KIMBERLEE J. KEARFOTT
Professor
Department of Nuclear Engineering and Radiological Sciences
The University of Michigan
Ann Arbor, MI 48109-2104

Educational Background

Degree	Year	University	Field
Sc. D.	1980	Massachusetts Institute of Technology	Nuclear Engineering
Doctoral Minor	1980	Harvard School of Public Health	Physiology/Medical Physics
M. E. N. E.	1977	University of Virginia	Nuclear Engineering
B. Sc.	1975	St. Mary's University (Nova Scotia)	Engineering

Employment History

Title	Organization	
Professor	The University of Michigan Nuclear Engineering and Radiological Sciences	1993 - Present (Tenured 1993)
Professor	Biomedical Engineering	1994 - Present
Professor	Radiology	2003 - Present
Radiological Engineer	Detroit Edison Fermi I and Fermi II Nuclear Power Facilities (through Bartlett Nuclear Services, Inc.)	2000-2001
Faculty Associate	Los Alamos National Lab, Environmental and Health Sciences Division (ESH-4), Inorganic Chemistry (C-SIC)	Summer 2001, 2002
Program Advisor	Radiological Health Engineering	1994 - 2000
Faculty Associate	Institute for the Humanities	1997 - 1998
Director of Faculty Development	College of Engineering	1994 - 1997 (3 year term)
Associate Professor	Georgia Institute of Technology Nuclear Engineering and Health Physics Programs Mechanical Engineering	1989 - 1993 (Tenured 1991)
Associate Professor	Emory University School of Medicine Radiology	1990 - 1993
Associate Professor	Arizona State University Electrical and Computer Engineering	1987 - 1989 (Tenured 1987)
Assistant Professor	Arizona State University Electrical and Computer Engineering	1984 - 1987
Research Associate	Sloan-Kettering Institute for Cancer Research Neurology	1980 - 1984
Assistant Professor	Cornell University Medical School Physics in Neurology	1980 - 1984
Adjunct Assistant Professor	Massachusetts College of Pharmacy Physics and Mathematics	1980
Research Assistant	Massachusetts General Hospital Physics Research Laboratory	1980
Research Assistant	Massachusetts Institute of Technology Nuclear Engineering Department	1977 - 1980
Co-op Engineer	Babcock and Wilcox Co. Nuclear Power Generation Division, Technical Staff	1975 - 1977

Major Fields of Interest and Expertise: personnel dosimetry (thermoluminescent detectors, optically stimulated luminescent detectors, novel approaches); environmental radionuclide modeling and measurement (radon, RESRAD and similar codes, *in situ* spectroscopy, tomography); radioactive waste transportation, management, disposal, decommissioning and decontamination; physiological models (PET, SPECT, ICRP, general); internal dose assessment (ICRP/NCRP, MIRD, general); radiation detection and external dosimetry; applied radiation protection (medical health physics, nuclear power plant health physics)

Additional Fields of Interest and Experience: positron emission tomography, single photon emission computed tomography, tomographic image reconstruction, digital image formation and processing, mammography, medical imaging quality control and assurance, augmented and virtual reality, new detector material development, history of women in engineering and physics

I. PUBLICATIONS

A. Dissertation: "Measurement of Glucose Metabolism Using Positron Imaging and F-18-Labeled Analogs"
B. Published Books and Parts of Books: 9
C. Published Journal Papers (refereed): 70
D. Published Papers, Reports, and News Items (non-refereed): 21
E. Book Reviews: 19
F. Editorials and Letters to the Editor: 13

II. CONFERENCE PUBLICATIONS, PRESENTATIONS, AND MEDIA APPEARANCES

A. Invited Conference and Keynote Addresses: 16
B. Conference Presentations with Proceedings: Abstracts (refereed): 117
C. Conference Presentations with Proceedings: Papers (refereed): 27
D. Conference Presentations with Proceedings (non-refereed): 28
E. Conference Presentations without Proceedings: 24
F. Seminar Presentations and Invited Talks (non-conference): 118
G. Radio and Television Appearances: 11
H. Newspaper, Magazine, and Internet Articles: 6

III. TEACHING

A. University Courses Taught

Introduction to Nuclear Engineering and Radiological Sciences (sophomore)
Digital Computer Fundamentals (sophomore)
Thermodynamics I (sophomore)
Electrical Networks (junior)
Radiological Health Engineering Fundamentals (senior)
Physics of Diagnostic Radiology (graduate)
Medical X-ray Imaging Laboratory (graduate)
Nuclear Medicine Instrumentation (graduate)
Medical Usage of Radioisotopes (graduate)
Medical Tomography (graduate)
Medical Terminology for Engineers (graduate)
Medical Physics Internship (graduate)
Health Physics Practice (graduate)
Internal Radiation Dose Assessment (graduate)

B. Continuing Education (Short) Courses Taught (selected)

Problems in External Dosimetry and Shielding (5 days)
Internal Radiation Dose Assessment (5 days)
Health Physics Board Certification Examination Review. (5 days)
Intensive Review for the NRRPT Certification Examination (5 days)
Medical Physics Training Course for Radiology Residents (9 months)

C. Curriculum Development

Arizona State University
Responsible for bionuclear component of undergraduate and graduate biomedical engineering interdisciplinary program

Georgia Institute of Technology
Leader of Health Physics and Medical Physics graduate programs, including video delivery and medical physics internships
University of Michigan
Leader of Radiological Health Engineering undergraduate and graduate master's programs
Leaded of new Radiation Safety, Environmental Science, and Medical Physics doctoral option

IV. INDIVIDUAL STUDENT GUIDANCE

A. Postdoctoral Fellows Supervised: 2
B. Ph.D. Students Supervised (as Chair): 13
C. M.S. Thesis Students Supervised (as Chair): 20
D. M.S./M. Eng. Research Projects: 90
E. Undergraduate Research and Engineering Projects: 69
F. Member of Master's Thesis Committees (not as primary advisor): 4
G. Member of Doctoral Oral Committees (not as primary advisor): 10
H. Member of Doctoral Dissertation Committees (not as primary advisor): 12

V. EXTERNAL RESEARCH FUNDING (selected)

"SPECT for Cardiovascular Imaging"
"A Novel Approach to Physiological Imaging"
"Software and Techniques Analysis for PET"
"TLDs and Radiology"
"Radon Mitigation Demonstration: Southwest Tucson"
Presidential Young Investigator Award
"Error Analysis of the Beta-Gamma Algorithm"
"Mixed Field Dosimetry Using Focused and Unfocused Laser Heating of Thermoluminescent Materials"
"Research Involving Digital Radiography"
"The Dual Integral Glow Analysis (DINGA) Method for Low LET Radiation Field Dosimetry:
"High Fidelity Electronic Display of Digital Mammograms"
"Dual Integral Glow Analysis (DINGA) Method for Mixed Radiation Field Dosimetry"
"Determination of Radionuclide Depth Distribution by Calibrated Gamma-Ray Spectroscopy
"Advanced Radiation Dosimeters for Radiological Dose Assessments"

VI. SERVICE (selected)

A. National Professional Leadership Activities

1. Member, National Council on Radiation Protection and Measurements (NCRP) Scientific Subcommittee 57 (Dosimetry and Metabolism of Radionuclides), 1992-96.
2. Member, Subcommittee on Radiation Cleanup Standards, National Advisory Council for Environmental Policy and Technology, U. S. Environmental Protection Agency, Office of Radiation and Indoor Air, 1993-1995.
3. Member, Advisory Committee of the U. S. Transuranium and Uranium Registries (USTUR), Washington State University, 1998-2001.
4. Member, Committee on Long-term Research Needs for Managing Transuranic and Mixed Wastes at DOE Sites, National Academy of Science, 2001-2002.

B. Professional Society Memberships

American Association of Physicists in Medicine, American Association of University Women,
American Nuclear Society, American Society for Engineering Education,
Association of Women in Science, Eta Kappa Nu,Sigma Xi, Health Physics Society,
Institute of Electrical and Electronics Engineers, International Radiation Physics Society,
Order of the Engineer, Society of Nuclear Medicine, Society of Women Engineers

C. Professional Society Activities

American Nuclear Society

1. Member, Scholarship Policy and Coordination Committee, American Nuclear Society, 1997-2000; Vice-Chair 1998-99.
2. President, American Nuclear Society Michigan Section, 1999-2000 (elected).
3. Member, Board of Directors, American Nuclear Society, 1996-99, 1999-2002 (elected).
4. Member, Executive Committee of Education and Training Division, American Nuclear Society, 1997-2000, 2000-2003 (elected).
5. Member, Executive Committee of the Radiation Protection and Shielding Division (Group II), 2000-2003 (elected).
6. Member, ANS President's Blue Ribbon Task Group on Workforce Needs, 2001-present.

Health Physics Society

1. President, Arizona Health Physics Society, 1988-89 (elected).
2. Co-chair, Health Physics Society, Manpower and Professional Education Committee, 1991-92.
3. Member, Board of Directors, Health Physics Society, 1992-95 (elected).
4. Member, Steering Committee/Executive Board, Medical Health Physics Section, Health Physics Society, 1990-95 (elected).

International Radiation Physics Society

1. Vice President for North America, International Radiation Physics Society, 1997-99 (elected).

D. On-Campus Committees and Service

Arizona State University

1. Member, Radiation Protection Committee, 1986-88.
2. Member, Animal Care and Use Committee, 1987-89.
3. Member, Faculty Senate, 1987-89 (elected).
4. Member, Human Laboratory Subjects Committee, 1988-89.
5. Chair, Committee on Committees, 1988-89 (elected).
6. Member, Executive Committee, 1988-89.
7. Member, Dept. of Electrical and Computer Engineering, Executive Committee, 1988-89 (elected).
8. Chair, Dept. of Electrical and Computer Engineering, Undergraduate Curriculum Committee, 1988-89.

Georgia Institute of Technology

1. Member, School of Mechanical Engineering, Faculty Advisory Committee, 1992-93 (elected).
2. Chair, School of Mechanical Engineering, Committee on Medical Physics, 1993.

University of Michigan

1. Member, Dept. Nuclear Engineering and Radiological Sciences, Executive Committee, 1993-95, 1998-2000 (elected).
2. Member, Michigan Memorial Phoenix Project Management Review Team, 1993-94.
3. Member, President's Advisory Commission on Women's Issues, 1993-95, 1995-96.
4. Member, Rackham College, Divisional Review Board in Physical Sciences and Engineering, 1994-96, 1999-01; Chair, 1995-96.
5. Program AdvisorCollege of Engineering, M. Eng. in Radiological Health Engineering, 1994-2000.
6. Member, Panel of Inquiry into Federally-Sponsored Human Radiation Research at the University of Michigan in the Post-World War II Period, 1994-96.
7. Member, Office of Vice President for Minority Affairs, Faculty Awards Review Committee, Summer 1995, Fall 1995.
8. Member, Bioengineering Program, Committee on Undergraduate Bioengineering Curriculum, 1995.
9. Member, Rackham School for Graduate Studies, Barbour Scholarship Review Panel, 1996-99.
10. Member, College of Engineering, Honors and Awards Committee, 1997-99.
11. Member, College of Engineering, Curriculum Committee, 1999-2000 (elected).
12. Member, Rackham School for Graduate Studies, Divisional Board II Grant Review Panel, 1999-2001.

13. Member, Radiation Policy Committee, 1999-present.
14. Chair, Dept. Nuclear Engineering and Radiological Sciences, Radiaiton Safety, Environmental Sciences and Medical Physics option, 2001-present.
15. Member, Radioactive Drug Research Committee (RDRC) Subcommittee on Human Use of Radioisotopes (SHUR), Dosimetrist, 2003-present.

E. Engineering Consulting

U. S. N.R.C. Advisory Committee on Nuclear Waste (ACNW), 1999-2001.
University of Hong Kong, People's Republic of China, External Reviewer for Faculty of Science, October 2000
Other Topics
PET Acquisition and Instrument Intercomparison
Catheter Quality Assurance
Medical Physics Surveys for Radiography, Fluoroscopy, and Mammography
Radiography, Angiography, and PET Facility Room Design
Expert Witness on Radiation Health Effects
Investigation of X-ray Diffractometer Exposure
Cyclotron-producible Radionuclides for Medicine
Nuclear Plant Refueling Outages, Radiation Protection Technologist and Health Physicist
Bulk Materials Release Program Review

VII. LOCAL, NATIONAL and INTERNATIONAL PROFESSIONAL RECOGNITION (selected)

A. Honors and Awards

1. Governor General's Medal (Canada), St. Mary's University, 1975.
2. Engineering Medal, St. Mary's University, 1975.
3. U.S. E.R.D.A. Traineeship, University of Virginia, 1975-77.
4. Ida Green Fellowship, Massachusetts Institute of Technology, 1977-78.
5. N.I.H. Fellowship, Massachusetts Institute of Technology, 1978-79.
6. Whitaker Health Sciences Fund Fellowship, Massachusetts Institute of Technology, 1979-80.
7. Presidential Young Investigator Award, National Science Foundation, 1985-91.
8. Tetalman Memorial Award, Society of Nuclear Medicine, 1991.
9. U.S. E.P.A. Innovative Radon Mitigation Design Competition, 1992.
10. Career Development Award, University of Michigan, 1995.
11. Women's Achievement Award, American Nuclear Society, 1995.
12. Service Award, University of Michigan, College of Engineering, 1996.

B. Invited Conference Session Chairs: 10

C. Professional Registrations

1. National Registry of Radiation Protection Technologists (NRRPT), 1993-2000, 2001-2005.
2. American Board of Health Physics (ABHP), Certified Health Physicist (CHP), 1994-2005.
3. Northeast Utilities Examination, May 2001.

D. Editorial and Reviewer Work for Technical Journals and Other Publications

1. Associate Editor (Operational Topics), Health Physics Journal, 1991-present.
2. Reviewer, National Research Council/National Academy of Science, The Characterization of Remote-Handled Transuranic Wastes for the Waste Isolation Pilot Plant, November 2001.