

In Memoriam of Bob Gorson: Radiation Programs in Medical Centers Memorial Lecture

Cari Borrás, D.Sc., FACR, FAAPM, FIOMP
Radiological Physics and Health Services
Adjunct Assistant Professor (Radiology)
GWU School of Medicine and Health Sciences
Washington DC, USA

Medical Physics

AVAILABLE ONLINE—See <http://www.medphys.org> August 2016, Volume 33, Number 8
The International Journal of Medical Physics Research and Practice

2016 COMP Annual Scientific Meeting
Dr. John A. Hounstman



1923-2016

Published by the American Association of Physicists in Medicine (AAPM) with the assistance of the Canadian Association of Medical Physicists (CAMPP), the Canadian College of Physicists in Medicine (CCPM), and the International Organization for Medical Physics (IOMP) through the IOMP Executive Committee. Medical Physics is an official review journal of the AAPM and of the CAMPP/CCPM/FAAPM.

Medical Physics is a hybrid gold open-access journal.

Early Years



Age 3



Age 5



Age 47



In the Navy 1944-1946: He served as an aviation radar technician and control tower operator on Guam and Kwajalein



**Hobbies: Astronomy,
Photography, Music...**



Astronomy Group 1940



At home 1982

*I am listening to Toccatina
conductor Butterfield Brown, the one
of the mine I like best. However,
it sounds quite magnificent
today. Perhaps I am beginning to
appreciate it. On the N.Y. Phil., I
listened to Brahms 1st piano
concerto (quite inferior to the second)
and two nocturnes by Chopin...*
1944 Letter



At home 1987

**Hobbies: Astronomy,
Photography and
Painting?**



**Total Sun Eclipse,
Minneapolis
30 June 1954**



Family Life: Marriage to Lois, 1946

Place October 18 in Doylestown Church

Mrs. Paul M. Smith, of 109 Arch street, today announced the marriage of her daughter, Miss Lois Smith, and Robert Owen Gorson, of Philadelphia, which took place Friday, October 18, at 5 o'clock, in the Deep Run Presbyterian church at Doylestown. The double-ring ceremony was performed by the pastor of the church, the Rev. M. M. Hostetter, in the presence of a small group of relatives and close friends of the couple. Lieutenant Commander and Mrs. Arthur G. Eichelberger, of Philadelphia, were best man and matron of honor. The bride wore a dress of turquoise wool, and a half-hat made of

Arch street. Mrs. Gorson, who is a member of the office staff of Chief Boy-Ar-Dee Quality Foods, Inc., is a well-known organist. For several years she lived in Philadelphia, where she and Mr. Gorson were active in the Amateur Astronomers Group of Franklin Institute. Mr. Gorson, who is a veteran of service in the U.S. Navy, spent several months in the South Pacific. He is attending the University of Pennsylvania.

The Rev. Mr. Hostetter, who performed the ceremony, is a classmate and friend of the Rev. Thomas Law Coyle, a former pastor of the First Presbyterian church of Milton, of which Mrs. Gorson is a member.

Announcements of the wedding were placed in the mails today.

Family Life: Bob and Lois, 1948



Health Physicist at the UPenn (1949) Radiological Physicist (1951-1959) in Radiology with John Hale, Eugene Pendergrass Radiology Chair



Bob at U of PA

Dr. Pendergrass Fellows, RSNA 1952

TJU Department Chairs

Phil Hodes, Chairman Radiology




Simon Kramer, Chairman Radiation Oncology



Tom Koszalka Biochemistry



Robert O. Gorson with Robert L. Brent, Director Stein Research Center and Chairman of Pediatrics




Thomas Jefferson University (TJU)

Associate Prof (1959-1966); Professor of Radiology (1966-1989) & Prof. of Radiation Therapy & Nuclear Medicine (1973-1989)


Chief of the Medical Physics Division (Radiology) & Associate Director of the Stein Research Center (1959-1989)

TEACHING	TO
Radiological Physics	Medical students
Radiation Biology	Residents in radiology, radiation oncology and nuclear medicine
Health Physics	Nurses and technologists
	Graduate students and postdoctoral fellows

BOB Gorson's Trainees



N Suntharalingam

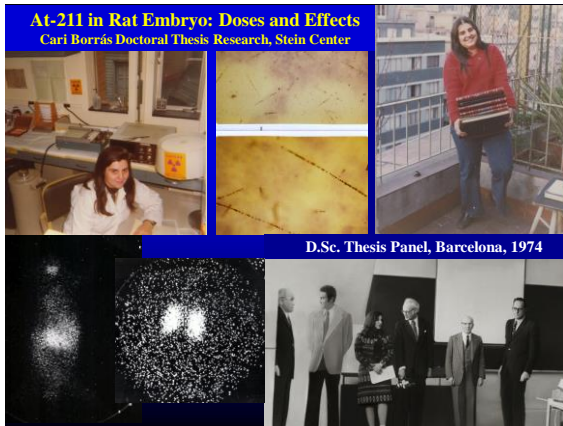


Farideh Bagne



Margit Lassen

In 1973 Dr. Suntharalingam became Director of the Medical Physics Division of the TJU Department of Radiation Oncology



AAPM Activities

- ▲ Charter Member, 1959
- ▲ President, 1969
- ▲ Member, Board of Directors, 1968 - 1970
- ▲ First Chairperson of the AAPM Professional Council, 1971
- ▲ First Chairperson of the AAPM History Committee, 1987 - 1993

RSNA 1967

ABR, ABHP & ABMP Activities

- ▲ American Board of Radiology, Guest Examiner (1957-1960)
- ▲ American Board of Health Physics, Chairman (1965-1966)
- ▲ American Board of Health Physics, Examiner (1963-1968)
- ▲ American Board of Medical Physics, Member, Constituting Panel, (1985-1988)
- ▲ American Board Medical Physics Treasurer and Board Member, (1988-1992)

**August 3, 1964: First Formal Meeting of Congressionally Chartered
National Council on Radiation Protection and Measurements**

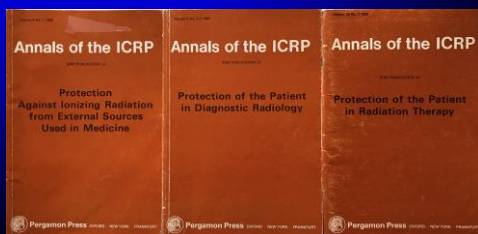
Mayflower Hotel, Washington DC.



**1981 Sun Eclipse
Bratsk, Siberia**



**International Commission on
Radiation Protection (ICRP)
Member (1977-1985): Committee 3
on Medical Uses of Radiation**









AAPM Videotaping & Interviews

- ▲ First AAPM Associate Historian for Videography (1993-2004)
- ▲ Conducted over 120 videotaped interviews of senior medical physicists and other radiological scientists for the Archives of AAPM & AIP (1991-2004)
- ▲ Videotaped most of the AAPM Honors & Awards Ceremonies & many tributes & scientific sessions & symposia for the AAPM Archives (1982-2007)

At the 1990 RSNA Meeting




AAPM INTERVIEWS

2004	Bernhard Cohen, Bill Hendee, C. Clifton Ling, Azam Nirsomand-Rad, Colin G. Orton, Martin Weinhous
2003	Michael Gillin, Michael Gillin, Robert Gould, Hélène Langevin-Joliet, Hélène Langevin-Joliet, Edward Nickoloff, Edward Nickoloff, Perry Sprawls, Sal Trofi, Jr., Sal Trofi, Jr.
2002	Peter Bloch, Peter Bloch, Luther Brady, Charles W. Coffey, Stephen Feig, M.D., Stephen Feig, M.D., James Galvin, James Galvin, Morton Kligerman, M.D., James B. Smathers, Raymond Wu, Raymond Wu
2001	Jerome G. Danc, Jerome G. Danc, Kenneth R. Hogstrom, Kenneth R. Hogstrom, Geoffrey Ibbott, Geoffrey Ibbott, Ravinder Nath
2000	Caridad Borrás, Paul DeLuca, Arthur Haut, Donald D. Tolbert
1999	Amos Norman, Guy H. Simmons, Stephen Thomas
1998	Stephen Balter, Donald Herbert, Basil Hilaris, M.D., Jack Krohmer, Mary Louise Meurk, Will Roger Ney, Will Roger Ney, Alfred R. Smith, Jean St. Germain, Rosalyn S. Yalow, Rosalyn S. Yalow
1997	Stephen Balter, Robert Dixon, Kenneth Kase, Faiz Khan, Edwin McCullough, Edwin McCullough, Charles Meinhold, Richard Morin, Budatt Palwal
1996	Gary Barnes, Paul Carson, Joel E. Gray, Thomas Payne, Robert J. Schulz, John Villforth
1995	Heinz Barshall, Luther Brady, Robert L. Brent, M.D., Gordon Brownell, John R. Cameron, Paul Goodwin, Ronald Kathren, Ronald Kathren, William Koch, Charles Lescrenier, James Purdy, Melvin Siedband, Lauriston Taylor, Lauriston Taylor, Ralph Worshup
1994	Bengt Bjarnagard, Victor Bond, M.D., Stewart Bushong, Gary Fullerton, Benjamin Galkin, Charles Kelsey, Simon Kramer, M.D., Ralph Laas, Otha Linton, Arthur Lucas, Carl Mansfield, M.D., Lawrence Rotherberg, Eugene L. Saenger, Joe Sayeg, Ned Sternick, Lauriston Taylor, Shirley Vickers*, S. Reid Warren Jr.*, Harold Wyckoff, Rosalyn S. Yalow
1993	Peter Almond, John Cunningham, Juan del Regato, Frank Ellis, Jack Fowler, Hy Glasser, Paul Hodges, M.D., Donald Kerst, John Lenihan, Robert Loevinger, Charles A. Mistretta, Fearghus O'Foghlu, Colin G. Orton, Elaine Osterman, Lester Skaggs, Leonard Stanton, N. Suntharalingam, Michel Ter-Pogossian, Robert Waggoner
1992	Herb Atix, Norman Baily, George Callendine, John R. Cameron, John R. Cameron, John R. Cameron, Arnold Feldman, Arnold Feldman, Ted Fields, Robert D. Gerson, Robert D. Gerson, Moses Greenfield, Bill Hendee, C.J. Karzmark, Jack Krohmer, Craig Nunan, Robert Shalek, Warren Sinclair, Ray Tanner, Edward Webster, Peter Wootton, Ann Wright, Kenneth Wright
1990	Gail Adams, John Hale, James Kerelakes, Larry Lanot, Larry Lanot, John Laughlin, John Laughlin, Jacques Ovadia

A

2004 Bernhard Cohen, Bill Hendee, C. Clifton Ling, Azam Niroumand-Rad, Colin G. Orton, Martin Weinhaus


2003 Michael Gillin, Michael Gillin, Robert Gould, Hélène Langevin-Joliet, Hélène Langevin-Joliet, Edward Nickoloff,




Arnold Feldman, Ted Fields, Robert O. Gorson, Robert O. Gorson, Moses Greenfield, Bill Hendee, C.J. Karzmark, Jack Krolmer, Craig Nunan, Robert Shalek, Warren Sinclair, Ray Tanner, Edward Webster, Peter Wootton, Ann Wright, Kenneth Wright

1990 Gail Adams, John Hale, James Kerelakes, Larry Lanot, Larry Lanot, Larry Lanot, John Laughlin, John Laughlin, Jacques Ovadia


Videographing Medical Physicists




John Nida




Raymond Wu



Edith Quimby



Harold Johns



Rosalee Yallow

Photos of Interviewees



John Cameron



Jacques Ovadia



Bill Hendee



John Laughlin



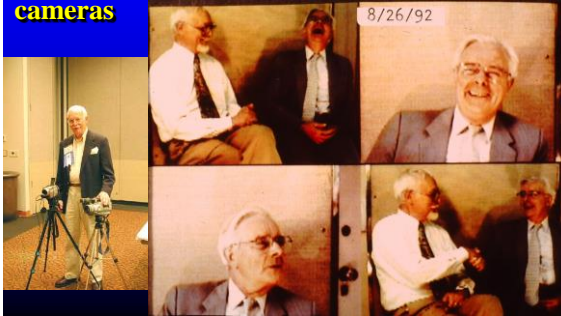
Peter Almond



Harb Parker

**Bob
used 2
cameras**

**They all had a good time...
(Here is Bob with Ted Webster)**



- ▲ Fellow of the ACR (1965)
- ▲ Fellow of the AAPM (1989)
- ▲ Fellow of the ACMP (1990)
- ▲ Delaware Valley Society for Radiation Safety Meritorious Service Award (1985)
- ▲ AAPM Marvin M.D. Williams Professional Achievement Award (1993)
- ▲ Failla Memorial Lecturer, NY Radiological & Medical Physics Society (1993)
- ▲ AAPM Award for Achievement in Medical Physics (1997)

Awards and Honors



**AAPM
Award for
50 years
Meeting
Attendance
(2008)**



Bob's 90th Birthday Celebration with Friends and Colleagues



Back row, left to right: Dennis Leeper, Mardys Leeper, Margaret Strubler, Shirley Vickers, Ken Strubler, Sally Mansfield, Carl Mansfield, Siva Suntharalingam, Nagalingam Suntharalingam, Lillian Brent, Robert Brent. Front row, left to right: Cari Borrás, Joy Gorson, Robert Gorson.



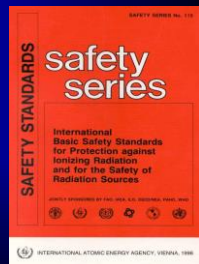
BOB's Legacy

Robert O. Gorson worked all his life in radiation safety in medicine, especially regarding patient protection in radiology. Many of his ideas were incorporated into USA FDA regulations on medical x ray equipment and were adopted by many other countries through the **International Basic Safety Standards (IBSS)**, the radiation safety standards elaborated by several international organizations such as the World Health Organization, the International Labour Office and the International Atomic Energy Agency (IAEA), which publishes them. **These Standards are adapted/adopted worldwide as radiation control regulations.**

23

BOB's Influence on Radiation Protection Regulations - Worldwide

- ▲ NCRP Reports → X-Ray FDA Standards
- ▲ ICRP Reports → International Organizations' Radiation Safety Standards (IBSS)
- ▲ International BSS → Country's (national or regional) Radiation Protection & Safety Regulations



24

BOB's Legacy re DRLs

In 1992, Bob chaired the Medical Exposure Working Group of the Technical Committee Meeting to endorse the Standards that was held in Vienna, at the IAEA HQ. The 1996 BSS stated that in medical imaging it is important to review not just high medical exposures but also the ones that are very low, as they may not yield the expected diagnostic information. The International Commission on Radiological Protection in their 2007 Recommendations incorporated this criterion when reviewing compliance with diagnostic reference levels (DRLs). So did the 2014 BSS and recently the ACR!

17