

# CURRICULUM VITAE

## JONATHAN MARK LINKS

### PERSONAL DATA

Professor/Vice Provost and Chief Risk Officer  
 The Johns Hopkins University  
 Garland Hall, Room 258  
 3400 N Charles St  
 Baltimore, MD 21218  
 410 516-6880

### EDUCATION AND TRAINING

Degree	Year	Institution	Field
B.A.	1977	University of California Berkeley, CA	Medical Physics
Ph.D.	1983	The Johns Hopkins University Baltimore, MD	Radiation Health

### PROFESSIONAL EXPERIENCE

7/21-present	Vice Provost and Chief Risk Officer
10/15-present	Joint Appointment, Carey Business School, JHU
7/15-7/21	Vice Provost and Chief Risk and Compliance Officer, JHU
1/13-6/15	Chief Risk Officer, JHU
7/15-present	Joint Appointment, Civil Engineering, Whiting School of Engineering, JHU
7/11-12/12	Senior Advisor for University Crisis and Risk Management, JHU
5/10-present	Joint Appointment, Health Policy & Management, JHBSPH
6/09-present	Joint Appointment, Johns Hopkins School of Education
5/07-present	Deputy Director, Office of Critical Event Preparedness and Response, JHI
2/07-3/13	Deputy Chair, Environmental Health Sciences, JHBSPH
3/05-present	Joint Appointment, Emergency Medicine, JHSOM
8/04-present	Director, Center for Public Health Preparedness, JHBSPH
7/98-present	Professor, Environmental Health Sciences, JHBSPH
7/89-6/98	Associate Professor, Environmental Health Sciences, JHBSPH
7/83-6/89	Assistant Professor, Environmental Health Sciences, JHSHPH
7/83-present	Joint Appointment, Radiology, JHSOM
9/79-6/83	Research Scientist, Radiology, JHSOM

## PROFESSIONAL ACTIVITIES

### *Society of Nuclear Medicine Participation*

Member, 1977 - 2021  
Secretary-Treasurer, Computer Council, 1985 - 1986  
President-Elect, Computer Council, 1986 - 1987  
President, Computer Council, 1987 - 1988  
President, Computer & Instrumentation Council, 1988 - 1989  
Program Chairman, 1989 Winter Meeting  
Member, Committee on Council Coordination, 1986 - 1989  
Member, Advertising Subcommittee, 1986 - 1987  
Chairman, Advertising Subcommittee, 1987 - 1992  
Member, Technical Exhibits Committee, 1988 - 1989  
Member, Commercial Affairs Committee, 1990 - 1993  
Member, Board of Trustees, 1991 - 1994  
Member, Audiovisual Committee, 1995 - 2000  
Member, Awards Committee, 1995 - 2000  
Member, Commercial Affairs Committee, 1997 - 2000  
Vice-President-Elect, 6/98-5/99  
Vice-President and President-Elect, 6/99-5/00  
President, 6/00-5/01  
Fellow, 2016

### *NIH Study Section Participation*

Chair, DMG/BMIT Study Section  
Member, DMG/BMIT Study Section (chartered; full member)  
Reviewer and Chairman, Small Business Innovative Research Grants (NCI)  
Reviewer, Shared Instrumentation Grants (NCI)  
Reviewer, Program Project Grants (NINCDS)  
Reviewer, R01 Grants (NIMH)  
Reviewer, R01 Grants (US Army)  
Chair, R01 Grants (NIBIB)  
Member, Radiology/Nuclear Medicine Study Section (non-chartered)

### *Advisory Panel Participation*

Full Member, Science Advisory Board Radiation Advisory Committee –  
U.S. Environmental Protection Agency, Washington, DC  
Full Member, Gulf War Veterans and Depleted Uranium Advisory Committee –  
Institute of Medicine, Washington, DC  
Full Member, Medical Imaging Drugs Advisory Committee –  
Center for Drug Evaluation, FDA, Rockville, MD  
Member, Scientific Committee on Radiation Protection for First Responders –  
National Council on Radiation Protection, Bethesda, MD

***Radiation Risk Assessment Consultation***

Health Dept, Fire Dept, Police Dept of Baltimore City  
Infrastructure Experts Team, Department of Homeland Security  
NASA, Houston, TX  
PSE&G Utility Company, Salem, NJ  
Dept of Natural Resources, State of NJ

**EDITORIAL ACTIVITIES**

Journal of Disaster Medicine and Public Health Preparedness (former Editorial Board)  
Journal of Nuclear Medicine (former Editorial Board)  
European Journal of Nuclear Medicine (former Editorial Board)  
Nuclear Medicine Communications  
IEEE Transactions in Medical Imaging  
Journal of American College of Cardiology  
Journal of Computer Assisted Tomography  
Journal of Nuclear Cardiology  
Radiology  
Annals of Internal Medicine  
Physics in Medicine and Biology  
American Journal of Cardiology

**HONORS AND AWARDS**

1983 Delta Omega National Public Health Honor Society  
1993 Teaching Quality Award, JHU School of Public Health  
1995 Advising, Teaching, and Mentoring Award, JHU School of Public Health  
2000 Advising, Teaching, and Mentoring Award, JHU School of Public Health  
2003 Excellence in On-Line Teaching Award (Best Instructor), JH School of Public Health  
2006 Golden Apple (Best Instructor), JHU Bloomberg School of Public Health  
2007 Cofounders Award, International Critical Incident Stress Foundation  
2011 Election to National Council on Radiation Protection and Measurements  
2012 Stebbins Medal, JHU Bloomberg School of Public Health  
2016 Fellow, Society of Nuclear Medicine and Molecular Imaging

## PUBLICATIONS

### *Peer-reviewed Journal Articles*

1. Alderson PO, Douglass KH, Mendenhall KG, Guadiani VA, Watson DC, Links JM, Wagner HN Jr.: Deconvolution analysis in radionuclide quantitation of left-to-right cardiac shunts. *J Nucl Med* 20: 502-506, 1979.
2. Links JM, Douglass KH, Wagner HN Jr.: Patterns of ventricular emptying by Fourier analysis of gated blood-pool studies. *J Nucl Med* 21: 978-982, 1980.
3. Douglass KH, Links JM, Alderson PO, Wagner HN: Temporal Fourier analysis in the selection of right ventricular regions of interest. *in*: Sorenson JA (ed.): *Single Photon Emission Computed Tomography and Other Selected Computer Topics*. Society of Nuclear Medicine, New York, 1980, pp. 187-193.
4. Bourguignon MH, Douglass KH, Links JM, Wagner HN, Jr.: Fully automated data acquisition, processing, and display in equilibrium radioventriculography. *Eur J Nucl Med* 6: 343-347, 1981.
5. Bourguignon MH, Links JM, Douglass KH, Alderson PO, Roland JM, Wagner HN Jr.: Quantification of left-to-right cardiac shunts by multiple deconvolution analysis. *Am J Cardiol* 48: 1086-1090, 1981.
6. Douglass KH, Links JM, Gedra T, Wagner HN: A comparison of interpolative background subtraction algorithms using analytical surfaces. *in*: Esser PD (ed.): *Functional Mapping of Organ Systems*. Society of Nuclear Medicine, New York, 1981, pp. 83-90.
7. Links JM, Becker LC, Shindlecker JG, Guzman P, Burow RD, Nickoloff EL, Alderson PO, Wagner HN: Measurement of absolute left ventricular volume from gated blood pool studies. *Circulation* 65: 82-91, 1982.
8. Douglass KH, Tibbits P, Kasecamp W, Han ST, Koller D, Links JM, Wagner HN Jr.: Performance of a fully automated program for measurement of left ventricular ejection fraction. *Eur J Nucl Med* 7: 564-566, 1982.
9. Links JM, Brown G, Hall D, Becker LC, Wagner HN: Improved fully-automated determination of left ventricular ejection fraction from equilibrium gated cardiac blood pool studies. *in*: *Proceedings of the Third World Congress of Nuclear Medicine and Biology*. Pergamon Press, Paris, 1982, pp. 708-710.
10. Wagner HN, Burns HD, Dannals RF, Wong DF, Langstrom KB, Duelfer T, Frost JJ, Ravert HT, Links JM, Rosenbloom SB, Lukas SE, Kramer AV, Kuhar MJ: Imaging dopamine receptors in the human brain by positron tomography. *Science* 221: 1264-1266, 1983.

11. Wagner HN, Burns HD, Dannals RF, Wong DF, Langstrom B, Duelfer T, Frost JJ, Ravert HT, Links JM, Rosenbloom SB, Lukas SE, Kramer AV, Kuhar MJ: Assessment of dopamine receptor densities in the human brain with carbon-11-labeled N-methylspiperone. *Ann Neurol* 15: S79-84, 1984.
12. Wong DF, Wagner HN Jr, Dannals RF, Links JM, Frost JJ, Ravert HT, Wilson AA, Rosenbaum AE, Gjedde A, Douglass KH, Petronis JD, Folstein MF, Toung JKT, Burns HD, Kuhar MJ: Effects of age on dopamine and serotonin receptors measured by positron tomography in the living human brain. *Science* 226: 1393-1396, 1984.
13. Wilson PD, Huang SC, Links JM: Improved estimation of local cerebral glucose metabolic rate using Bayes regression analysis of PET scan data. *in*: Cohen GS (ed.): *Proceedings of the Eighth Annual Symposium on Computer Applications*. *in*: *Medical Care*. Computer Society Press, Washington, 1984, pp. 128-131.
14. Inoue Y, Wagner HN Jr, Wong DF, Links JM, Frost JJ, Dannals RF, Rosenbaum AE, Takeda K, DiChiro G, Kuhar MJ: Atlas of dopamine receptor images (PET) of the human brain. *J Comput Assist Tomogr* 9: 129-140, 1985.
15. Frost JJ, Wagner HN Jr, Dannals RF, Ravert HT, Links JM, Wilson AA, Burns HD, Wong DF, McPherson RW, Rosenbaum AE, Kuhar MJ, Snyder SH: Imaging opiate receptors in the human brain by positron tomography. *J Comput Assist Tomogr* 9: 231-236, 1985.
16. Links JM, Raichlen JS, Wagner HN Jr, Reid PR: Assessment of the site of ventricular activation by Fourier analysis of gated blood-pool studies. *J Nucl Med* 26: 27-32, 1985.
17. Raichlen JS, Links JM, Reid PR: Effect of electrical activation site on left ventricular performance in ventricular tachycardia patients with coronary heart disease. *Am J Cardiol* 55: 84-88, 1985.
18. Wong DF, Wagner HN, Pearlson G, Dannals RF, Links JM, Ravert H, Wilson A, Suneja S, Bjorvvinssen E, Kuhar MJ, Tune L: Dopamine receptor binding of C-11 3-N-methylspiperone in the caudate in schizophrenia and bipolar disorder: A preliminary report. *Psychopharm Bull* 21: 591-594, 1985.
19. Bice AN, Links JM, Wong DF, Wagner HN Jr: Absorbed fractions for dose calculations of neuroreceptor PET studies. *Eur J Nucl Med* 11: 127-131, 1985.
20. Bice AN, Wagner HN Jr, Frost JJ, Natarajan TK, Lee MC, Wong DF, Dannals RF, Ravert HT, Wilson AA, Links JM: Simplified detection system for neuroreceptor studies in the human brain. *J Nucl Med* 27: 184-191, 1986.

21. Wong DF, Gjedde A, Wagner HN Jr, Dannals RF, Douglass KH, Links JM, Kuhar MJ: Quantification of neuroreceptors in the living human brain. II. Inhibition studies of receptor density and affinity. *J Cereb Blood Flow Metab* 6: 147-153, 1986.
22. Frost JJ, Wagner HN Jr, Dannals RF, Ravert HT, Wilson AA, Links JM, Rosenbaum AE, Trifiletti RR: Imaging benzodiazepine receptors in man with C-11 suriclone by positron emission tomography. *Eur J Pharm* 122: 381, 1986.
23. Lyon RA, Titeler M, Frost JJ, Whitehouse PJ, Wagner HN Jr, Wong DF, Dannals RF, Links JM, Kuhar MJ: <sup>3</sup>H-3-N-Methylspiperone labels D2 dopamine receptors in basal ganglia and 52 serotonin receptors in cerebral cortex. *J Neurosci* 6: 2941-2949, 1986.
24. Wong DF, Wagner HN Jr, Tune LE, Dannals RF, Pearlson GD, Links JM, Tamminga, CA, Broussolle EP, Ravert HT, Wilson AA, Toung JKT, Malat J, Williams JA, O'Tuama LA, Snyder SH, Kuhar MJ, Gjedde A: Positron emission tomography reveals elevated D2 dopamine receptors in drug-naive schizophrenics. *Science* 234: 1558-1563, 1986.
25. Wong DF, Bice AN, Beck T, Dannals RF, Links JM, Wagner HN: Considerations for dosimetry calculations with neuroreceptor binding radioligands. *in*: Fourth International Radiopharmaceutical Dosimetry Symposium. NTIS, Springfield, 1986, pp. 245-259.
26. Douglass KH, Links JM, Chen DCP, Wong DF, Wagner HN Jr: Linear discriminant analysis of regional ejection fractions in the diagnosis of coronary artery disease. *Eur J Nucl Med* 12: 602-604, 1987.
27. Wong DF, Lever JR, Hartig PR, Dannals RF, Villemagne V, Hoffman BJ, Wilson AA, Ravert HY, Links JM, Scheffel U, Wagner HN Jr: Localization of serotonin 5-HT<sub>2</sub> receptors in living human brain by positron emission tomography using N1-([C-11]-Methyl)-2-Br-LSD. *Synapse* 1: 393-398, 1987.
28. Becker LC, Becker DM, Pearson TA, Fintel DJ, Links JM, Frank TL: Screening of asymptomatic siblings of patients with premature coronary artery disease. *Circulation* 75: II-14-17, 1987.
29. Frost JJ, Mayberg HS, Fisher RS, Douglass KH, Dannals RF, Links JM, Wilson AA, Ravert HT, Rosenbaum AE, Snyder SH, Wagner HN Jr. Mu-opiate receptors measured by positron emission tomography are increased in temporal lobe epilepsy. *Ann Neurol* 23: 231-237, 1988.
30. O'Tuama LA, Guilarte TR, Douglass KH, Wagner HN Jr, Wong DF, Dannals RF, Ravert HT, Wilson A, LaFrance ND, Bice AN, Links JM: Assessment of [<sup>11</sup>C]-L-Methionine transport into the human brain. *J. Cerebral Blood Flow and Metab* 8: 341-345, 1988.
31. Geckle WJ, Frank TL, Links JM, Becker LC: Correction for patient and organ movement in SPECT: Application to exercise thallium-201 cardiac imaging. *J Nucl Med* 29: 441-450, 1988.

32. Laube BL, Links JM, Wagner HN, Norman PS, Koller DW, LaFrance ND, Adams GK: Simplified assessment of fine aerosol distribution in human airways. *J Nucl Med* 29: 1057-1065, 1988.
33. Mukai T, Links JM, Douglass KH, Wagner HN: Scatter correction in SPECT using non-uniform attenuation data. *Phys Med Biol* 33: 1129-1140, 1988.
34. Mayberg HS, Robinson RG, Wong DF, Parikh R, Bolduc P, Price T, Dannals RF, Links JM, Wilson AA, Ravert HT, Wagner HN: PET imaging of cortical S2-serotonin receptors following stroke: Lateralized changes and relationship to depression. *Amer J Psych* 145: 937-943, 1988.
35. Wong DF, Broussolle EP, Wand G, Villemagne V, Dannals RF, Links JM, Zacur HA, Harris J, Naidu S, Braestrup C, Wagner HN Jr, Gjedde A: In vivo measurement of dopamine receptors in human brain by positron emission tomography - Age and sex differences. *in: Central Determinants of Age-Related Declines in Motor Function*, ed. James A. Joseph, *Annals of the New York Academy of Sciences* 515: 203-214, 1988.
36. Fintel DF, Links JM, Brinker JA, Frank TL, Parker M, Becker LC: Improved diagnostic performance of exercise thallium-201 single photon emission computed tomography over planar imaging in the diagnosis of coronary artery disease: A receiver operating characteristic analysis. *J Am Coll Cardiol* 13: 600-612, 1989.
37. Laube BL, Links JM, LaFrance ND, Wagner HN, Rosenstein BJ: Homogeneity of bronchopulmonary distribution of Tc-99m aerosol in normal subjects and in cystic fibrosis patients. *Chest* 95: 822-830, 1989.
38. Bowes SM, Laube BL, Links JM, Frank R: Regional deposition of inhaled fog droplets. *Environ Health Perspectives* 79: 151-157, 1989.
39. Becker LC, Rogers WJ, Links JM, Corn C: Limitations of regional myocardial thallium clearance for identification of disease in individual coronary arteries. *J Am Coll Cardiol* 14: 1491-1500, 1989.
40. London ED, Margolin RA, Wong DF, Links JM, LaFrance ND, Cascella NG, Broussolle EPM, Wagner HN, Snyder FR, Jasinski DR: Cerebral glucose utilization in human heroin addicts. *Res Comm Sub Abuse* 10: 141 - 144, 1989.
41. Frost JJ, Douglass KH, Mayberg HS, Dannals RF, Links JM, Wilson AA, Ravert HT, Crozier WC, Wagner HN, Jr: Multi-compartmental analysis of C-11-carfentanil binding to opiate receptors in man measured by positron emission tomography. *J Cereb Blood Flow Metab* 9:398-409, 1989.

42. Brandt J, Folstein SE, Wong DF, Links J, Dannals RF, Sill A, Startstein S, Anders P, Strauss ME, Tune LE, Wagner HN, Folstein MF: D2 receptors in Huntington's disease: PET findings and clinical correlates. *J Neuropsych* 2: 20-27, 1990.
43. Frost JJ, Mayberg HS, Sadzot B, Dannals RF, Lever JR, Ravert HT, Wilson AA, Wagner HN Jr, Links JM: Comparison of C-11-deprenorphine and C-11-carfentanil binding to opiate receptors in man by positron emission tomography. *J Cereb Blood Flow Metab* 10: 484-492, 1990.
44. Links JM, Jeremy RW, Frank T, Becker LC: Wiener filtering improves quantification of myocardial blood flow with thallium SPECT. *J Nucl Med* 31: 1230-1236, 1990.
45. London ED, Broussolle EPM, Links JM, Wong DF, Cascella NG, Dannals RF, Sano M, Toung TJK, Rippetoe LR, Herning R, Snyder FR, Jaffe JH, Wagner HN: Morphine-induced metabolic changes in human brain: Studies with positron emission tomography and fluorodeoxyglucose. *Arch Gen Psych* 47: 73-81, 1990.
46. London ED, Cascella NG, Wong DF, Phillips RL, Dannals RF, Links JM, Herning R, Grayson R, Jaffe JH, Wagner HN: Cocaine-induced reduction of glucose utilization in human brain. A study using positron emission tomography and fluorodeoxyglucose. *Arch Gen Psych* 47: 567-574, 1990.
47. Jeremy RW, Links JM, Becker LC: The progressive failure of coronary flow during reperfusion of myocardial infarction: Documentation of the no-reflow phenomenon with positron emission tomography. *JACC* 16: 695-704, 1990.
48. Phillips RL, London ED, Links JM, Cascella NG: Program for PET image alignment: Effects on calculated differences in cerebral metabolic rates for glucose. *J Nucl Med* 31: 2052-2057, 1990.
49. Camargo EE, Sostre S, Sadzot B, Shafique I, Szabo Z, Links JM, Dannals RF, Wagner HN: Global and regional cerebral metabolic rate of glucose in the presence of ofloxacin. *Antimicrob Agents* 35: 648-652, 1991.
50. Herold CJ, Brown RH, Mitzner W, Links JM, Hirshman CA, Zerhouni EA: Assessment of pulmonary airway reactivity with high-resolution CT. *Radiology* 181: 369-374, 1991.
51. Harris GJ, Links JM, Pearlson GD, Camargo EE: Cortical circumferential profile of SPECT cerebral perfusion in Alzheimer's disease. *Psychiatric Research: Neuroimaging* 40: 167-180, 1991.
52. Links JM, Frank TL, Becker LC: Effect of differential washout during SPECT acquisition. *J Nucl Med* 32: 2253-2257, 1991.
53. Civelek AC, Shafique I, Brinker JA, Durski K, Weiss JL, Links JM, Natarajan TK, Ozguven MA, Wagner HN: Reduced left ventricular cavity activity in thallium-201



- SPECT perfusion images of antero-apical transmural myocardial infarction. *Amer J Cardiol* 68: 1132-1137, 1991.
54. Civelek AC, Brinker JA, Camargo EE, Links JM, Wagner HN: Rest Tl-201 myocardial perfusion imaging in a patient with leukemic infiltration of the heart. (Case Report) *Eur J Nucl Med* 19: 306-308, 1992.
  55. Szabo Z, Links JM, Seki C, Rhine J, Wagner HN: Scatter, spatial resolution, and quantitative recovery in high resolution SPECT. *J Comput Assist Tomogr* 16: 461-467, 1992.
  56. Mueller-Gaertner HW, Links JM, Prince J, Bryan RN, McVeigh E, Leal JP, Davatzikos C, Frost JJ: Measurement of radiotracer concentration in brain gray matter using positron emission tomography: MRI-based correction for partial volume effects. *J Cereb Blood Flow Metab* 12: 571-583, 1992.
  57. Camargo EE, Szabo Z, Links JM, Sostre S, Dannals RF, Wagner HN: The influence of biological and technical factors on the variability of global and regional brain metabolism of fluorodeoxy glucose. *J Cereb Blood Flow Metab* 12: 281-290, 1992.
  58. Szabo Z, Camargo EE, Sostre S, Shafique I, Sadzot B, Links JM, Dannals RF, Wagner HN: Factor analysis of regional cerebral glucose metabolic rates in healthy men. *Eur J Nucl Med* 19: 469-475, 1992.
  59. Links JM, Leal JP, Mueller-Gaertner HW, Wagner HN: Improved positron emission tomography quantification by Fourier-based restoration filtering. *Eur J Nucl Med* 19: 925-932, 1992.
  60. Civelek AC, Gozukara I, Durski K, Ozguven MA, Brinker JA, Links JM, Camargo EE, Wagner HN, Flaherty JT: Detection of left anterior descending coronary artery disease in patients with left bundle branch block. *Am J Cardiol* 70: 1565-1570, 1992.
  61. Szabo Z, Ravert HT, Gozukara I, Geckle W, Seki C, Sostre S, Peller P, Monsein L, Natarajan TK, Links JM, Wong DF, Dannals RF, Wagner HN: Noncompartmental and compartmental modeling of the kinetics of carbon-11 labeled pyrilamine in the human brain. *Synapse* 15: 263-275, 1993.
  62. Schauer DA, Seltzer SM, Links JM: Exposure-to-absorbed dose conversion for human adult cortical bone. *Int J Appl Radiat Isot* 44: 485-489, 1993.
  63. Laube BL, Bowes SM, Links JM, Thomas KK, Frank R: Acute exposure to acid fog: Effects on mucociliary clearance. *Am Rev Res Dis* 147: 1105-1111, 1993.
  64. Schauer DA, Links JM: Newly computed f-factors for use in radiation dosimetry. *Medical Physics* 20: 1371-1373, 1993.

65. Schauer DA, Desrosiers MF, Le FG, Seltzer SM, Links JM: EPR dosimetry of cortical bone and tooth enamel irradiated with x- and gamma-rays: Study of energy-dependence. *Rad Res* 138: 1-8, 1994.
66. Hawkins WG, Links JM, Leichner PK: FFT interpolation for arbitrary factorizations: Application to cross-sectional imaging. in: *Proceedings of 14th IMACS World Conference 2*: 724-726, 1994.
67. Holder LE, Machin JL, Asdourian PL, Links JM, Sexton CC: Planar and high-resolution SPECT bone imaging in the diagnosis of facet syndrome. *J Nucl Med* 36: 37-44, 1995.
68. Links JM, Frank TL, Engdahl JC, Becker LC: Cardiac single-photon emission tomography with a 90° dual-head system. *Eur J Nucl Med* 22: 548-552, 1995.
69. Meltzer CC, Zubieta JK, Links JM, Brakeman P, Stumpf MJ, Frost JJ: MR-based correction of brain PET measurements for heterogeneous gray matter radioactivity distribution. *J Cereb Blood Flow Metab* 16: 650-658, 1996.
70. Links JM, Zubieta JK, Meltzer CC, Stumpf MJ, Frost JJ: Influence of spatially heterogeneous background activity on "hot object" quantitation in brain emission computed tomography. *J Comput Assist Tomogr* 20: 680-687, 1996.
71. Links JM, Prince JL, Gupta SN: A vector Wiener filter for dual-isotope SPECT. *IEEE Trans Med Imag* 15: 700-709, 1996.
72. Mourtada FA, Beck TJ, Links JM: Theoretical analysis of error propagation in triple-energy absorptiometry: Application to measurement of lead in bone in vivo. *Medical Physics* 24: 925-927, 1997.
73. Rigo P, Van Boxem P, Foulon J, Safi M, Engdahl J, Links J: Quantitative evaluation of a comprehensive motion, resolution, and attenuation correction program: initial experience. *J Nucl Cardiol* 5: 458-468, 1998.
74. Reiss AL, Rubin MA, Hennessey JG, Links JM: Reliability and validity of an algorithm for fuzzy tissue segmentation of MRI. *J Comput Assist Tomogr* 22: 471-479, 1998.
75. Links JM, Beach LS, Subramaniam B, Rubin MA, Hennessey JG, Reiss AL: Edge complexity and partial volume effects. *J Comput Assist Tomogr* 22: 450-458, 1998.
76. Chefer SI, Horti AG, Lee KS, Koren AO, Jones DW, Gorey JG, Links JM, Mukhin AG, Weinberger DR, London ED: In vivo imaging of brain nicotinic acetylcholine receptors with 5-iodo-A-85380 using single photon emission computed tomography. *Life Sciences* 63: PL355-360, 1998

77. Schwartz BS, Stewart WF, Todd AC, Links JM: Predictors of DMSA-chelatable lead and tibial lead in former organolead manufacturing workers. *Occup Environ Med* 56: 22-29, 1999
78. Stewart WF, Schwartz BS, Simon D, Bolla KI, Todd AC, Links JM: Neurobehavioral function and tibial and chelatable lead levels in 543 former organolead workers. *Neurology* 52: 1610-1617, 1999
79. Chefer SI, Horti AG, Koren A, Gundisch D, Links JM, Kurian V, Dannals RF, Mukhin AG, London ED: 2-F-A-83580: A PET radioligand for  $\alpha 4\beta 2$  nicotinic acetylcholine receptors. *NeuroReport* 10:2715-2721, 1999
80. Bonson KR, Grant SJ, Links JM, London ED: Validation of an analytic method of calculating cerebral glucose metabolism using PET. *J Nucl Med* 41: 658-660, 2000
81. Horti AG, Chefer SI, Mukhin AG, Koren AO, Gundisch D, Links JM, Kurian V, Dannals RF, London ED: 6-fluoro-A-85380, a novel radioligand for in vivo imaging of central nicotinic acetylcholine receptors. *Life Sciences: Pharmacology Letters* 67: 463-469, 2000
82. Schwartz BS, Stewart WF, Todd AC, Simon D, Links J: Different associations of blood lead, DMSA-chelatable lead, and tibial lead with blood pressure in former organolead manufacturing workers. *Arch Environ Health* 55: 85-92, 2000
83. Links JM, Becker LC, Rigo P, Taillefer R, Hanelin L, Anstett F, Burckhardt D, Mixon L: Combined corrections for attenuation, depth-dependent blur, and motion in cardiac SPECT: A multi-center trial. *J Nucl Cardiol* 7: 414-425, 2000
84. Schwartz BS, Stewart WF, Kelsey KT, Simon D, Park S, Links JM, Todd AC: Associations of tibial lead levels with Bsm1 polymorphisms in the vitamin D receptor in former organolead manufacturing workers. *Env Health Perspectives* 108: 199-211, 2000
85. Schwartz BS, Stewart WF, Bolla KI, Simon D, Bandeen-Roche K, Gordon B, Links JM, Todd AC: Past adult lead exposure is associated with longitudinal decline in neurobehavioral function in 535 former organolead manufacturing workers. *Neurology* 55: 1144-1150, 2000
86. Links JM, Schwartz BS, Simon D, Bandeen-Roche K, Stewart WF: Characterization of toxicokinetics and toxicodynamics with linear systems theory. *Env Health Perspectives* 109: 361-368, 2001
87. Bonson KR, Grant SJ, Contoreggi CS, Links JM, Metcalfe J, Weyl HL, Kurian V, Ernst M, London ED: Neural systems and cue-induced cocaine craving. *Neuropsychopharmacology* 26: 376-386, 2002

88. Links JM, DePuey G, Taillefer R, Becker LB: Attenuation correction and gating synergistically improve the diagnostic accuracy of myocardial perfusion SPECT. *J Nucl Cardiol* 9: 183-187, 2002
89. Nakamoto Y, Osman M, Cohade C, Marshall LT, Links JM, Kohlmyer S, Wahl RL: PET/CT: Comparison of quantitative tracer uptake between germanium and CT transmission attenuation-corrected images. *J Nucl Med* 43: 1137-1143, 2002
90. Cohade C, Osman M, Nakamoto Y, Marshall LT, Links JM, Fishman EK, Wahl RL: Initial experience with oral contrast in PET/CT: Phantom and clinical studies. *J Nucl Med* 44: 412-416, 2003
91. Glenn BS, Stewart WF, Links JM, Todd AC, Schwartz BS. The longitudinal association of lead with blood pressure. *Epidemiology* 14:30-36, 2003
92. Links JM, Becker LC, Anstett F: Clinical significance of apical thinning. *J Nucl Cardiol* 11: 26-31, 2004
93. Bencherif B, Stumpf MJ, Links JM, Frost JJ: Application of MRI-based partial-volume correction to the analysis of PET images of m-opioid receptors using statistical parametric mapping. *J Nucl Med* 45: 402-408, 2004
94. He X, Frey EC, Links JM, Gilland KL, Segars WP, Tsui BMW: A mathematical observer study for the evaluation and optimization of compensation methods for myocardial SPECT using a phantom population that realistically models patient variability. *IEEE Trans Nucl Sci* 51: 218-224, 2004
95. He X, Links JM, Song X, Tsui BMW, Frey EC. Comparison of penetration and scatter effects on defect contrast for GE and Siemens LEHR collimators in myocardial perfusion SPECT – a simulation study. *IEEE Trans Nucl Sci* 52: 1359-1364, 2005
96. Schwartz BS, Lee BK, Bandeen-Roche K, Stewart W, Bolla K, Links J, Weaver V, Todd A: Occupational Lead Exposure and Longitudinal Decline in Neurobehavioral Test Scores. *Epidemiology* 16: 106-113, 2005
97. Barnett D, Parker C, Everly G, Links J: Applying educational gaming to enhance all-hazards emergency readiness for public health workers. *Am J Prev Med* 28: 390-395, 2005
98. Barnett D, Blodgett D, Fews A, Parker C, Links J: The application of the Haddon Matrix to public health readiness and response planning. *Environ Health Perspect* 113: 561-566, 2005
99. Parker C, Fews A, Barnett D, Fews AL, Blodgett D, Links J: The Road Map to Preparedness: a competency-based approach to all-hazards emergency readiness training for the public health workforce. *Public Health Reports* 120: 504-514, 2005

100. Barnett DJ, Balicer RD, Blodgett DW, Everly GS, Omer SB, Parker CL, Links JM: Applying risk perception theory to public health workforce preparedness training. *J Public Health Management Practice* Nov 2005 Supplement: S33-S37, 2005
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Thomas Denney  
Gordon Harris  
Bin He  
Juleen Lam  
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Firas Mourtada  
Medhat Osman  
Julie Price  
Youlin Qiao  
David Schauer  
Dustin Simonson

***Final Oral Examination (Thesis Defense) Participation***

Ingrid Berger  
Darrell Burckhardt  
Gai Cole  
Virgil Cooper  
Gordon Harris  
Chung-Chien Huang  
Mark Melanson  
Firas Mourtada  
Phil Murray  
Medhat Osman  
Julie Price  
David Schauer  
Dustin Simonson  
Dean Wong

**CLASSROOM INSTRUCTION**

***Sole Instructor***

Topics in Radiological Physics (186.637), 1984  
Radiation Safety (186.670), 1988  
Radiation Dosimetry (186.673), 1988 – 1993  
Survey of Radiation Health (186.669), 1988 – 1994  
Radioactive Tracer Techniques (186.661), 1988 – 2001  
Nuclear Instrumentation (186.664), 1987 – 2005  
Radiation Safety and Dosimetry (186.645), 1994 – 2005  
Introduction to Radiation Health (186.601), 1988 – 2006  
Mathematical Modeling of Toxicokinetics & Toxicodynamics (187.635), 2005 – 2007  
Public Health Toxicology: Advanced Topics [Third Term] (187.621), 2012 – 2014

**Course Director**

Terrorism & Public Health (301.647)/Intro to PH Preparedness (180.670), 2006 – 2009  
Environmental Health (180.601) in East Baltimore, 2001 – 2009 and 2012 – 2014  
Environmental Health (180.601) via Distance Education, 1999 – 2008 and 2011 – 2013  
Environmental Health (180.601 @ Montgomery Co. Center), 1994 – 2003  
Environmental Health (180.601 @ Summer Institute), 1997 – 1999

**GRANT AND OTHER FUNDING HISTORY**

CoPE-WELL Community Resilience Project  
Jonathan M. Links, Principal Investigator, CDC Research Contract  
08/25/17 – 08/24/20; \$750K – first year directs

CoPE-WELL Community Resilience Project  
Jonathan M. Links, Principal Investigator, CDC Research Contract  
09/23/14 – 09/22/17; \$750K – first year directs

End-to-End Optimization of Cardiac SPECT  
Jonathan M. Links, Co-Principal Investigator; NIH R01  
01/01/13 - 12/31/16; \$225,000 – first year directs

Community Resilience Index  
Jonathan M. Links, Principal Investigator; CDC P01 Supplement  
09/30/11 – 09/29/15; \$278K first year directs

Preparedness and Emergency Response Learning Center (PERLC)  
Jonathan M. Links, Principal Investigator; CDC Cooperative Agreement  
09/30/10 - 09/29/15; \$937,657 – first year directs

Preparedness and Emergency Response Research Center (PERRC)  
Jonathan M. Links, Principal Investigator; CDC P01  
09/30/08 - 09/29/15; \$907,013 – first year directs

Center for Public Health Preparedness  
Jonathan M. Links, Principal Investigator; CDC Cooperative Agreement  
09/01/04-08/31/10; \$1,042,666 – first year directs

Catastrophic Preparedness and Response: University Center of Excellence  
Gabor Kelen and Lynn Goldman, Co-Principal Investigators; DHS Center Grant  
Jonathan M. Links, Project Leader (Higher Education Project)  
07/06-09/08

Comprehensive Validation of Cardiac SPECT Reconstruction  
Jonathan M. Links, Principal Investigator; NIH R01

02/01/02-12/31/07; \$255,291 – first year directs

Vector Wiener Filter for Dual-Radionuclide Studies  
Jonathan M. Links, Principal Investigator; NIH R01  
08/97 – 07/01; \$506,354

Validation of EPR-based Bone Dosimetry  
Jonathan M. Links, Principal Investigator; NIST Contract

Interagency Personnel Agreement  
Jonathan M. Links, Principal Investigator; NIH NIDA IPA  
6/97 - 5/99; \$89,600

Nuclear Imaging in Medicine and Biology  
Jonathan M. Links, Principal Investigator; Sopha Medical Vision, Inc. gift  
7/94 – 6/98; \$20,000/year

PET Image Display and Analysis System  
Jonathan M. Links, Principal Investigator; NIH S10  
12/87 - 11/88; \$196,130

Clinical Imaging Workstation  
Jonathan M. Links, Principal Investigator; General Electric Medical Systems Contract  
7/90 - 8/96; \$345,000

Program for the Study of Neuroreceptor Binding in Man  
Jonathan M. Links, Physics Core Leader;  
Henry N. Wagner, Jr., Program Director; NIH P01  
9/80 - 11/94; \$9,902,000

Nuclear Instrumentation and Chemistry in Medicine  
Jonathan M. Links, Project Leader;  
Jonathan M. Links, Physics Core Leader;  
Henry N. Wagner, Jr., Program Director; NIH P01  
3/82 - 2/97; \$5,576,744