatric radiotherapy patients for epidemiological studies of late effect," National Cancer Center, Seoul, South Korea (July 2017)
- 32. "Estimation of normal tissue dose in pediatric proton therapy patients for epidemiological studies of late effect," Samsung Medical Center, Seoul, South Korea (July 2017)
- 33. "Use of ETRI computational pediatric phantom for ionizing radiation dosimetry," Electronics and Telecommunications Research Institute, Daejun, South Korea (July 2017)
- 34. "Development of computational human phantoms and application to medical radiation studies," Children's National Health System, Washington, DC (November 2017)

- 35. "Neutron dose conversion coefficients for the ICRP pediatric phantom series," Radiation Effects Research Foundation, Hiroshima, Japan (December 2017)
- 36. "Application of computational phantoms to medical radiation dosimetry," University of Leuven, Leuven, Belgium (January 2018)
- 37. "Radiation dosimetry activities at the National Cancer Institute," SCK-CEN, Mol, Belgium (January 2018)

CONFERENCE TALKS

- "Construction of Korean reference adult male and female voxel phantoms," 47th annual meeting of the Health Physics Society, Tampa, FL, 20-24 July (2002) [Supplement to Health Phys 82(6):S121 (2002)]
- "Dose calculation in boron neutron capture therapy using Korean adult female voxel phantom," 1stAsian and Oceanic Congress for radiation Protection (AOCRP-1), Seoul, Korea (2002)
- "Dose conversion coefficients for external photon irradiation of Korean male and female voxel models," 9thWorld Congress on medical physics and biomedical engineering, Sydney, Australia (2003)
- "The Korean reference adult male voxel model "KRMAN" segmented from whole-body MR data and dose conversion coefficients," 48th annual meeting of the Health Physics Society, San Diego, CA, 20-24 July (2003) [Supplement to Health Phys 84(6): S163 (2003)]
- "Construction of two tomographic head models and comparison of dose distribution," 2ndInternational Symposium on Radiation Safety and Detection Technology, Sendai, Japan (2003)
- "The Family of Korean Anthropomorphic Tomographic Models," 49th annual meeting of the Health Physics Society, Washington, DC, 11-15 July (2004) [Supplement to Health Phys. 86(6):S150-S151 (2004)]
- "The dosimetric effect of unrealistic arm structure of stylized human model," 47th annual meeting of the American Association of Physicists in Medicine, Seattle, WA, 24-28 July (2005) [Supplement to Med Phys 32(6):2100 (2005)]
- 8. "Dose to salivary glands and extrathoracic airways for external photon," the annual meeting of the American Nuclear Society, Reno, NV, 4-8 June (2006)
- "Internal dosimetry calculation from newborn hybrid computational phantoms having ICRP reference anatomy," 54thannual meeting of Society of Nuclear Medicine, Washington DC, 2-6 June (2007) [Supplement to J Nucl Med 48(2):S135 (2007)]
- "Effect of pediatric subcutaneous fat thickness on effective dose for external radiation exposure: Monte Carlo calculation study," 52th annual meeting of the Health Physics Society, Portland, OR, 8-12 July (2007) [Supplement to Health Phys. 93(1):S41 (2007)]
- 11. "New class of flexible computational human phantom for Monte Carlo dosimetry calculation," 11th International Conference on Radiation Shielding, Pine Mountain, GA (2008)
- "Assessment of photon and electron internal organ dose for the University of Florida hybrid computational phantoms of the ICRP89 reference male and female 15-year-old," 55thannual meeting of Society of Nuclear Medicine, New Orleans, LA, 14-18 June (2008) [Supplement to J Nucl Med 49(S1):14 (2008)]
- "UF series of hybrid computational phantoms representing ICRP reference anatomy and CDC standardized anthropometric data," 53th annual meeting of the Health Physics Society, Pittsburgh, PA, 13-17 July (2008) [Supplement to Health Phys. 95(1):S47 (2008)]

- 14. "Dosimetry characterization of multi-beam radiotherapy treatment for age-related macular degeneration," 53th annual meeting of the Health Physics Society, Pittsburgh, PA, 13-17 July (2008) [Supplement to Health Phys. 95(1):S48 (2008)]
- "Organ doses in the ICRP-compliant adult phantoms from computed tomography examinations,"47th annual meeting of the American Association of Physicists in Medicine, Philadelphia, PA, 18-22 July (2010) [Supplement to Med Phys 32(6):2100 (2010)]
- 16. "Estimation of organ doses in reference pediatric individuals undergoing computed tomography examination using Monte Carlo simulations,"47th annual meeting of the American Association of Physicists in Medicine, Philadelphia, PA, 18-22 July (2011) [Supplement to Med Phys 32(6):2100 (2011)]
- 17. "Development of computational lymph node models for pediatric hybrid phantoms for nuclear medicine dosimetry,"47th annual meeting of the American Association of Physicists in Medicine, Philadelphia, PA, 18-22 July (2011) [Supplement to Med Phys 32(6):2100 (2011)]
- "Automated organ dose calculation for thousands of computed tomography scans,"48th annual meeting of the American Association of Physicists in Medicine, Charlotte, NC, 31 July – 2 August (2012) [Supplement to Med Phys 32(6):2100 (2012)]
- "NCICT a computer program for organ and effective dose calculation for pediatric and adult patients undergoing computed tomography,"48th annual meeting of the American Association of Physicists in Medicine, Charlotte, NC, 31 July – 2 August (2012) [Supplement to Med Phys 32(6):2100 (2012)]
- 20. "Size-specific organ dose calculation using age and gender specific computational human phantoms in patients undergoing computed tomography examinations," Radiological Society of North America annual meeting (2013)
- 21. "Monte Carlo Transport Simulated Patient size-specific k-factors for Pediatric CT," Society of Pediatric Radiology annual meeting (2014)
- 22. "A novel method to estimate normal tissue dose for radiotherapy patients to support epidemiologic studies of second cancer risk", 56th annual meeting of the American Association of Physicists in Medicine, Austin, TX (2014)
- "Individualized organ dose calculations for body CT patients from automatically segmented anatomy coupled with fast Monte Carlo transport," Radiological Society of North America annual meeting (2014)
- 24. "Calculation of individualized organ dose for CT patients in National Lung Screening Trial," Radiological Society of North America annual meeting (2014)
- 25. "CT Lung Cancer Screening and the Medical Physicist: A Dosimetry Summery of CT Participants in the National Lung Cancer Screening Trial (NLST)," American Association of Physicists in Medicine, Anaheim, LA, July 12-16 (2015) (<u>Self Assessment Modules Invited Lecture</u>)
- 26. "Digital phantoms for developing protocols in particle therapy," American Association of Physicists in Medicine, Anaheim, LA, July 12-16 (2015) (<u>Self Assessment Modules Invited Lecture</u>)
- 27. "NCICT: A computational method to estimate organ doses for paediatric and adult patients undergoing CT scans," European Society of Pediatric Radiology, Graz, Austria, June 4-6 (2015)
- "Trends in computational human phantoms and application to personal dosimetry," International Conference on Individual Monitoring of Ionising Radiation, Bruges, Belgium, April 20-24 (2015) (<u>Keynote Speech</u>)

- 29. "A computer program to assess organ doses for pediatric and adult patients undergoing CT scans," Radiological Society of North America annual meeting (2015)
- 30. "Use of computational human phantoms in out-of-field organ dose estimation for epidemiological studies of second cancer in radiotherapy patients," International Conference on the Use of Computers in Radiation Therapy, London, UK, 27-30 June (2016)
- 31. "Organ dose for CT patients based on computational phantoms and application to epidemiological studies," 6th Computational Phantom Workshop, Annapolis, MD, August 27-30 (2017) (<u>Invited</u> <u>Lecture</u>)
- 32. "Dosimery for normal tissue in pediatric patients undergoing photon/proton radiotherapy," PROS Educational Day, Washington, DC, October 11 (2017)
- 33. "Automatic mapping of CT scan locations on computational human phantoms for organ dose estimation," Radiological Society of North America, Chicago, IL, November 26 December 1 (2017)
- 34. "NCICTX: A size-specific organ dose assessment tool for pediatric CT exams," European Society of Pediatric Radiology, Berlin, Germany (2018)
- 35. "NCICTX: an organ dose calculator for CT patients with different body sizes," American Association of Physicists in Medicine, Nashville, TN (2018)

PUBLICATIONS

Notes: Mentees of Dr. Lee are indicated by an asterisk.

Peer-Reviewed Journal Articles

- 1. **C Lee** and JK Lee, "Characterization of Radiation Field in the Steam Generator Water Chambers and Effective Doses to the Workers," J Rad Prot Res 24:215-223 (1999)
- 2. C Lee, CI Lee, and JK Lee, "Construction of voxel head phantom and application to BNCT dose calculation," J Rad Prot Res 26: 93-99 (2001)
- S Kang, S Lee, C Jung, C Lee, and JK Lee, "Development of point kernel shielding analysis computer program implementing recent nuclear data and graphical user interface," J Rad Prot Res 26:215-224 (2001)
- 4. W Kim, C Lee, and JK Lee, "Assessment of effective dose from diagnostic X-ray examinations of adult," J Rad Prot Res 27:155-164 (2002)
- 5. C Lee, S Park, and JK Lee, "Modification of trunk thickness of MIRD phantom based on the comparison of organ doses with voxel phantom," J Rad Prot Res 28:199-206 (2003)
- 6. S Park*, C Lee, W Kim, and JK Lee, "Investigation of organ dose difference of age phantoms for medical X-ray examinations," J Rad Prot Res 28: 35-42 (2003)
- 7. **C Lee** and JK Lee, "Construction of two tomographic head models and comparison of dose distribution," J Nucl Sci Tech S4:121-123 (2004)
- 8. S Park*, C Lee, and JK Lee, "Dose assessment for medical exposure from diagnostic x-rays using a human voxel model," J Nucl Sci Tech S4:239-242 (2004)
- 9. **C Lee**, CI Lee, and JK Lee, "The effect of unrealistic thyroid vertical position on thyroid dose in the MIRD phantom," Med Phys 31(7):2038-2041 (2004)
- 10. **C Lee**, CI Lee, and JK Lee, "Korean adult male voxel model KORMAN segmented from magnetic resonance images," Med Phys 31(5):1017-1022 (2004)
- 11. S Choi, CH Min, SH An, C Lee, SH Na, and C Kim, "Preliminary study on the effect of organ size in organ dose calculation," J Radiat Prot Bulletin 25:133-135 (2005)

- 12. K Jang, C Lee, J Lee, and JK Lee, "Evaluation of patient dose from computed tomography using TLD measurement," J Radiat Prot Bulletin 25:136-137 (2005)
- 13. CI Lee, JL Williams, C Lee, and WE Bolch, "The UF series of computational phantoms of pediatric patients," Med Phys 32(12): 3537-3548 (2005)
- C Lee, CI Lee, JK Lee, JS Park, and MS Chung, "Reference Korean human models: past, present and future," the Monte Carlo Method: Versatility Unbounded In A Dynamic Computing World, Monte Carlo 2005 Topical Meeting: 209-218 (2005)
- 15. K Jang*, C Lee, J Kwon, and JK Lee, "Measurement of patient dose from computed tomography using physical anthropomorphic phantom," J Rad Prot Res 30(3):113-119 (2005)
- 16. C Lee and JK Lee, "Computational anthropomorphic phantoms for radiation dosimetry: evolution and prospective," Nucl Eng Tech 38(3):239-250 (2006) [Invited Paper]
- 17. **C Lee**, CI Lee, S Park, and JK Lee, "Development of the two Korean adult tomographic models," Med Phys 33(2): 380-390 (2006)
- 18. C Lee, CI Lee, and WE Bolch, "Dose to salivary glands and extrathoracic airways for external photon," ANS Transaction 94:349-350 (2006)
- 19. C Lee, T Nagaoka, and JK Lee, "Implementation of Japanese male and female tomographic phantoms to multi-particle Monte Carlo code for ionizing radiation dosimetry," J Nucl Sci Tech 43(8):937-945 (2006)
- 20. CI Lee, C Lee, JL Williams, and WE Bolch, "Whole-body voxel phantoms of paediatric patients UF Series B," Phys Med Biol 51:4649-4661 (2006)
- 21. S Park, C Lee, and J Lee, "Dose assessment to patients and medical staff from interventional radiological procedures using tomographic phantom," Proceedings of the Second Asian and Oceanic Congress for Radiation Protection 3:135-138 (2006)
- 22. CI Lee, **C Lee**, and WE Bolch, "Age-dependent organ and effective dose coefficients for external photons: a comparison of stylized and tomographic pediatric phantoms," Phys Med Biol 51:4663-4688 (2006)
- 23. R Staton, CI Lee, C Lee, M Williams, D Hintenlang, M Arreola, JL Williams, and WE Bolch, "Organ and effective doses in newborn patients during helical multislice computed tomography examination," Phys Med Bio 51:5151-5166 (2006)
- 24. CI Lee, C Lee, A Shah, and WE Bolch, "An assessment of bone marrow and bone endosteum dosimetry methods for photon sources," Phys Med Biol 51:5391-5407 (2006)
- 25. C Lee, CI Lee, and JK Lee, "On the need to revise the arm structure in stylized anthropomorphic phantoms in lateral photon irradiation geometry," Phys Med Biol 51:N393-N402 (2006)
- 26. S Park*, C Lee, JK Lee, JI Kim, YJ Lee, and YK Lim, "In vivo organ mass of Korean adults obtained from whole body magnetic resonance data," Radiat Prot Dosim 118(3):275-279 (2006)
- 27. JI Kim, H Choi, BI Lee, YK Lim, CS Kim, JK Lee, and C Lee, "Physical phantom of typical Korean male for radiation protection purpose," Radiat Prot Dosim 118(1):131-136 (2006)
- 28. S Park*, JK Lee, and C Lee, "Development of a Korean adult male computational phantom for internal dosimetry calculation," Radiat Prot Dosim 121(3):257-264 (2006)
- 29. C Lee, CI Lee, EY Han, and WE Bolch, "Consideration of the ICRP 2006 revised tissue weighting factors on age-dependent values of the effective dose," Phys Med Biol 52:41-58 (2007)
- 30. **C Lee**, CI Lee, and JK Lee, "Applicability of dose conversion coefficients of ICRP74 to Asian adult population: Monte Carlo simulation," Applied Radiation and Isotope 65:593-598 (2007)

- 31. A Al-Basheer, M Ghita, G Sjoden, W Bolch, and C Lee, "Whole body dosimetry simulation using the PENTRAN-MP Sn code system," ANS Transaction 96:389-391 (2007)
- 32. CI Lee, C Lee, R Staton, D Hintelang, M Arreola, J Williams, and WE Bolch, "Organ and effective doses in pediatric patients undergoing helical multislice computed tomography examinations," Med Phys 34(5):1858-1873 (2007)
- 33. C Lee, CI Lee, D Lodwick, and WE Bolch, "Hybrid computational phantoms of newborn male and female for dosimetry calculation," Phys Med Biol 52:3309-3333 (2007) [Nominee 2007 Robert's Prize – Top 10 Articles in PMB for 2007]
- 34. C Lee, CI Lee, D Lodwick, and WE Bolch, "NURBS-based 3D anthropomorphic computational phantoms," Radiat Prot Dosim 127:227-232 (2007)
- 35. C Lee, S Park, and JK Lee, "Specific absorbed fraction from Korean adult voxel phantom for internal photon source," Radiat Prot Dosim 123(3):360-368 (2007)
- 36. S Whalen, C Lee, JL Williams, and WE Bolch, "Anthropometric approaches and their uncertainties to assigning computational phantoms to individual patients in pediatric dosimetry studies," Phys Med Biol 53:453-471 (2008)
- S Park*, JK Lee, and C Lee, "Dose conversion coefficients calculated using tomographic phantom, KTMAN-2 for X-ray examination of cardiac catheterization," Radiat Prot Dosim 128(3):351-358 (2008)
- 38. S Park*, JK Lee, CI Lee, and C Lee, "Dosimetry calculations for internal electron sources using a Korean reference adult stylized phantom," Radiat Prot Dosim 130(2):186-205 (2008)
- JH Jeong, SH Choi, S Cho, C Lee, KW Cho, and CH Kim, "Development of a reference Korean voxel model by adjusting the size of the organs and tissues," Journal of Nuclear Science and Technology S5:321-324 (2008)
- 40. L Padilla*, C Lee, R Milner, A Shahlaee, and WE Bolch, "A canine anatomical phantom for preclinical dosimetry in molecular radiotherapy," Journal of Nuclear Medicine 49:446-452 (2008)
- C Lee, D Lodwick, JL Williams, and WE Bolch, "Hybrid computational phantoms of the 15-year male and female adolescent: Applications to CT organ dosimetry for patients of variable morphometry," Med Phys 35:2366-2382 (2008)
- 42. CH Kim, SH Choi, JH Jeong, C Lee, and MS Chung, "HDRK-Man: a whole-body voxel model based on high-resolution color slice images of a Korean adult male cadaver," Phys Med Biol 53:4093-4106 (2008)
- 43. C Lee, E Chell, M Gertner, S Hansen, R Howell, and WE Bolch, "Dosimetry characterization of a multi-beam radiotherapy treatment for age-related macula degeneration," Med Phys 35(11): 5151-5160 (2008)
- 44. J Hanlon*, C Lee, E Chell, M Gertner, S Hansen, R Howell, and WE Bolch, "Kilovoltage stereotactic radiosurgery for age-related macular degeneration: assessment of optic nerve dose and patient effective dose," Med Phys 36:3671-3681 (2009)
- J Jeong, S Cho, C Lee, K Cho, and CH Kim, "Development of deformable computational model for Korean adult male based on polygon and NURBS surfaces," Nuclear Technology 168: 227-230 (2009)
- 46. P Johnson*, C Lee, D Siragusa, K Johnson, WE Bolch, "The influence of patient size on dose conversion coefficients: a hybrid phantom study for adult cardiac catheterization," Phys Med Biol 54:3613-3629 (2009) [Nominee 2009 Robert's Prize Top 10 Articles in PMB for 2009]

- D Pafundi*, C Lee, C Watchman, V Bourke, J Aris, N Shangina, J Harrison, T Fell, and WE Bolch, "An image-based skeletal tissue model for the ICRP reference newborn," Phys Med Biol 54:4497-4531 (2009)
- 48. M Ghita, GE Sjoden, C Watchmen, A Al-Basheer, MM Arreola, WE Bolch, and C Lee, "Deterministic radiation transport simulations for diagnostic imaging applications," ANS Proceedings of 2009 International Conference on Mathematics Computational Methods and Reactor Physics 3:1822-1834 (2009)
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