

CURRICULUM VITAE

Smathers, James Burton

Birth Date: 1935 Citizenship: U.S. M.S.: Married

Birthplace: Prairie du Chien, Wisconsin # Children: 4

PROFESSIONAL INTERESTS:

Medical Physics, Biophysics
Radiation Dosimetry, Health Physics
Activation Analysis
Non-power Uses of Nuclear Energy

EDUCATION:

Ph.D., Nuclear Engineering, University of Maryland
(1967)
M.S., Nuclear Engineering, N.C. State College
(1959)
B.N.E., Nuclear Engineering, N.C. State College
(1957)

EXPERIENCE:

Educational

Professor Emeritus, Department of Radiation Oncology,
UCLA School of Medicine (2001-present)
Professor, Director of Medical Physics, Department of Radiation
Oncology, UCLA School of Medicine, (1980-2001)
Professor & Head, Bioengineering, Texas A&M University,
(1976-1980)
Professor, Nuclear Engineering, Texas A&M University
(1973-1980)
Associate Professor, Nuclear Engineering, Texas A&M
(1971-1973)
Assistant Professor, Nuclear Engineering, Texas A&M University,
(1967-1971)
Graduate Faculty Member, Texas A&M University, (1968-1980)
Graduate School Faculty, Baylor University School of Medicine,
Adjunct Assistant Professor of Nuclear Engineering (1968-1976)

Experience - Education (Continued)

Graduate School Faculty, Baylor University School of Medicine
Visiting Professor of Bioengineering (1977-1980)

Industrial

Section Chief, Walter Reed Army Institute of Research,
Washington, D.C., (1961-1967)
Research Engineer, Atomics International, Canoga Park,
California, (1959)

Military

U.S. Army Officer, Walter Reed Army Institute of
Research, Washington, D.C., (1959-1961)

PROFESSIONAL LICENSES:

Active

Registered Professional Engineer, District of Columbia, 1964, #PE5240
Registered Professional Engineer, California, #2247
Certified Health Physicist, American Board of Health
Physics, 1974
Certified Medical Physics, Radiation Oncology Physics, American
Board of Medical Physics, 1989
Approved Physicist List, Department of Health Services, State of California,
1989
Certified Radiological Physics, Radiation Oncology Physics,
American Board of Radiology, 1991
Licensed Medical Physicist, Texas, #MP0023,

Inactive

Nuclear Regulatory Commission, Senior Reactor Operator License
Registered Professional Engineer, Texas, #27520 (Inactive)

SOCIETY MEMBERSHIPS:

American College of Medical Physics
American Academy of Health Physics
American College of Radiology
California Radiological Society
Los Angeles Radiological Society (___-2000)
Health Physics Society

Society Membership (continued)

California Society Professional Engineers (____-2001)
National Society Professional Engineers (____-2001)
American Radium Society (___ - 2001)
American Association Physicist in Medicine
American Nuclear Society (___ - 2001)
Phi Kappa Phi
Sigma Pi Sigma
Sigma Xi (- 2001)
American Society for Engineering Education (- 2000)
Radiation Research Society (___ - 2001)
The Biomedical Engineering Society (- 1986)

HONORS, AWARDS, LISTINGS:

Teaching

General Dynamics Distinguished Achievement in Teaching
Award, Texas A&M University, (1971)
American Society Engineering Education, Nuclear Engineering
Division, Distinguished Teacher Award, (1972)

Research

Faculty Distinguished Achievement Award In Research,
Association of Former Students, Texas A&M University, (1976)
Farrington Daniels Award, AAPM, Best Scientific Paper on Radiation Dosimetry, 1976

Professional

Brazos Chapter, Texas Society of Professional Engineers,
Engineer of the Year Award, (1976)
Member of Three Man Group Representing U.S.A. in
Japanese/American Neutron Dosimetry Inter comparison, (1976)
Principal U.S. Representative, I.A.E.A. Advisory Group
on Advances in Dosimetry for Fast Neutrons and Heavy
Charged Particles, (1982)
Elected Fellow of American College of Medical Physics (1992)
Elected Fellow of American Association of Physicists in Medicine (1996)
Elected Fellow of American College of Radiology (1999)
Marvin M.D. Williams Professional Achievement Award, American
College Of Medical Physics, 2003
Elected Fellow of American Society for Radiation Oncology (2010)

Listings

Who's Who in America
Who's Who in West
Who's Who in California
Who's Who in Science and Engineering (2011-2012)
Who's Who in Technology Today
Who's Who in Frontier Science and Technology
Who's Who in American Education
American Men and Women of Science
Leading Scientists of the World (2006)

COMMITTEE MEMBERSHIPS:

Texas A&M University

University:

(1972-1976) Committee on the use of human subjects
and experimental animals
(1976-1980) Committee on the use of human subjects
(1969-1973) , (1976-1980), Radiological Safety Committee:
Chairman (1972-1973), (1976-1980)

College of Engineering:

(1968-1973) Biomedical Engineering Research Committee
(1968-1969) Urban Crisis Committee
(1970-1974) Senior Achievement Awards Committee
(1970-1971) Salary, Promotion and Tenure Criteria
Review Committee
(1970-1976) Graduate Instruction Committee
(1974-1978) Interdisciplinary Engineering Committee

University of California, System

(1995-2006) Environment, Safety and Health Panel ,
U.C. President's Council on the National Laboratories, Member

University of California, Los Angeles

University:

(1980-1981) Human Subject Protection Committee
(1982-1984) Ralph and Majorie Crump Award Selection Committee
(1984-2001) Member Jonsson Comprehensive Cancer Center
(1984) Member External Review Committee, Medical
Physics Program, U.C. Irvine
(1984-2001) Member Admissions Committee,
Biomedical Physics Graduate Program

University of California, Los Angeles (Continued)

- (1985-1988) School of Medicine Faculty
Representative to School of Engineering Faculty
- (1988-1990) Faculty Senate Representative
- (1990-2001) Biomedical Physics Graduate Program,
Admission Policy Review Committee
- (1991) Biomedical Physics Graduate Program,
Fellowship Committee
- (1991) Search Committee Radiological Safety Officer
- (1991-1992) School of Medicine Faculty Representative To School Of
Engineering Faculty
- (1992) Radiation Safety Officer Search Committee
- (1992 - 1996) Transition Committee, Graduate Program in Biomedical
Physics, member
- (1993-2001) Medical Radiation Safety Committee
- (1993-1994) University Radiation Safety Committee
- (1994-2001) University Radiation Safety Committee, Chairman
- (1995-2001) Biomedical Physics Graduate Program, Standing
Curriculum Committee
- (1995) Student Research Program, Faculty Sponsor
- (1993-1996) Biomedical Physics Graduate Program, Tri-Department
Committee
- (1995-1998) Faculty Welfare Committee

Department:

- (1980-2001) Executive Committee
- (1980-2001) Long Range Planning Committee
- (1980-2001) Budget Committee
- (1980-2001) Rate Committee
- (1985-2001) Education Committee
- (1991-2001) Physician Contracting Committee

Professional Society Participation

Brazos Chapter, Texas Society of Professional Engineers

Director (1970-1971), (1977-1978)
Secretary (1971-1972)
Second Vice President (1972-1973)
First Vice President (1973)
President (1973-1974)

American Nuclear Society

Action Steering Committee (1979-1980)
Isotopes and Radiation Division
Secretary (1972-1975)
Director (1975-1978)
Education Division
Director (1972-1975)
Vice Chairman/Chairman Elect (1975-1976)
Chairman (1976-1977)
Student Activities Committee (1972-1975)
Technical Group for Biology and Medicine
Director (1982-1983)
Vice Chairman/Chairman Elect (1983-1984)
Chairman (1984-1985)
Engineering Evaluation & Accreditation/Registration
and Professional Development Committee (1977-1983)
Professional Divisions Committee (1984-1985)
Advisory Editor For Journal Nuclear Science
and Engineering (1984-1985)

Accreditation Board Engineering and Technology

Board of Directors (1977-1983)
Executive Committee (1980-1982)
Finance & Audit Committee (1982-1983)
Ad-Hoc Accreditation Visitor (ANS) (1983-1990)

South Texas Chapter, Health Physics Society

Vice President/President Elect (1974-1975)
President (1975-1976)

Health Physics Society

Public Information Committee (1973-1976)

American Society for Engineering Education,

Nuclear Engineering Division, Director (1972-1974)

Professional Society Participation (continued)

**Southern California Chapter, American Association
of Physicists in Medicine**

Board of Directors (1981-1984)

American Association Physicists in Medicine

Treasurer 1992-1997

Task Group 18 - Fast Neutron Beam Dosimetry

Physics (1975-1990)

Board of Directors - S. Calif. Chapter Rep. (1981-1984)

Member of Editorial Board, Medical Physics Journal (1981-
1984) & (1991-2004)

Book Review Editor, Medical Physics Journal (1981-1984)

Board of Directors – Representative at Large (1987-1989)

Program Committee (1987-1992)

Research Committee (1988-1991)

Assoc. Editor, Medical Physics Journal, (1991-2004)

Finance Committee, Chairman (1992-1997)

Annual Meeting Coordination Committee (1992-1997)

Development Committee (1992-1997)

Investment Advisory Committee (1992-1997) & (2000-
2005)

Publications Committee (1992-1997)

Executive Committee (1992-1997)

Medical Physics Journal Business Management Committee
(1995-1997)

Medical Physics Journal Business Management Committee
Consultant (1998)

Electronic Media Coordinating Committee (1996-1997)

Ad Hoc Committee on FDA Oversight of Medical Software (1997)

Awards Selection Subcommittee Member Graduate

Fellowship, Development Committee (1999-2009)

Medical Physics Work Force Subcommittee, Education and Training of
Medical Physicists-ACMP Liaison, (2000 -2009)

Nomination Committee (2001) (2003)

Summer Undergraduate Fellowship Program Subcommittee

Member (2002-2009), Consultant (2010-present)

Ad Hoc Committee On Placement Services (2003)

Headquarters Site Visit Review Committee, Chair (2004)

Placement Services Subcommittee, Member (2004-2009), Consultant (2010-
present)

Recruitment of Young Physicists into Medical Physics
Subcommittee, member (2004-2009)

Board of Directors as Governing Board Representative
of American Institute of Physics (1998-2006)

Professional Society Participation (continued)

California Association of Medical Physics Society

President (1991-1992)
Chairman of the Board of Directors (1992-1993)

American College of Medical Physics

Member (1983-1992)
Fellow (1992-Present)
Ethics Committee (1984-1988)
Member Board of Chancellors (1987-1989)
Licensure Committee (1990-1992)
Vice Chairman, Board of Chancellors (1998)
Chairman, Board of Chancellors (1999)
Immediate Past Chairman, Board of Chancellors (2000)
American College Of Radiology Intersociety Commission
Representative (ACMP) (1998-1999)
Strategic Planning Committee (1998-2002)
Journal Applied Clinical Medical Physics, Book Review
Editor, (2000-2006)
Journal Applied Clinical Medical Physics Editor Search
Committee, (2001 - 2002)
Awards and Honors Committee (2000 – 2006)
Chairman (2004-2006)
Ad Hoc Committee on Membership Recruitment and Retention
(1993 – 2009)

Commission on Accreditation of Medical Physics Educational Programs

Board of Directors, (ACMP), (2000-2006)
Secretary/Treasurer (2002-2006)

American Institute of Physics

Committee of Society Treasurers/AAPM Treasurer
(1992-1997)
Governing Board Representative (1995-2006)
Audit Committee, Member (1996-1999)
Audit Committee Chair (1998-1999)
Sub-Committee on Books, Member (1995- 1997)
Executive Committee Member (2002 – 2003), (2004-2005)
Committee on Committees (2003 – 2005)
Chairman (2003, 2004)
Nominating Committee (2006)
Executive Committee-Non voting Member (2006)
Chair of Governing Board Search Committee Member (2007)

Professional Society Participation (continued)

American College of Radiology

Research and Technology Assessment Committee of the Physics
and Radiation Protection Commission (1993-1999)

Radiological Society of North America

Reviewer, RSNA Research and Educational Fund, (1997-present)

The American Society For Therapeutic Radiology and Oncology

Radiation Physics Committee, Member, (1999-2004)
Member, Corporate Task Force (1999-2004)

Greater Los Angeles Zoo Association

Medical Advisory Board, (1999-2001)

International Organization Medical Physics

Member, Finance Committee (2002-present)

Community Activities

American Association of Retired Persons

Income tax preparation volunteer (2001-Present)

Operation Gratitude - Los Angeles

Volunteer (2003-Present)

TECHNICAL CONSULTING:

National Institute of Health

1976-1981	National Cancer Institute
1982-1986	National Cancer Institute, Radiation Study Section, Member Chairman (1984-1986)
2004 Feb.	National Cancer Institute, Radiation Study Section, Ad Hoc Member
2004 June	National Cancer Institute, Radiation Study Section, Ad Hoc Member
2004-2008	National Cancer Institute, Radiation Study Section, Member
2005	National Cancer Institute, Subcommittee H, Clinical Trials, Ad Hoc Member
2008 -Feb.	NCI, Scientific Review Group, Member
2009-June	NCI, Special Emphasis Panel/Scientific Review Group/mail reviewer
2010-May	NCI, Special Emphasis Panel/Scientific Review Group/mail reviewer
2011-January	NCI Special Emphasis Panel/Scientific Review Group/mail reviewer
2011-September	NCI Special Emphasis Panel/Scientific Review Group/mail reviewer

Department of Energy

1981-1982	Department of Energy, Neutron Dosimetry Advisory Committee
1985-1987	Department of Energy, Neutron Quality Factor Committee
1989	Department of Energy
1989	Department of Energy, Boron Capture Neutron Therapy Review Committee Member
1990	Department of Energy, Member Technical Review Committee, NRC BEIR V Report
2001-2002	Department Of Energy, Office of Planning & Analysis
2001-2006	Department Of Energy, NEER Program

Department of Health and Human Services

1996-2000	Department of Health & Human Services, Food an Drug Administration, Radiological Devices Panel
2001-present	Department of Health & Human Services, Food an Drug Administration, Radiological Devices Panel Consultant List

Other Government Agencies and Institutions

1968-1970	Walter Reed Army Institute of Research
1979-1981	Battelle Northwest Laboratories (Nuclear Regulatory Commission)
1980-1982	Wadsworth V.A. Hospital
1980-1982	Nuclear Regulatory Commission
1984	National Science Foundation
1995-1996	Panel on Space Radiation Effects of the Space Studies, Board Committee on Space Biology and Medicine, National Research Council
2000	National Aeronautics & Space Administration

TECHNICAL CONSULTING, Continued

2005 CDC, ATSDR, Report Review
2008-pres. Technical Expert Resource Member to Texas Board of Professional Engineers

Industrial Companies

1974-1975 Ecosystem Data Company
1990-1994 Philips Medical Systems North America, Technical Advisory Board Member
1993-1996 Nuclear Associates/Victoreen Instrument Corp. Technical Advisory Committee
1997-2001 PTW North America Inc.
2001- 2003 Syncor Corp.
2003 -present Radiological Support Devices

Non-Profit Agencies

1981-1983, 2009 American Council on Education
1983 Medical Component, National Accelerator Center, Republic of South Africa
1988-1992 Loma Linda University Proton Accelerator Technical Advisory Committee
1989 Radiological Physics Center, Outside Review Committee Member
1992-1993 Lawrence Berkeley Laboratory-Massachusetts General Hospital Proton Therapy Advisory Committee, Chairman
1992-1996 RTOG Proton Therapy Quality Assurance Committee
1994 Pan American Health Organization, Radiation Therapy Physics Consultant, Government of Chile
1994-2001 Massachusetts General Hospital, Northeast Proton Therapy Advisory Committee Member
1995 University of Missouri, Columbia, Faculty Appraisal Committee Member
1996 & 1999 International Atomic Energy Agency

RESEARCH PARTICIPATION:

1968-1974	N.A.S.A.,	Senior Investigator, Effects of Proton Irradiation of Skin and Eyes: \$448,605.
1969	N.S.F.,	Principal Investigator, Summer Institute for Science Teachers, Neutron Activation Analysis: \$23,000.
1971-1972	N.A.S.A.,	Co-Principal Investigator, Activation Analysis Techniques for Contamination Monitoring: \$20,000.
1972-1980	N.I.H.,	Multi-Institution Project, Principal Investigator at T.A.M.U., Use of High Energy Neutrons in Radiotherapy: \$673,317.
1976-1980	H.E.W.,	Multi-Institution Project, Principal Investigator at T.A.M.U., Rehabilitation Engineering Center: \$2,946,903.
1980-1989	N.C.I.,	Senior Investigator, Clinical Neutron Therapy Program: \$14,605,921;
1981-1986	N.I.H.,	Co-Principal Investigator, Research Training in Medical Physics: \$219,270.
1984-1990	N.C.I.,	Co-Principal Investigator, Clinical Neutron Therapy Program, NCI-CM-97325, \$15,000,000; 1979-1990.
1984-1986	N.C.I.,	Principal Investigator, Radiation Study Section; U09-RG-10553-13, \$175,000
1986-1996	N.C.I.,	Co-Investigator, Collaborative Ocular Melanoma Study, NEI-EY 06268, \$306,109
1987-1992	N.C.I.,	Co-Investigator, Research Training in Biomedical Physics, NCI-CA 09092-11A1 \$424,605; 1987-1992
1992-1997	N.C.I.,	Co-Investigator, Research Training in Biomedical Physics, NCI-CA 09092-11A1 \$526,527; 1992-1997
1994	MICRO	Principle Investigator, Application of FPGA Technology to Performance Limitations In Radiation Therapy, 94-114, \$91,572, 1994-1995
1998-2002	N.C.I.,	Co-Investigator, Research Training in Biomedical Physics, NCI-CA 09092-22A1 \$909,598; 1998-2002
1999-2001	CBCRP	Co-Principle Investigator, UCLA Biomedical Physics Graduate Training In Breast Cancer, \$189,206

PUBLICATIONS:

Served as a scientific paper reviewer for the following technical journals

Radiology
Nuclear Technology
Medical Physics
Physics in Medicine and Biology
International Journal of Radiation Oncology,
Biology, and Physics
Health Physics

PAPERS REFEREED AND PUBLISHED

"Survey of Chromatographic Papers for Interfering Nuclides in Activation Analysis", Anal. Chem. Acta. 39:529-532, J.B. Smathers, D. Duffey & S. Lakshmanan, 1967.

"Derivative Neutron Activation Analysis of Magnesium", Nucl. Applications 7:84-88, J.B. Smathers, D. Duffey & S. Lakshmanan, 1969.

"Chelate Enhancement of the Neutron Activation Analysis Sensitivity of Magnesium", Anal. Chem. Acta., 46:9-15, J.B. Smathers, D. Duffey, S. Lakshmanan, 1969.

"Application of Neutron Activation Analysis to the Sweat Test Diagnosis of Cystic Fibrosis", Nucl. Appl. & Techn. 8:290-295, R.G. McAndrew, J.B. Smathers, R. Wainerdi, G. Harrison & R. Doggett, 1970.

"The Dose Rate of Cyclotron-Produced Fast Neutron Beams", Phys. Med. Biol., 17(3):429-430, C. Parnell, G. Oliver, Jr., P. Almond & J.B. Smathers, 1972.

"Picoampere Charged Particle Beam Monitor", The Review of Scientific Instruments, 43(3):447, J.B. Smathers, K. Routt & D. Hightower, 1972.

"A Theoretical Analysis of Proportional Counter Response Versus LET", Health Physics, 22(1):73-78, G. Martin, J.B. Smathers, & R. Neff, 1972.

"Dosimetry Properties of Neutron Beams Produced by 16-60 MeV D+ on Beryllium:", Radiation Research, 53:24-34, P. Almond, J.B. Smathers, G. Oliver, E. Hranitzky & K. Routt, 1973.

"Space Simulator", Proceedings of a Symposium Sponsored by the American Institute of Aeronautics and Astronautics, The American Society for Testing and Materials Institute of Environmental Sciences and the National Aeronautics and Space Administration, NASA SP-336, Scientific and Technical Information Office, pp.421-435, J.B. Smathers, W. Kuykendall, Jr., R. Wright, Jr., & J. Marshall, 1973.

"Dosimetric Properties of Fast Neutron Beams at TAMVEC", Second Symposium on Neutron Dosimetry in Biology and Medicine in Munchen, Germany, P. Almond, A. Smith, J.B. Smathers & V. Otte, Sept. 30-Oct. 4, 1974.

"Dosimetry Inter comparisons Between Fast Neutron Radiotherapy Facilities", Second Symposium on Neutron Dosimetry in Biology Medicine in Munchen, Germany, P. Almond, A. Smith, J. Smathers & V. Otte, Sept. 30 - Oct. 4, 1974.

"Use of Cyclotrons in Cancer Therapy", Third Conference on Application of Small Accelerators, Denton, Texas, J.B. Smathers, V. Otte, P. Almond, A. Smith & D. Hussey, Oct. 21-23, 1974.

"Dosimetric Properties of the Fast Neutron Therapy Beams at TAMVEC", Radiology, 113(1):187-193, A. Smith, P. Almond, J.B. Smathers & V. Otte, 1974.

"Response of Mouse Intestine to Neutrons and Gamma Rays in Relation to Dose Fractionation and Division Cycle", Cancer, 34:39-47, H. Withers, K. Mason, B. Reid, N. Dubravsky, H. Barkley, B. Brown & J.B. Smathers, 1974.

"Response of Journal Mucosa to Fractionated Doses of Neutrons or Gamma Rays", European Journal of Cancer, 10:249-252, H. Withers, A. Chu, K. Mason, B. Reid, H. Barkley & J.B. Smathers, 1974.

"Radiation Quality of Fields Produced by 16-, 30-, and 50 MeV Deuterons on Beryllium", Radiation Research, 61:366, G. Oliver, W. Grant & J.B. Smathers, 1975.

"Dosimetry Inter comparisons Between Fast Neutrons Radiotherapy Facilities", Medical Physics, 2:195-200, A. Smith, P. Almond, J.B. Smathers, V. Otte, F. Attix, R. Theus, P. Wootton, H. Bichsel, J. Eenmaa, D. Williams, D. Bewley & C. Parnell, 1975.

"Instructional Programs in the Application of Radiation and Radioisotopes at Texas A & M University", Nuclear Technology, 27:131-134, J.B. Smathers, & R. Cochran, 1975.

"Computer Dosimetry for Flattened and Wedged Fast Neutron Beams", Medical Physics, 3:26-30, K. Hogstrom, A. Smith, P. Almond, V. Otte & J.B. Smathers, 1976.

"Fast Neutron Dose Rate vs. Energy for the $d + Be$ Reaction, A Re-analysis", Medical Physics, 3:34-47, J.B. Smathers, V. Otte, A. Smith, & P. Almond, 1976.

"Dosimetry Inter comparisons Between Fast Neutron Radiotherapy Centers in the United States and Europe", Workshop on Basis Physical Data for Neutron Dosimetry, Rijswijk, Netherlands, May 19-21, 1976: also Monograph on Basic Physical Data for Neutron Dosimetry, J. Broerse (Ed.), Commission of the European Communities, EUR 5629: 267, J.B. Smathers, P. Almond, V. Otte, & W. Grant, 1976.

"Design of Flattening Filters for the Fast Neutron Beam at TAMVEC by Use of Decrement Lines", Medical Physics, 3(4): 250-252, V. Otte, J.B. Smathers, R. Wright, A. Smith, & P. Almond, 1976.

"Status Report: Direct Track Detector Dosimetry in Fast Neutron Beams", Ninth International Solid State Nuclear Track Detector Conference, September 30-October 6, Munich, Germany, H. Knowles, F. Ruddy, G. Tripard, H. Bichsel, J. Eenmaa & J.B. Smathers, 1976.

"Physical Requirements of a Neutron Beam for Radiotherapy", Fourth Conference on Application of Small Accelerators, Denton, Texas, October 27, pp. 493-495, W. Grant, P. Almond, V. Otte & J.B. Smathers, 1976.

"Physics Inter comparisons for Neutron Radiation Therapy", Particles and Radiation Therapy II Conference, September 14-17, Berkeley, California, 1976; also J. Rad. Oncol. Biol. Phys., 3:169-176, P. Almond & J.B. Smathers, 1977.

"Composition of A-150 Tissue Equivalent Plastic", Medical Physics, 4(1):74, J.B. Smathers, V. Otte, P. Almond, A. Smith, F Attix, J. Spokas, W. Quam & L. Goodman, 1977.

"Summary of High Energy Neutron Sources and Their Characteristics", J. Rad. Oncol., Biol. & Phys., 3:149, J.B. Smathers, P. Almond, V. Otte & W. Grant, 1977.

"Thick Target Yields from the d-Be Reaction at $E_d = 15.5$, 29.9, and 49.0 MeV", Proceedings of Symposium on Neutron Cross Sections 10-40 MeV, Brookhaven National Laboratory, Upton, New York, May 3-5, pp. 117-124, R. Graves, J.B. Smathers, N. Hertel, V. Otte, P. Almond & W. Grant, 1977.

"Physics Inter comparison for Neutron Radiation Therapy", Int. J. Rad. Oncol. Biol. & Phys., 3:169, P. Almond & J.B. Smathers, 1977.

"Status Report: Direct Track Detector Dosimetry in Fast Neutron Beams", Nuclear Instruments & Methods, 147:119-123, H. Knowles, F. Ruddy, G. Tripard, H. Bichsel, J. Eenmaa & J.B. Smathers, 1977.

"Skin Sparing with D-T Neutrons", Br. J. Rad., 50:449, V. Otte, J. Horton, E. Goldberg, D. Tripler & J.B. Smathers, 1977.

"Effect of Dose Fractionation of Early and Late Skin Responses to Gamma Rays and Neutrons", Int. J. Rad. Oncol. Biol. & Phys., 3:227, H. Withers, B. Flow, J. Huchton, D. Hussey J. Jardine, K. Mason, G. Raulston & J.B. Smathers, 1977.

"Radiation Dose Received by TAMVEC Neutron Therapy Staff", Health Physics, 35(2):271, J.B. Smathers, R. Graves, P. Sandel, P. Almond, V. Otte & W. Grant, 1978.

"Shielding for Neutron Radiotherapy Sources Created By The Be(d,n) Reaction", Health Physics, 35:807, J. B. Smathers, R. Graves, W. Wilson, P. Almond, W. Grant & V. Otte, 1978.

"Thallium-201 Production with the Idle Beam from Neutron Therapy", *Medical Physics*, 5(6):532, J. Blue, D. Liu & J.B. Smathers, 1978.

"Neutron Energy Spectra of d(49)-Be and P(41)-Be Neutron Radiotherapy Sources", *Medical Physics*, 6(2):123, R. Graves, J.B. Smathers, P. Almond, W. Grant, V. Otte, 1979.

"Characteristics of Fast Neutron Sources", Third Meeting on Fundamental and Practical Aspects of Fast Neutrons and Other High LET Particles in Clinical Radiotherapy, September 13-15, 1978, The Hague, The Netherlands; also in *High LET Radiations in Clinical Radiotherapy*, a Supplement to the *European Journal of Cancer*, 125, J.B. Smathers, 1979.

"Neutron Dosimetry", Proceedings of Conference on Nuclear Cross Sections for Technology, Knoxville, Tennessee, October 22-26, NBS Publication 594, pp. 447-455, Conf. 791058, P. Almond & J.B. Smathers, 1979.

"A Medically Dedicated Cyclotron Facility", Proceedings of the Small Accelerator Conference, I.E.E.E. Transactions, Denton, Texas, November 6-8, P. Almond, V. Otte, W. Grant, J.B. Smathers & R. Graves, 1979.

"Effects of Filters and Wedges on Skin Sparing and Gamma/Neutron Dose Ratios In Neutron Teletherapy", *Medical Physics*, 7(1):65, J.B. Smathers, R. Graves, P. Almond, V. Otte & W. Grant, 1980.

"Lymphatic Clearance of Radioactive Sulfur Colloid", *Lymphology*, 13(1):24, G. Miller, J.B. Smathers, J. Seale, D. Hightower & D. Hood, 1980.

"Calorimetric and Ionimetric Dosimetry Inter comparisons, I-U.S. Neutron Radiotherapy Centers", *Medical Physics*, 8(1): 39, J. McDonald, I. Ma, J. Liang, J. Eenmaa, M. Auschalom, J.B. Smathers, R. Graves, L. August & P. Shapiro, 1981.

"The Second Neutron Dosimetry Inter comparison Between Japan and USA", *Japan Radiological Physics*, 1:31-39, K. Kawashima, K. Hoshino, T. Hiraoaka, H. Matsuzawa, T. Hashizume, A. Itoh, P. Almond, J.B. Smathers, & H. Bichsel, 1981.

"In Phantom Photon Spectral Measurements for High Energy Neutron Therapy Sources", Proceedings of the Fourth Symposium of Neutron Dosimetry, EUR 7448, Vol. 2, pp. 181, June 1-5 Munchen, Germany, J.B. Smathers, N. Hertel & R. Graves, 1981.

"Modifications of the 50% Maximum Dose Depth for 41 MeV (p+,Be) Neutrons by use of Filtration and/or Transmission Targets", *Medical Physics*, 9(6):856, J.B. Smathers, R. Graves, L. Earls, V. Otte, & P. Almond, 1982.

"Clinical Neutron Dosimetry", IAEA-AG-371/10, Advances in Dosimetry for Fast Neutrons and Heavy Charged Particles, P. 175-199, J.B. Smathers, & P. Almond, 1984.

"Verification Timer for AECL 780 Cobalt Unit", International Journal Radiation Oncology Biol. Phys. 10:, 753, J.B. Smathers & F. E. Holly, 1984.

"Use of Cyclotrons in Medical Research, Past, Present, Future, Invited Paper, Conference on The Application of Accelerators in Research and Industry; Nuclear Instruments and Measurements. B10/11, 1111-1116, J. B. Smathers, L.T. Myers, 1985.

"Uses of Ionizing Radiation and Medical Care Related Problems" in Medical-Care Radiation Safety Problems, A Look to The Future, 25th Hanford, Life Science Symposium, October 21-23, 1986, and Health Physics 55(2):165 J.B. Smathers 1988.

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“Physics and Dosimetry, Staffing and Their role in Cancer Treatment”, 19th National Oncology Economics Conference, Association of Community Cancer Centers, 18-21 September 2002, Albuquerque, New Mexico

“BS in Nuclear Engineering – Is It A Good Preparatory Degree For Graduate Training In Medical Physics”?, Georgia Institute of Technology, The George W. Woodruff School of Mechanical Engineering, Atlanta, Ga., 24 February 2005

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OTHER ACTIVITIES

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- 1978 Session Rapporteur, Third Meeting On Fundamental and Practical Aspects of Fast Neutrons and Other High LET Particles In Clinical Radiotherapy, Rijswijk, The Netherlands
- 1982 Session Chairman, 29th Annual Meeting American Nuclear Society, June 6-10
- 1983 Session Chairman, 18th Annual Meeting Association For the Advancement of Medical Instrumentation.
- 1983 Series of 5 Seminars on Neutron Physics, Biology, and Therapy. Karl Bremer Hospital and Groote Schuur Hospital, Cape Town, Republic of South Africa
- 1983 Series of 2 Seminars on Neutron Therapy, Hillbrow Hospital, Johannesburg and Pretoria Cyclotron Group, Pretoria; Republic of South Africa
- 1985 Paper Reviewer, 1985 Winter Meeting American Nuclear Society.
- 1985 Session Chairman, 1985 Spring Seminar Southern California Chapter, American Association Physicists in Medicine.
- 1986 Invited Speaker, Annual Meeting American College of Medical Physics "NCI Support of Physics - A Four Year Perspective"
- 1986 Invited Speaker, Southern California Chapter American Association Physicists In Medicine, Spring Seminar "Physics Of Neutron Therapy"
- 1986 Invited Speaker, Los Angeles, Radiological Society, November

- 1986 Invited Speaker, Radiation Medicine, Symposium,
AMI Tarzana Regional Medical Center.
- 1987 Invited Speaker, Basic and Clinical Science Seminars,
UCLA - V.A. Wadsworth Dermatology Program.
- 1988 Session Chairman, 22nd Mid-year Topical Meeting
On Instrumentation, Health Physics Society.
- 1989 RTOG Site Visitor - San Diego, California, January
1989 Chaired Symposium on Research Funding at
AAPM National Meeting, 31st Annual.
- 1990 Presentation, UCLA Stereotactic Radiosurgery
Symposium, March 25,
- 1990 Presentation, JSEI-UCLA Ocular Oncology Conference,
May 11,
- 1990 Chaired Session on "Medical Physics", Health Physics
Society meeting, June 27, Anaheim, Calif.
- 1991 Chaired Session on "Dosimetry For Heavy Particles",
World Congress of Medical Physics and Biomedical
Engineering, July 7-12, Kyoto, Japan
- 1991 Faculty Sponsor - UCLA Student Research Program
- 1991 Chaired Session on "Radiotherapy in the 21st Century",
American College of Medical Physics, June 27-30,
Stowe, Vermont,
- 1991 Organizing Committee, 3rd Annual Combined
Radiation Oncology Conference, 5-7 April ,
Newport Beach, Calif.
- 1992 Invited talk, 8th Annual Midwest Meeting, Society
Radiation Oncology Administrators, August ,
Chicago, Illinois
- 1992 AAPM Research Committee, Symposium
on Research Grant Funding, Panel Member, August,
Calgary, Canada

- 1993 Invited Talk, "Medical Physics Licensure in the State of California", Southern California Chapter, American Association Of Physicists in Medicine, October
- 1995 Book Review, "Calibration of Dosimeters Used in Radiotherapy, A. Manual, IAEA Technical Report. Series #374, Health Physics, 69 #5 850 1995
- 1996 Session Chairman, "Heavy-Particle Therapy, Radiobiology, and New Treatment Modalities", AAPM Annual Meeting, Philadelphia, Pa., 24 July
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- 1996 Radiation Protection Lecture, UCLA "Current Uses of Radiation", 18 October

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