

John M. Boone, Ph.D.

Research/Academic Interests	<p>John M Boone PhD is professor of radiology at the University of California Davis, and holds an appointment in the department of biomedical engineering as well. He received his undergraduate degree in biophysics at UC Berkeley, and finished his graduate work in medical physics at the University of California Irvine. He is board-certified by the American Board of Radiology in diagnostic radiological physics.</p> <p>Dr. Boone has had many research interests, but has focused recently on breast dosimetry and the development of breast computed tomography (bCT) for breast cancer screening and diagnostic evaluation. His lab has designed, fabricated and tested four prototype breast CT scanners, and over 600 women have been scanned on these systems. His research on breast CT has focused on technical development, clinical assessment, observer performance and mathematical image characterization.</p> <p>Dr. Boone is co-author of the medical imaging textbook, the Essential Physics of Medical Imaging, and is a commissioner of the International Commission on Radiation Units (ICRU). He is a fellow of the American Association of Physicists in Medicine (AAPM), the American College of Radiology (ACR), the Society of Breast Imaging (SBI), the American Institute for Medical and Biological Engineering (AIMBE), and the Society of Photo-optical Instrumentation Engineering (SPIE).</p>
Title	Professor
Specialty	Mammography
Department	Radiology
Division	Radiology Physics
Center/Program Affiliation	UC Davis Comprehensive Cancer Center
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Education	M.S., UC Irvine, Irvine CA 1981 Ph.D., Philosophy, UC Irvine, Irvine CA 1985 B.A., UC Berkeley, Berkeley CA 1979

John M. Boone, Ph.D.

Fellowships Research, Health Care Affiliates, Inc., Laguna Hills CA 1983-1985

Board Certifications American Board of Medical Physics - Diagnostic Radiology - Diplomat, 1991
American Board of Radiology - Diagnostic Radiological Physics - Diplomat, 1988

Professional Memberships American Association of Physicists in Medicine (Fellow)
American College of Radiology (Fellow)
American Institute for Medical and Biological Engineering (Fellow)
American Institute of Physics
International Society of Photo Optical Engineers (Fellow)
Radiologic Society of North America
Sigma Xi
Society of Breast Imaging (Fellow)

Honors and Awards Fellow, Society of Photo-optical Instrumentation Engineers (SPIE), 2017
Fellow, American Institute for Medical and Biological Engineering (AIMBE), 2016
Journal Club selection, American Journal of Roentgenology (Corwin, et al.), 2016
Best Paper of the Year, Medical Physics (Hernandez A, et al.), 2015
Distinguished Investigator Award, Academy of Radiology Research, 2015
Dean's TEAM Award for Collaborative Research, 2015
Best Paper of the Year, Medical Physics (Chen L, et al.), 2012

Select Recent Publications Demb, J, Chu, P, Nelson, T, Hall, D, Seibert, A, Lamba, R, Boone, J, Krishnam, M, Cagnon, C, Bostani, M, Gould, R, Miglioretti, D, Smith-Bindman, R. Optimizing Radiation Doses for Computed Tomography Across Institutions: Dose Auditing and Best Practices. JAMA internal medicine. 2017;117(6): 810-817.

Boone, JM, McNitt-Gray, MF, Hernandez, AM. Monte Carlo Basics for Radiation Dose Assessment in Diagnostic Radiology. Journal of the American College of Radiology: JACR. 2017;14(6): 793-794.

Hernandez, AM, Seibert, JA, Nosratieh, A, Boone, JM. Generation and analysis of clinically relevant breast imaging x-ray spectra. Medical physics. 2017;44(6): 2148-2160.

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Lee, J, Nishikawa, RM, Reiser, I, Boone, JM. Optimal reconstruction and quantitative image features for computer-aided diagnosis tools for breast CT. Medical physics. 2017; 44(5): 1846-1856.

Lee, J, Nishikawa, RM, Reiser, I, Zuley, ML, Boone, JM. Lack of agreement between radiologists: implications for image-based model observers. Journal of medical imaging (Bellingham, Wash.). 2017;4(2): 025502.

Boone, JM, Hernandez, AM, Seibert, JA. Two-dimensional breast dosimetry improved using three-dimensional breast image data. Radiological physics and technology. 2017;10(2): 129-141.

Abbey, CK, Wu, Y, Burnside, ES, Wunderlich, A, Samuelson, FW, Boone, JM. A Utility/Cost Analysis of Breast Cancer Risk Prediction Algorithms. Proceedings of SPIE--the International Society for Optical Engineering. 2016;9787.

Smith-Bindman, R, Wang, Y, Yellen-Nelson, TR, Moghadassi, M, Wilson, N, Gould, R, Seibert, A, Boone, JM, Krishnam, M, Lamba, R, Hall, DJ, Miglioretti, DL. Predictors of CT Radiation Dose and Their Effect on Patient Care: A Comprehensive Analysis Using Automated Data. Radiology. 2016; 151391.

Chaudhari, AJ, Ferrero, A, Godinez, F, Yang, K, Shelton, DK, Hunter, JC, Naguwa, SM, Boone, JM, Raychaudhuri, SP, Badawi, RD. High-resolution (18)F-FDG PET/CT for assessing disease activity in rheumatoid and psoriatic arthritis: findings of a prospective pilot study. The British journal of radiology. 2016;89(1063): 20160138.

Corwin MT, Seibert JA, Fananapazir G, Lamba R, Boone JM. JOURNAL CLUB: Quantification of Fetal Dose Reduction if Abdominal CT Is Limited to the Top of the Iliac Crests in Pregnant Patients With Trauma. AJR Am J Roentgenol. 2016 Apr;206(4):705-12.

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