



AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

*Awards Ceremony*

**AAPM 2019** JUL 14–18

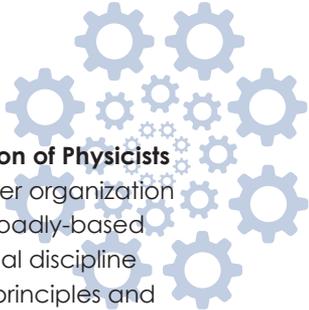


**61<sup>ST</sup> ANNUAL MEETING & EXHIBITION | SAN ANTONIO, TX**

July 15, 2019 • 6:30 pm  
Lone Star Ballroom • 2nd Floor  
Grand Hyatt Hotel

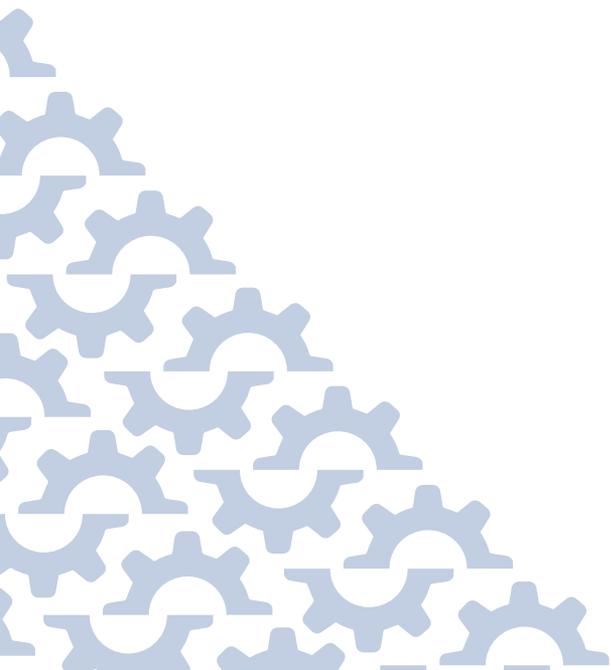


BUILDING BRIDGES. CULTIVATING SAFETY.  
GROWING VALUE.



**The American Association of Physicists in Medicine** is the premier organization in medical physics, a broadly-based scientific and professional discipline encompassing physics principles and applications in biology and medicine.

The mission of the American Association of Physicists in Medicine is advancing medicine through excellence in the science, education and professional practice of medical physics.



# 2019 PROGRAM

Cynthia McCollough  
*AAPM President*

Honoring Deceased AAPM Members

AAPM Fellowships and Grants

MedPhys Slam

Grand Challenges

Jack Fowler Junior Investigator Award

Jack Krohmer Junior Investigator Award

John R. Cameron Young Investigator Awards

AAPM Award for Innovation in Medical Physics Education

*Journal of Applied Clinical Medical Physics* Paper Awards

- George Starkschall Award of Excellence for an Outstanding Radiation Oncology Physics Article
- Edwin C. McCullough Award of Excellence for an Outstanding Medical Imaging Physics Article
- Peter R. Almond Award of Excellence for an Outstanding Radiation Measurements Article
- Michael D. Mills Editor in Chief Award of Excellence for Outstanding General Medical Physics Article

*Medical Physics Journal* Paper Awards

- Moses and Sylvia Greenfield Paper Award
- Farrington Daniels Paper Award

Honorary Membership

Fellows

Recognition of 50+ Years of AAPM Membership

John S. Laughlin Young Scientist Award

Marvin M.D. Williams Professional Achievement Award

Edith H. Quimby Lifetime Achievement Award

William D. Coolidge Gold Medal

Closing Remarks

*Reception immediately following*

## AAPM FELLOWSHIPS & GRANTS

### ■ **AAPM/RSNA Fellowship for the training of a doctoral candidate in the field of Medical Physics**

Awarded for the first two years of graduate study leading to a doctoral degree in Medical Physics. The recipient is:

***Hadley Smith – University of Chicago***

### ■ **ASTRO-AAPM Physics Resident/Post-Doctoral Fellow Seed Grant**

The Physics Seed Grant is a joint effort to advance the field of radiation oncology in novel ways through the support of talented early-career scientists performing physics and radiation oncology-related research. The aim of the Physics Seed grant is to support the next generation of researchers. The 2019 grant recipient is:

***Siamak Nejad-Davarani, PhD – Henry Ford Health System***

### ■ **2019 DREAM — Diversity Recruitment through Education and Mentoring Program**

The American Association of Physicists in Medicine (AAPM) Diversity Recruitment through Education and Mentoring Program “DREAM” is a 10-week summer program designed to increase the number of underrepresented groups in medical physics by creating new opportunities, outreach and mentoring geared towards diversity recruitment of undergraduate students in the field of medical physics. Students participating in the program are placed into summer positions that are consistent with their interests. Students are selected for the program on a competitive basis to be a DREAM fellow. Each DREAM fellow receives a \$5,500 stipend from AAPM. The AAPM Northwest Chapter provided additional support. The DREAM Fellows for 2019 are:

***Ayobami Ayodele***

***Neha Swati Bhatt***

***Matthew Daniel Hwang***

***Liyan Jacob***

***Gabrielle R. Moss***

***Erin Snoddy***

***Rachel Paige Trevillian***

### ■ **Research Seed Funding Grant**

These grants are awarded to provide funds to develop exciting investigator-initiated concepts, which will hopefully lead to successful long-term project funding from the NIH or equivalent funding sources. It is expected that subsequent research results will be submitted for presentation at future AAPM meetings. The recipients for 2019 are:

***Dante Capaldi – Stanford University***

***Michele Kim – University of Pennsylvania***

***Thomas Mazur – Washington University in St. Louis***



■ **AAPM/RSNA Imaging Physics Residency Program Grant**

On November 29, 2017, the AAPM Board of Directors approved \$140,000 in funding for two new imaging physics residency positions, in diagnostic, diagnostic with a nuclear medicine option, or nuclear medicine. With this funding, the selected institution(s) will receive \$35,000 per year for two years as matching support for one resident. **Program Update:** The AAPM Board of Directors has approved \$420,000 in support over six years (\$70,000/year starting in 2019) to fund six spots in existing or new imaging residency programs. The RSNA Board of Directors approved \$210,000 in funding for three additional slots in existing or new imaging residency programs. The 2020 winners are:

*David Hintenlang – Ohio State University*

*Yogesh Thakur – Vancouver Coastal Health Authority*

■ **2019 Summer Undergraduate Fellowships**

Designed to provide opportunities for undergraduate university students to gain experience in medical physics by performing research in a medical physics laboratory or assisting with clinical service at a clinical facility. In this program, AAPM serves as a clearinghouse to match exceptional students with exceptional medical physicists, many of whom are faculty at leading research centers. Students participating in the 10-week program are placed into summer positions that are consistent with their interests. Students are selected for the program on a competitive basis to be an AAPM Summer Fellow. Each summer fellow receives a \$5,500 stipend from AAPM. The AAPM Northwest Chapter provided additional support. The Summer Undergraduate Fellows for 2019 are:

*Alexander David Benson*

*Elizabeth Rene Brown*

*Madison Emily Grayson*

*Tobey D. Haluptzok*

*Benjamin A. Insley*

*Brendan D. Koch*

*Olivia Starr Krieger*

*Eloise C. Lienert*

*Sarah H. Lim*

*David K. Martinus*

*Joshua A. Miles*

*Tarun P. Naren*

*Megan Poremba*

*Noah Schweitzer*

*Brian-Tinh Duc Vu Jr*

*Trey J. Waldrop*

■ **Summer School Tuition Scholarships**

These scholarships are offered to applicants who are early in their careers in medical physics. The 2019 scholarship recipients were:

*Arezoo Modiri, PhD*

*Huijun Xu, PhD*

*Zhilei (Julie) Shen, PhD*

*You Zhang, PhD*

*Marc J.P. Chamberland, PhD*

### ■ **The AAPM Expanding Horizons Travel Grant**

This travel grant program is designed to provide an opportunity to broaden the scope of scientific meetings attended to introduce students and trainees to new topics that may be of relevance to medical physics research and which may subsequently be incorporated into future research to progress the field in new directions. **The deadline for 2019 Round 2 is September 7, 2019.** The 2018 Travel Grant recipients are:

***Elham Abouei***

***Elizabeth Boehnke***

***Justin Brown***

***Samuel Einstein***

***Nastaran Emaminejad***

***Eric Morris***

***Daniel Huff***

***Daniel Mulrow***

***Jennie Crosby***

### ■ **The AAPM Science Council Associates Mentorship Program**

This program has been established to recognize and cultivate outstanding researchers at an early stage in their careers, with the goal of promoting a long-term commitment to science within AAPM. The program uses the process of "shadowing" to integrate the Associates into the scientific activities of the organization. The 2019 Associates are:

***Katelyn Hasse***

***David "Bo" McClatchy***

***Kristen McConnell***

***Eenas Omari***

***Lydia Wilson***

***Hao Zhang***

### ■ **AAPM Best Awards**

A new Travel Fellowship for Student, Resident, or Junior Members of AAPM to attend the AAPM Annual Meeting, to be exposed to, and have access to the scientific and technical information and presentations on current and emerging topics in medical physics and related areas. The 2019 Travel Fellowship recipients are:

***Davide Brivio***

***Jamison L. Brook***

***Jina Chang***

***Esther M. Vicente***

***Chuang Wang***

## MEDPHYS SLAM

The MedPhys Slam is a research communication competition in which participants present the significance of their science in a concise, compelling yet understandable manner. On Wednesday, July 17th, from 10:15 am – 12:15 pm participants will be judged by a non-physicist panel on three equally weighted categories: comprehension/content, communication, and engagement.



## GRAND CHALLENGES

### ■ **The Computed Tomography Ventilation Imaging Evaluation Challenge (CTVIE)**

The CTVIE was conducted in advance of the AAPM Annual Meeting and was designed to determine which CT ventilation imaging algorithms best correlate with reference measures across a range of pulmonary pathologies.

### ■ **The Auto-Segmentation on MRI for Head-and-Neck Radiation Treatment Planning Challenge (RT-MAC)**

RT-MAC is a two-part challenge that includes a real-time session at this meeting. The overall objective of this challenge is to provide a platform for comparison of various auto-segmentation algorithms used to delineate organs at risk and tumors from MR images of head and neck patients for radiation treatment planning.

The two top-performing teams from both challenges will present their methods at the AAPM Grand Challenges Symposium on Wednesday.

## JACK FOWLER JUNIOR INVESTIGATOR AWARD

Established in honor of Dr. Jack Fowler, PhD, Emeritus Professor of Human Oncology and Medical Physics, University of Wisconsin. Junior Investigators were encouraged to submit abstracts for the competition. The top scoring Junior Investigator submission determined by abstract reviewers was selected and the award is presented to:

**Daive Brivio, PhD**

## JACK KROHMER JUNIOR INVESTIGATOR AWARD

*(formerly known as Science Council Junior Investigator Award)*

Established in honor of Dr. Jack Krohmer, PhD, a pioneer in the medical physics community, and sponsored by the Krohmer Memorial Fund and Science Council through the AAPM Education and Research Fund. The award is based on abstracts submitted to the Scientific Program of the AAPM Annual Meeting, judged according to criteria of significance, innovation, and the potential for major scientific impact in an area of cutting edge interest in medical physics. The 2019 award is presented to:

**Xue Dong, PhD**

## JOHN R. CAMERON YOUNG INVESTIGATOR AWARDS

The 10 Young Investigator submissions scored highest by abstract reviews were selected to be presented in a special symposium, held early today, in honor of the University of Wisconsin Professor Emeritus John R. Cameron, PhD. The top three scoring abstracts will be announced during this ceremony.

# AAPM AWARD FOR INNOVATION IN MEDICAL PHYSICS EDUCATION

The Award for Innovation in Medical Physics Education is generously supported by a bequest from the estate of Dr. Harold Marcus. It is given for innovative programs in medical physics education of physicists, physicians, ancillary personnel, and the public. The 2019 winner was determined earlier today and will be announced during this ceremony.

## JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS PAPER AWARDS

### ■ **George Starkschall Award of Excellence for an Outstanding Radiation Oncology Physics Article**

The George Starkschall Award of Excellence for an outstanding radiation oncology physics article published in JACMP in 2018 is presented to:

**Rajesh Pidikiti, Bijal C. Patel, Matthew R. Maynard, Joseph P. Dugas, Joseph Syh, Narayan Sahoo, Hsinshun Terry Wu and Lane R. Rosen** for the paper entitled "Commissioning of the world's first compact pencil-beam scanning proton therapy system," *Journal of Applied Clinical Medical Physics*, 19(1): 94 - 105 (2018).

### ■ **Edwin C. McCullough Award of Excellence for and Outstanding Medical Imaging Physics Article**

The Edwin C. McCullough Award of Excellence for an outstanding medical imaging physics article published in JACMP in 2018 is presented to:

**Sebastian Ehn, Thorsten SELLERER, Daniela Muenzel, Alexander A. Fingerle, Felix Kopp, Manuela Duda, Kai Mei, Bernhard Renger, Julia Herzen, Julia Dangelmaier, Benedikt J. Schwaiger, Andreas Sauter, Isabelle Riederer, Martin Renz, Rickmer Braren, Ernst J. Rummeny, Franz Pfeiffer and Peter B. Noel** for their paper entitled "Assessment of quantification accuracy and image quality of a full-body dual-layer spectral CT system," *Journal of Applied Clinical Medical Physics*, 19(1): 204 - 217 (2018).

### ■ **Peter R. Almond Award of Excellence for an Outstanding Radiation Measurements Article**

The Peter R. Almond Award of Excellence for an outstanding radiation measurements article published in JACMP in 2018 is presented to:

**David E. Hintenlang, Xia Jiang and Kevin J. Little** for their paper entitled "Shielding a high-sensitivity digital detector from electromagnetic interference," *Journal of Applied Clinical Medical Physics*, 19 (4): 290 - 298 (2018).



■ **Michael D. Mills Editor In Chief Award of Excellence for an Outstanding General Medical Physics Article**

The Michael D. Mills Editor in Chief Award of Excellence for an outstanding general medical physics article published in *JACMP* in 2018 is presented to:

**Eric D. Morris, Joshua P. Kim, Paul Klahr and Carri K. Glide-Hurst** for their paper entitled "Impact of a novel exponential weighted 4DCT reconstruction algorithm," *Journal of Applied Clinical Medical Physics*, 19(6): 217 - 225 (2018).

## MEDICAL PHYSICS JOURNAL PAPER AWARDS

■ **Moses & Sylvia Greenfield Paper Award**

The Moses & Sylvia Greenfield Award for an outstanding paper on imaging published in *Medical Physics* in 2018 is presented to:

**James R. Scheuermann, Adrian Howansky, Marc Hansroul, Sebastien Léveillé, Kenkichi Tanioka and Wei Zhao** for their paper entitled "Toward Scintillator High-Gain Avalanche Rushing Photoconductor Active Matrix Flat Panel Imager (SHARP-AMFPI): Initial fabrication and characterization," *Medical Physics*, 45 (2): 794 - 802 (2018).

■ **Farrington Daniels Paper Award**

The Farrington Daniels Award for an outstanding paper on radiation therapy dosimetry, planning or delivery published in *Medical Physics* in 2018 is presented to:

**Linh T. Tran, David Bolst, Lachlan Chartier, Dale Prokopovich, Susanna Guatelli, Alex Pogosso, Marco Petasecca, Michael Lerch, Mark Reinhard, Marco Povoli, Angela Kok, Vladimir Perevertaylo, Naruhiro Matsufuji, Tatsuaki Kanai, Michael Jackson and Anatoly B. Rosenfeld** for their paper entitled "The relative biological effectiveness for carbon, nitrogen and oxygen ion beams using passive and scanning techniques evaluated with fully 3D silicon microdosimeters," *Medical Physics*, 5 (5): 2299 - 2308 (2018).

## HONORARY MEMBERSHIP

Honorary Membership into AAPM is bestowed upon individuals to recognize distinguished service that they have provided to other societies that support medical physics. Thus the award not only honors the individual but also strengthens the links between AAPM and the other society. This year, AAPM will grant Honorary Membership to:

**Kimberly E. Applegate, MD**

**Carl E. Ravin, MD**

## FELLOWS

The category of Fellow honors members who have distinguished themselves by their contributions in research, education, and leadership in the medical physics community.

**Max Amurao, PhD**

**Aldo Badano, PhD**

**Ross I. Berbeco, PhD**

**Bette W. Blankenship, MS**

**Minsong Cao, PhD**

**Wesley S. Culberson, PhD**

**Chris John Diederich, PhD**

**Frank F. Dong, PhD**

**William D. Erwin, MS**

**Rebecca Fahrig, PhD**

**Ryan T. Flynn, PhD**

**William Robert Geiser, MS**

**Anne W. Greener, PhD**

**Amy S. Harrison, PhD**

**Geoffrey D. Hugo, PhD**

**Andrew Jackson, PhD**

**Aaron K. Jones, PhD**

**Srinivas Cheenu Kappadath, PhD**

**Katja M. Langen, PhD**

**Shuai Leng, PhD**

**Jessica R. Lowenstein, MS**

**Martha M. Matuszak, PhD**

**Zoubir Ouhib, MS**

**Brent C. Parker, PhD**

**Xiangrong (Sharon) Qi, PhD**

**Donna M. Reeve, MS**

**Andries N. Schreuder, MS**

**Ioannis Sechopoulos, PhD**

**Donna M. Stevens, MS**

**Iris Z. Wang, PhD**

**Richard E. Wendt, III, PhD**

**Sharon L. White, PhD**

## RECOGNITION OF 50+ YEARS OF AAPM MEMBERSHIP

### JOHN S. LAUGHLIN YOUNG SCIENTIST AWARD

This award recognizes outstanding scientific achievement in medical physics for a young scientist member of the AAPM. The award will usually be given to a member who is no more than 40 years old as of December 31 of the year of nomination, and who has been an AAPM member (student, resident, junior or full) for at least five years. The 2019 recipient is:

**Wei Liu, PhD**

### MARVIN M.D. WILLIAMS PROFESSIONAL ACHIEVEMENT AWARD

This award recognizes AAPM members for an eminent career in medical physics with an emphasis on clinical medical physics. The 2019 recipients are:

**Bruce J. Gerbi, PhD**

**Larry E. Sweeney, PhD**



## EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD

This award recognizes AAPM members whose careers have been notable based on their outstanding achievements. The 2019 recipient are:

**James C. Chu, PhD**

**Ellen D. Yorke, PhD**

## WILLIAM D. COOLIDGE GOLD MEDAL

This award recognizes an AAPM member for an eminent career in medical physics. It is the highest award given by AAPM. The 2019 recipient is:

**John M. Boone, PhD**

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## HONORARY MEMBERSHIP



### **KIMBERLY APPLGATE, MD, MS, FAAP, FACR, FAWR**

Kimberly Applegate is a professor of radiology and pediatrics at the University of Kentucky in Lexington. Dr. Applegate is the Chair of Committee 3 of the International Council for Radiation Protection (ICRP), focusing on radiation protection in medicine. Dr. Applegate is a leader in radiology—Dr. Applegate's policy and research work, including 200 publications, has resulted in an improved understanding of

the structure, process, and outcomes of how pediatric imaging is practiced, including the volume of ionizing imaging in children, the variation in radiation dose in pediatric CT, and the standardization of practice for both children--and adults. She has worked collaboratively around the world across medical specialties and geographic boundaries to improve access to best practices.

Having served on the Steering Committee of the Image Gently Alliance from its start in 2007 to the present, Dr. Applegate is dedicated to its mission to improve safe and effective imaging care of children worldwide, and to engaging with AAPM as a founding member. Dr. Applegate has received a number of awards that include the American Association for Women in Radiology's Marie Sklowdoska Curie Award for her unique roles in leadership and outstanding contributions to the advancement of women in the Radiology Professions. She is the first woman elected Speaker of the American College of Radiology and chair of its national guidelines committee where she has also engaged AAPM. Dr. Applegate is married to Dr. George Parker and they have three grown sons, David, and twins Eric and Andrew.



## CARL E. RAVIN, MD

Over the years, the AAPM has recognized outstanding MD colleagues through honorary membership. Belonging to that group is Dr. Carl E. Ravin, the former Chair of Radiology at Duke University.

In a luminary career through the University of Utah, Yale, and eventually Duke, Dr. Ravin established his exceptional leadership qualities at each institution, leading to a 23-year tenure as the Chair of Radiology at Duke and eventually the head of the Duke physicians' group, Private Diagnostic Clinic. Throughout his path Dr. Ravin established himself as an exceptional leader, serving as the president of the Fleischner Society, the president of the Society of Chairmen of Academic Radiology Departments (SCARD), and the member of numerous boards of directors. Dr. Ravin has formed a lasting mark on the discipline of radiology, not only by his exemplary leadership, but also by his role in the development and advancement of thoracic radiology as a distinct and prominent sub-specialty. With over 220 refereed publications, Dr. Ravin was the impetus behind the development of chest-specific imaging systems and technologies for improved thoracic imaging.

In line with his visionary leadership, Dr. Ravin has been an outstanding advocate for the field of medical physics. It was his vision and support that led to the formation of the Duke Advanced Imaging Laboratories in 1990. In its nearly 30-year history, this primarily medical physics lab has been the impetus of dozens of extramural grants, the education vehicle for dozens of graduate students, and the initiator of over 600 refereed articles. Most notably, the lab has been instrumental in the emergence and development of numerous new technologies in imaging including digital radiography, tomography, dual-energy imaging, CAD, and virtual trials. His vision and contribution were so significant that in 2009, the Chancellor of Health Affairs at Duke, Victor Dzau, renamed the lab after him as the Carl E. Ravin Advanced Imaging Laboratories.

But perhaps most noteworthy of Dr. Ravin's contributions to the field of medical physics is his vision in the formation of the Duke Medical Physics Graduate Program in 2005. It was his vision and unwavering support, both logistically and financially, that made this program possible. Now in existence for over 13 years, the program has graduated more than 200 medical physicists, scattered throughout the world in various medical physics professions, led to hundreds of new scholarships, and contributed to excellence in the practice of medical physics. Throughout his career, Dr. Ravin has been a staunch advocate for the role of physics in medicine. The Duke Medical Physics Program congratulates Dr. Ravin for this deserved recognition.

## FELLOWS

### MAX AMURAO, PHD



Dr. Amurao has served on multiple AAPM committees over the years (e.g., Administrative Council, Investment Advisory, MRI-

Subcommittee, Education of Physicians). He has also served the American College of Radiology, currently as Chair of the Medical Physics Technical Standards and Practice Parameters Committee, leading the development and updates of multiple ACR Standards/Parameters. He has served as an examiner for the American Board of Radiology (both Diagnostic and Nuclear Medical Physics), as well as the American Board of MR Safety (founding Vice-Chair). He is board certified in Diagnostic Medical Physics, Nuclear Medical Physics, Medical Laser Safety, and Magnetic Resonance Safety. He earned his PhD in Medical Physics and his MBA from the University of Texas.

He currently serves as the Radiation Safety Officer/Director for Washington University St. Louis, Barnes-Jewish Hospital, and St. Louis Children's Hospital, and is on faculty at the Mallinckrodt Institute of Radiology. He previously worked at Columbia University, Georgetown University, Duke University, and Baylor Healthcare.

### ALDO BADANO, PHD



Aldo Badano holds a Senior Biomedical Researcher Service appointment at FDA and currently serves as Deputy Director of the

Division of Imaging, Diagnostics, and Software Reliability, OSEL/CDRH. He received an MEng in Radiological Health Engineering and a PhD in Nuclear Engineering from the University of Michigan in 1999 and 1995 after obtaining a ChemEng from the Universidad de la República, Montevideo, Uruguay in 1992. His primary interests are in the characterization and modeling of medical imaging acquisition and visualization systems. Dr. Badano has published over 300 publications (70 in the last five years) that have been cited 2,800 times, including a tutorial book on medical displays. In addition, he leads international consensus development efforts through standards activities. Aldo has provided significant training of young regulatory scientists and has successfully directed several doctoral theses. He received CDRH's Excellence in Supervisory (2018) and Mentoring Award (2013), and FDA's Excellence in Laboratory Science Award (2003).

## **ROSS I. BERBECO, PHD**



Ross Berbeco has spent the last 16+ years performing research, teaching and clinical activities within the field of radiation therapy.

He received undergraduate degrees in Physics and Astrophysics, with a minor in Philosophy, from UC Berkeley. His PhD dissertation from the University of Michigan was an experimental search for the Higgs Boson at CERN. Switching gears, Dr. Berbeco completed a Postdoctoral Fellowship in Medical Physics with Dr. Steve Jiang at MGH in 2005. Since that time, he has been a staff physicist at the Brigham and Women's Hospital, Dana-Farber Cancer Institute and Harvard Medical School, receiving ABR certification in 2010. Currently, Dr. Berbeco is an Associate Professor at Harvard Medical School and the Director of Medical Physics Research at BWH/DFCI. Major educational contributions include direct mentorship of ~34 trainees and junior faculty and teaching lectures/workshops within the department and at national and international conferences. He has published over 100 original papers, garnering over 4,000 citations. His research contributions have been supported by federal and industrial grants. Dr. Berbeco has been an active participant in AAPM at both the local and national level since

2003, serving as Chapter President in 2014–2015 and as an Annual Meeting Scientific Program Director in 2014–2016. He is looking forward to continuing to advance the field and to doing his part to maintain strong national and regional organizations

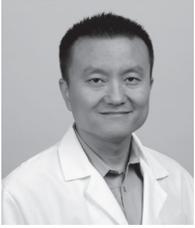
## **BETTE W. BLANKENSHIP, MS**



Ms. Blankenship is a board-certified medical physicist, certified by the American Board of Radiology in Therapeutic

Radiologic Physics. She works throughout the Hartford Healthcare System in Imaging, Radiation Oncology, and Radiation Safety as a Medical Physicist and Radiation Safety Officer. Ms. Blankenship has been an active AAPM member and has served as a member at large on the AAPM Board of Directors, the Chair of GRAC, and as a member of multiple AAPM committees, subcommittees, Ad hoc committees, and task groups. Throughout her career, she has contributed to accreditation guidelines and ACR/AAPM technical guidelines. Ms. Blankenship is the AAPM liaison to the American Board of Medical Physics and to the Conference of Radiological Control Protection Directors. In addition, she is an active member of professional health physics and research societies.

## MINSONG CAO, PHD



Minsong Cao received his PhD in Medical Physics from Purdue University in 2007 and then joined Indiana University as an Assistant

Professor, where he was involved in various educational activities and helped establish the IU Medical Physics Residency Program. Dr. Cao is currently an Associate Professor, Associate Vice Chair of Education and Director of the Medical Physics Residency Program at the University of California, Los Angeles. He was a recipient of the 2017 ARRO Educator of the Year award in recognition for his educational contributions. He has been active in global outreach education of medical physicists in multiple developing countries. Dr. Cao has authored over 65 journal articles and three book chapters and been invited to present at various national and international meetings including AAPM Summer School. Dr. Cao has served in many capacities within AAPM. He is a member of multiple AAPM committees and currently the AAPM liaison to the Medical Dosimetry Certification Board. He had served as mentor for the Summer Undergraduate Fellowship Program and President of the Ohio River Valley Chapter of AAPM. He currently serves as Associate Editor for *JACMP*, Senior Associate Editor for the *Red Journal* and residency program reviewer for CAMPEP.

## WESLEY S. CULBERSON, PHD



Dr. Culberson completed his PhD in Medical Physics at the University of Wisconsin-Madison in 2006. He worked as a therapy

physicist in multiple radiation oncology centers before joining the UW-Madison Department of Medical Physics faculty in 2013. He is committed to medical physics education. He is a course instructor and currently advises seven PhD students. He also developed a linac small-field dosimetry course for clinical physicists, which has been held more than a dozen times. His research areas of interest are radiation dosimetry and metrology and in 2016 he became the director of the University of Wisconsin Accredited Dosimetry Calibration Laboratory (UWADCL). Dr. Culberson's AAPM service includes being a task group chair, the liaison to multiple standards organizations (IEC and CIRMS) and a member of several committees and working groups. He is also an active regional chapter member and has served as President, Secretary, and Treasurer of the NCCAAPM.

## CHRIS JOHN DIEDERICH, PHD



Dr. Diederich is a Professor in the Department of Radiation Oncology at the University of California-San Francisco.

His research focus involves the development of ultrasound devices and treatment delivery strategies for targeted hyperthermia, thermal ablation, drug delivery, and non-thermal tissue effects. This includes integration of MR and US image-guidance techniques for therapy delivery. His clinical responsibilities as Director of Hyperthermia Physics include treatment planning and delivery of superficial and interstitial hyperthermia in conjunction with radiation therapy and/or chemotherapy using ultrasound and electromagnetic systems. He received the Robinson Award in 2010 and the Hahn Award in 2019 from the Society of Thermal Medicine in recognition of his contributions to the field of thermal therapy. Dr. Diederich has been an active member and contributor to AAPM and is currently serving on the Board of Associate Editors for Medical Physics, TG241, TG331, and SPWG as Director of the Ultrasound Specialty Track.

## FRANK F. DONG, PHD



Frank Dong is a staff diagnostic physicist at Cleveland Clinic, and an associate professor of Radiology at Cleveland Clinic

Lerner College of Medicine. Dr. Dong received his PhD degree from University of Wisconsin-Madison in 1999. Before joining Cleveland Clinic in 2009, Frank had worked at GE Healthcare as a lead engineer of CT and Ultrasound for 10 years. Frank's specialty includes diagnostic ultrasound, CT image quality and radiation dosimetry. He has authored and co-authored 38 peer-reviewed articles, three book chapters, 17 patents and 86 national/international meeting abstracts. As a staff physicist, Frank has great passion for training technologists, medical physicists, radiology residents and fellows. His CT imaging physics lecture series have been well received by the cardiac imaging fellows at Cleveland Clinic's Heart and Vascular Institute. He currently serves as the director for AAPM's Diagnostic Review Courses and is Co-Director of the Imaging Education Track for the 2019 Annual Meeting. Frank also serves in AAPM's Corporate Relations Committee, Annual Meeting Education Program Working Group and Task Group 246 on Patient Dose from Diagnostic Radiation. Frank is a full member of

AAPM, ACR, and ARRS. During his leisure time, Frank likes traveling with his family and playing golf with friends.

### **WILLIAM D. ERWIN, MS**



Mr. Erwin has been a nuclear medicine (NM) physicist his entire career. His hospital appointments have been clinical but

have always included education and research. He has been a lecturer and lab instructor to hundreds of graduate students at two academic medical centers. At his current institution, he has served on one PhD dissertation committee (ex officio) and six MS thesis committees (advisor on one); and supervised clinical activities of thirty two-year imaging physics residents/fellows (while research mentoring four). Throughout his career, Mr. Erwin has taught NM physics to radiology and radiation oncology residents, and nuclear medicine technologists; and co-directed or participated in NM physics hands-on workshops. Mr. Erwin has always been actively engaged in clinically-related NM physics research, both his own and in collaboration with numerous colleagues and trainees. Mr. Erwin approaches NM physics, especially teaching, as a science and not merely a profession, being heavily influenced by his education in traditional physics.

### **REBECCA FAHRIG, PHD**



Dr. Fahrig is an expert in the design, characterization and implementation of x-ray imaging systems for diagnostic and image-guided

procedures. Dr. Fahrig earned her PhD at the University of Western Ontario in 1999, where she co-pioneered C-arm-based conebeam CT imaging. She completed a postdoctoral fellowship at Stanford University developing an x-ray/MR hybrid system. She then joined the faculty of the Department of Radiology at Stanford, where she and her team—in collaboration with national and international clinical and scientific colleagues—developed new MR-compatible hardware, x-ray detectors, image reconstruction and correction algorithms, and protocols for clinical applications with funding from industry and NIH. Dr. Fahrig is currently Vice-president of Innovations, business area Advanced Therapies, at Siemens Healthcare where she directs a group of 50 scientists designing, prototyping and testing new applications to enhance guidance of minimally invasive therapies. She is also a Professor at the Pattern Recognition Lab, Friedrich-Alexander University.

## **RYAN T. FLYNN, PHD**



Ryan Flynn obtained his PhD from the University of Wisconsin-Madison in 2007. He has been the Medical Physics Division Director at

the University of Iowa since 2013. Dr. Flynn's primary research interest is in developing technologies for improving brachytherapy and proton therapy dose distributions. He has published 49 papers, two book chapters, 83 abstracts, has been issued nine patents with six more pending, has given 25 invited lectures, and was awarded the Moses and Sylvia Greenfield award for best paper in Medical Physics in 2014. He has contributed to the supervision of 16 medical physics residents and has directly supervised 5 graduate students. He was awarded a phase I small business technology transfer (STTR) grant, is a co-investigator on two R01 grants, and has been the principal investigator on four completed grants. Dr. Flynn has served AAPM on two task groups, multiple committees, and on the faculty for an AAPM summer school.

## **WILLIAM ROBERT GEISER, MS**



William Geiser, MS, DABR, is a Senior Medical Physicist in the Department of Imaging Physics at the University of Texas MD

Anderson Cancer Center. He is the Mammography Quality Standards Act (MQSA) physicist of record for MD Anderson Cancer Center Section of Breast Imaging. After obtaining his Master of Science in Imaging Medical Physics at the University of Florida in 1996, Mr. Geiser began his career as a clinical medical physicist working with the Environmental Health and Safety program at the University of Florida. While there he performed medical physics services for Shands Hospital at the University of Florida and obtained his board certification in Diagnostic Radiological Physics in May 2000. He moved to Texas to work at the University of Texas MD Anderson Cancer Center in December of 2001 where he currently practices as a Senior Medical Physicist in the Department of Imaging Physics. Mr. Geiser's area of expertise is imaging physics as it relates to breast imaging. He is particularly interested in full-field digital mammographic imaging and digital breast tomosynthesis. Another passion of his is image informatics and image display. Mr. Geiser has authored several articles in peer-reviewed

journals, lectured at international conferences and participated as an instructor in hands-on courses. He has authored a book chapter on artifacts in digital mammography.

### **ANNE W. GREENER, PHD**



Anne Wujek Greener received an M.S. from Rutgers University (1982) and a Ph.D. from Seton Hall University (2013), is

certified by the ABR in both Medical Nuclear Physics (1988) and Therapeutic Radiation Physics (1993) and is a Fellow of the ACR (2013). She worked at NJ community facilities, including Saint Barnabas Medical Center, Overlook Hospital, Warren Radiation Therapy Center, Hunterdon Medical Center and VA-NJHCS (East Orange). Over her 38-year career, she taught more than 10 nuclear medicine students, 30 radiographers, 100 student radiation therapists, 10 medical dosimetrists, 10 radiology residents and 10 radiation oncology residents. Dr. Greener served as secretary and president for the NJ Medical Physics Society, was a member of the 1983 AAPM Summer School local arrangements committee and was the AAPM Liaison to the American Association of Medical Dosimetrists. She is a member of the AAPM Training & Practice of Medical Dosimetry

sub-committee, WG for Prevention of Errors, Task Group No. 275, and AAMD Formal Education Committee.

### **AMY S. HARRISON, PHD**



Amy S. Harrison has twenty-eight years of clinical physics experience, with increasing responsibilities including leadership

positions in the areas of operations, safety and education. She has been the Medical Physics Residency Program Director at Jefferson for the last 10 years. This program has grown from two to eight CAMPEP accredited positions across three locations. Dr. Harrison recently completed a doctorate degree in population health with a focus on healthcare, quality and safety. She is certified by the American Board of Radiology in therapeutic radiological physics as well as being a Certified Medical Dosimetrist. She has been employed in academic and community settings. Currently Dr. Harrison is the Enterprise Physics Director of Quality and Safety for the Jefferson Network. Clinically, she has expertise in IMRT, VMAT, IGRT, SBRT, HDR, and permanent implants. Nationally, she is a CAMPEP reviewer for residency programs and has served on the board of directors and president of the SDAMPP.

## **GEOFFREY D. HUGO, PHD**



Dr. Hugo received a PhD degree in biomedical physics from UCLA in 2003. He is currently a Professor at Washington University

in St. Louis and is Director for Clinical Development in the physics division. Previously, he was a staff physicist at William Beaumont Hospital and faculty at Virginia Commonwealth University where he served as the Director of the Medical Physics graduate program. His interests include research in image guided and adaptive radiation therapy, the education of medical physicists, and caring for patients through clinical physics work. He has served on several AAPM committees, including as the current Chair of the Therapy Imaging Subcommittee, and as an NIH study section member. He has been fortunate to mentor more than 30 MS and PhD students and postdoctoral fellows, and to publish over 60 peer-reviewed publications and book chapters with them.

## **ANDREW JACKSON, PHD**



Andrew Jackson completed a PhD in theoretical physics from London University in 1994. In 1990, he studied dose calculation algorithms, treatment planning

optimization, and modeling treatment outcome at Memorial Sloan Kettering Cancer Center. Dr. Jackson wrote the plan evaluation module of the MSKCC treatment planning system, in use from 1994–2014. From 1990–93 he studied the outcome of inhomogeneous irradiation of parallel organs. In 1995, he was the first to analyze the incidence of complication probability in patients treated with radiotherapy for liver cancer using patient specific outcome and dose-volume histograms. From 1995–2005, he applied these methods to data from 3DRT and IMRT treatments for prostate, head and neck, and NSCLC, applying tolerances derived to dose escalation trials at MSKCC. From 2007 to 2010 he was a member of the steering committee of QUANTEC, reviewing and synthesizing tolerance doses for treatment planning. International collaborations he co-created are currently applying QUANTEC methodology to hypofractionated and pediatric treatments. Dr. Jackson has served on the AAPM biological effects sub-committee as a member since 1998, and as Chair from 2009–2015 and from 2017–present.

## **AARON K. JONES, PHD**



Dr. Aaron K. (Kyle) Jones supports a large clinical operation at an NCI comprehensive cancer center, where he is the

Section Chief of Radiologic Physics. He provides primary clinical support for image-guided interventions in interventional radiology, cardiology, and the operating room. His clinical support role provides critical insight to support his research efforts in these areas, which include patient dosimetry, development of novel strategies for guiding interventions quantifying and predicting therapeutic effect, and study of the cost/benefit ratio in medical imaging and intervention. Many of his research studies deliver results that are immediately applicable to clinical practice. He works closely with physician colleagues and studies the procedures they perform to identify opportunities to better quantify outcomes, improve interventions, and reduce cost. He is the course coordinator for the biology core courses in the medical physics graduate program, and he recently chaired the curriculum review committee which did a comprehensive review and restructuring of the medical physics graduate curriculum.

#### **SRINIVAS CHEENU KAPPADATH, PHD**



Dr. Srinivas Cheenu Kappadath is a board-certified and licensed medical physicist with specialties in Nuclear Medicine

Physics and Instrumentation (ABSNM) and Diagnostic Radiologic Physics (ABR)

supporting clinical nuclear medicine and radiology at the University of Texas MD Anderson Cancer Center. He is actively involved in a variety of clinical and research projects on the development and application of quantitative imaging in SPECT/CT, PET/CT, and molecular breast imaging (MBI). He has focused his research on (1)  $^{90}\text{Y}$  SPECT/CT imaging and dosimetry for  $^{90}\text{Y}$ -microsphere therapy, (2) Optimization of SPECT/CT and PET/CT image generation, and (3) Quantification of radionuclide uptake in MBI. He has been awarded more than five research grants as principal investigator, published over 40 peer-reviewed manuscripts, and given over 40 invited lectures. He is an active member of AAPM and has prepared more than 12 SAMs lectures. He is also an active member of professional nuclear medicine and medical physics societies. He is a faculty member at the UT Health Graduate School for Biomedical Sciences in Houston and serves as an advisor to medical physics graduate students and residents.

#### **KATJA M. LANGEN, PHD**



Katja M. Langen received a PhD in Medical Physics from the University of Wisconsin-Madison in 1997. She spent the following three

years in South Africa as a postdoctoral fellow before returning to the US for a

residency at the University of California-San Francisco. In 2003 the MD Anderson Cancer Center in Orlando was one of the first clinics to purchase a helical tomotherapy unit and Dr. Langen was recruited to help with its utilization. The Orlando team published extensively on the implementation of this and other new technologies. In 2013 she was recruited to the University of Maryland to lead the physics efforts at a new proton treatment center. In early 2019 Dr. Langen joined Emory University as the Associate Director of Medical Physics. Outside of her home institution she serves on several AAPM committees and as an ABR examiner. Dr. Langen is a member of the editorial board for the International Journal of Radiation Oncology, Biology, Physics.

### **SHUAI LENG, PHD**



Shuai Leng received a PhD degree in Medical Physics from University of Wisconsin-Madison in 2008. He then joined the Department of Radiology at Mayo Clinic, where he is currently a Professor of Medical Physics and Associate Director of the residency program. Dr. Leng's research interests are technical development and clinical applications of computed tomography (CT), including image reconstruction, image quality assessment, dose reduction, multi-energy CT, and photon-counting-detector CT. He has led the

development of these techniques and the deployment of them into clinical practice. Dr. Leng served as Scientific Program Co-Director and Director of the AAPM Annual Meetings in 2017 and 2018. He also serves as chair or member of 10 committees and task groups, and AAPM representative and Co-Chair of the DICOM CT workgroup. Dr. Leng has published 140+ peer-reviewed journal articles, and 180+ abstracts and proceedings. He has given 20+ invited talks.

### **JESSICA R. LOWENSTEIN, MS**



Jessica R. Lowenstein received her MS degree from East Carolina University in 1997. She is the Associate Director of the

Imaging and Radiation Oncology Core (IROC) Houston QA Center and a Senior Medical Physicist in the Department of Radiation Physics at UT MD Anderson Cancer Center. Ms. Lowenstein is a diplomate of the American Board of Radiology (ABR) in Therapeutic Radiologic Physics. She has more than 21 years of experience performing clinical trial QA and an extensive knowledge of radiation dosimetry, radiation dosimetry quality assurance and the application of these concepts in the cooperative clinical trial setting, which she uses to assure NCI and the NCTN Groups that the radiation doses delivered to clinical

trial patients is accurate with minimal uncertainty. Her research, development of national standards (AAPM task group reports) and QA center day-to-day activities have all been focused on minimizing dosimetry errors for clinical trial radiotherapy patients.



**MARTHA M.  
MATUSZAK, PHD**

Martha Matuszak received her PhD from the University of Michigan in Nuclear Engineering &

Radiological Sciences. After working at William Beaumont Hospital in Royal Oak, Michigan, she returned to the University of Michigan in 2009. She is currently an associate professor and the Director of Advanced Treatment Planning in the Dept of Radiation Oncology. She also serves as the director of UM's medical physics certificate program and as the director of clinical physics at UM's Brighton Center for Specialty Care. Dr. Matuszak's research and clinical interests are in the area of advanced treatment planning and optimization, including knowledge-based planning, planning based on physiological imaging, and response based adaptive therapy. She also enjoys working on institutional and national clinical trials and currently serves on committees in the NRG and is the chair for the AAPM working group on clinical trials.

**ZOUBIR OUHIB, MS**



Zoubir Ouhib is the chief Medical Physicist at the Lynn Cancer Institute of the Boca Raton Regional Hospital and Assistant

Professor at the Florida Atlantic University CAMPEP-accredited Program. He is a Fellow of both the ACR and the ABS. He has been a Medical Physicist for 36 years at various places rising from staff physicist to director of the medical physics department. He has served as President of the Florida AAPM chapter. Mr. Ouhib has been a member of several committees: ASTRO (Apex, Regulatory), AAPM (TGs, TPC, BTSC, and CRCPD), ABS (Board, Patient Safety, International Comm., and Physics Comm.), ACRO (ABS liaison), ACR (CRCPD), and ACMUI (therapy physicist member). Besides his clinical work, he dedicated part of his time to students' education, research, and training. He published several international peer-reviewed articles and has served as a speaker at several national and international meetings. He was the author of multiple chapters in several books and peer review articles.

**BRENT C. PARKER, PHD**



A native of Houma, LA, Brent Parker earned a BS in Physics from Louisiana Tech University, and MS

and PhD degrees in Medical Physics from MD Anderson Cancer Center (MDACC). He is currently a Professor in the Department of Radiation Physics at MDACC, and previously held positions as Director of Physics at The University of Texas Medical Branch (UTMB) and Residency Program Director at Mary Bird Perkins Cancer Center (MBPCC). While at MBPCC, he was active in the medical physics graduate program and helped establish their hub-and-spoke residency program. As part of his ongoing involvement with UTMB, he has taught physics to radiation oncology residents for over 10 years. He is actively involved in the SWAAPM chapter, having twice served as President and one term as Secretary. He currently serves on eight AAPM committees, including Chair of the Subcommittee on Practice Guidelines and as a member of the Professional Council. Dr. Parker credits his parents, Bill and Bernadette, and brother, Brian, for shaping the person he has become. He thanks his wife, Daina, and sons, Mason and Wyatt, for their support of his service to our profession.

### **XIANGRONG (SHARON) QI, PHD**



Xiangrong (Sharon) Qi received her PhD degree and continued on high-energy-physics research at Fermilab until 2004.

She completed a Medical Physics

Postdoctoral Fellowship in 2006, then began her career in medical physics at the Medical College of Wisconsin (2006–2009). She worked at the University of Colorado (2009–2011) before she joined the Department of Radiation Oncology at UCLA in 2011. She is certified in Therapeutic Radiologic Physics by the American Board of Radiology. Dr. Qi has published 88 peer-reviewed papers, 110+ abstracts, and three book chapters. She has been awarded research grants and has been a PI or co-investigator for active clinical trials. Dr. Qi's current academic rank is Associate Professor, she is a faculty mentor of the UCLA CAMPEP-accredited residency program and the UCLA Physics and Biology in Medicine Interdepartmental Graduate Program. Dr. Qi serves the radiation oncology community through her involvement in various AAPM committees and subcommittees and is a chapter representative to the AAPM Board of Directors.

### **DONNA M. REEVE, MS**



Donna Reeve earned an MS degree in medical physics from the University of Texas Graduate School of Biomedical

Sciences. She was Senior Medical Physicist at MD Anderson's Department of Imaging Physics from 2004–2019. She is ABR certified in Diagnostic Medical

Physics and ABMP certified in Magnetic Resonance Imaging Physics. Ms. Reeve worked as the lead MR physicist for MD Anderson's MRI and ultrasound quality assurance programs. During her career she taught numerous medical physicists, residents, graduate students and technologists. She received the 2017 Outstanding Teaching Award from the GSBS Medical Physics Graduate Program and twice received the School of Health Professions Outstanding Educator Award. Ms. Reeve served on the AAPM MR Subcommittee and MR QA working group and is Chair of the ACR Subcommittee on MRI Accreditation Physics.

### **ANDRIES N. SCHREUDER, MS**



Andries N. (Niek) Schreuder is a board certified (ABR) medical physicist with significant experience in all aspects of

radiotherapy, in managing Medical Physics teams, and in training medical professionals in Radiation Therapy. He gained extensive experience in training medical professionals while being responsible for training medical physicists, dosimetrists and radiation therapists at seven out of the eight proton therapy facilities opened to date under his leadership. His core strengths include knowledge of particle medical physics, innovation, problem solving, communication, getting the

best out of people and developing new technologies to advance the field of radiation therapy. Mr. Schreuder has been a full member of AAPM since 2001 and has participated in many AAPM events, chapter meetings and workgroups. He served as the Treasurer of the ORVC chapter of AAPM for three years and arranged the 2018 SEAAPM emerging technologies seminar that was approved for 9.5 SAM credits. He is a member of the AAPM WGPB.

### **IOANNIS SECHOPOULOS, PHD**



Dr. Sechopoulos earned his PhD from Georgia Tech and Emory University, and is ABR-certified in Diagnostic Medical Physics. He served

on the faculty of the Emory University School of Medicine, where he was also Assistant Program Director for Physics in the Diagnostic Radiology Residency. He is now Associate Professor of X-ray based Tomographic Techniques at Radboud University Medical Center, where he heads the Advanced X-ray Tomographic Imaging lab, and at the Dutch Expert Center for Screening, in the Netherlands. Dr. Sechopoulos has served on over a dozen AAPM Task Groups, Subcommittees and Committees, and as Chair of five Task Groups, notably being the Vice-Chair of the Imaging Physics Committee, Co-Director of the Annual Meeting Imaging Science Track, and a

member of Science Council and the Editorial Boards of Medical Physics and of Radiology. He is a winner of the Farrington Daniels Award and the Best Imaging Article published in JACMP Award. He has published 67 scientific articles, 108 abstracts, and five book chapters on the development and clinical evaluation of x-ray-based imaging techniques, especially for breast cancer.

### **DONNA M. STEVENS, MS**



Donna M. Stevens has enjoyed 25 years in clinical imaging physics and voluntary activities for AAPM, professional journals, and the

state Radiation Advisory Committee in Oregon. Education accomplishments include the development of the clinical aspects of the first CAMPEP-accredited Diagnostic Imaging Physics residency program for The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, teaching visiting medical physicists through the International Atomic Energy Agency, and a course on CT Quality Control in Mexico City. Donna has also collaborated on several research projects including the use of Monte Carlo methods to generate CT x-ray beam spectra and to estimate radiation doses in CT. Ms. Stevens's activities in the

AAPM include development of guidelines for education and training of medical physics residents, selection of patient dose monitoring systems, and the scope of practice for clinical medical physicists. She has also performed accreditation assessments for the AAPM dosimetry calibration laboratories. In her free time, Ms. Stevens enjoys her family and friends, hiking, backpacking and drawing.

### **IRIS Z. WANG, PHD**



Dr. Iris Wang is a Senior Medical Physicist in the Department of Radiation Medicine at Roswell Park Comprehensive

Cancer Center and a faculty member of the CAMPEP-accredited Medical Physics Program at the University at Buffalo. She received a PhD from the University at Buffalo in 2004 and completed a medical physics residency at Roswell Park in 2006. She is certified by the American Board of Radiology and has served as an oral examiner in Therapeutic Medical Physics for the ABR. Dr. Wang served a three year term in the presidential chain of the Upstate New York Association of Medical Physicists from 2010 to 2012. She also recently completed one term on the AAPM Board of Directors as the Upstate New York chapter elected representative. Dr. Wang

is currently an Associate Editor and member of Board of Editors of the JACMP. Dr. Wang is highly engaged in education programs. She has supervised more than 30 graduate students and medical physics residents. Her collaborative research has resulted in 32 peer review and proceeding publications and 52 conference abstracts, along with numerous national and regional presentations.

### **RICHARD WENDT, III, PHD**



Richard E. (Bud) Wendt studied physics and business administration at the University of Chicago and then electrical engineering at

Rice University. His dissertation work analyzing nuclear medicine studies led to a post-doc in NMR imaging at Baylor College of Medicine. He served on the Baylor faculty before joining The University of Texas MD Anderson Cancer Center, where he is now a professor in the Department of Imaging Physics. He was a member and chairman of the Texas Board of Licensure for Professional Medical Physicists. He teaches in and directs the Graduate Program in Medical Physics of The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences. He serves on the Graduate Education Program Review Committee of the Commission

on Accreditation of Medical Physics Education Programs and as the Treasurer of the Society of Directors of Academic Medical Physics Programs. He has served the AAPM on TG108 and TG313.

### **SHARON WHITE, PHD**



Sharon L. White is an Associate Professor in the Department of Radiology at the University of Alabama at Birmingham (UAB).

She is certified by the American Board of Radiology in Diagnostic Radiological Physics and Medical Nuclear Physics. She provides clinical physics support to the Division of Molecular Imaging and Therapeutics at UAB and is the Program Director for the diagnostic imaging medical physics residency program. She teaches nuclear medicine physics, radiation biology, and radiation protection to radiology and medical physics residents, and cardiology fellows. She has served as chair of the AAPM Nuclear Medicine Subcommittee and as a member of several other AAPM Task Groups and committees. She also has served on exam committees with the ABR, ACR and ARRT. Currently Dr. White is the Chair of the UAB Radiation Safety Committee. She enjoys giving nuclear medicine physics-related educational talks at AAPM Annual Meetings and Review Courses.

## JOHN S. LAUGHLIN YOUNG SCIENTIST AWARD



### WEI LIU, PHD

Wei Liu received his undergraduate degree from the University of Science and Technology of China and his PhD in Plasma Physics from Princeton University in 2007. He completed postdoctoral fellow training at Los Alamos National Laboratory in 2007–2010. He then switched to medical physics and joined The University of Texas MD Anderson Cancer Center as Assistant Professor in 2010. He moved to Mayo Clinic Arizona as Assistant Professor in the

Department of Radiation Oncology in 2013. Currently he is Associate Professor of Radiation Oncology and Research Director of Division of Medical Physics of Mayo Clinic Arizona. He was the recipient of the T.H. Stix Plasma Physics Prize from Princeton University and the G.K. Walters Fellowship from Rice University. A scientific term *Liu Limit* was named after him for his work in plasma astrophysics. His research focuses on: (1) application of operations research techniques in proton therapy treatment planning, especially robust optimization, 4D robust optimization, and linear energy transfer (LET)-guided robust optimization; (2) robustness quantification techniques in proton therapy; and (3) accurate and fast dose and LET calculation algorithms for proton therapy. A leading radiotherapy company, Varian Medical Systems, has adopted methods similar to those that he and other groups developed as the basis for its commercial treatment planning solutions. He has 60 manuscripts, 10 pending US patents, and one book chapter and has been awarded about 2.3 million dollars in funding including an NIH K25 award and an Arizona Department of Health Science Investigator grant. He is an Associate Editor of *Medical Physics* and a member of the Research Committee of AAPM.



## MARVIN M. D. WILLIAMS PROFESSIONAL ACHIEVEMENT AWARD RECIPIENTS

Gail D. Adams	1989	Michael D. Mills	2007
Peter R. Almond	1990	Edward Lee Nickoloff	2008
Ann E. Wright	1991	Melissa Carol Martin	2009
John S. Laughlin	1992	Walter Grant	2010
Robert O. Gorson	1993	Benjamin R. Archer	2011
Robert J. Shalek	1994	William F. Hanson	2012
Nagalingam Suntharalingam	1995	Marilyn Stovall	2013
James A. Purdy	1996	Herbert W. Mower	2014
Colin G. Orton	1997	Christopher H. Marshall	2015
Faiz M. Khan	1998	Jean M. St. Germain	2015
Jimmy O. Fenn	1999	Keith J. Strauss	2016
Moses A. Greenfield	2000	Stephen Balter	2017
Stewart C. Bushong	2001	Michael T. Gillin	2017
Bhudatt R. Paliwal	2002	Muthana S.A.L. Al-Ghazi	2018
James B. Smathers	2003	Louis K. Wagner	2018
Kenneth R. Hogstrom	2004	Bruce J. Gerbi	2019
Edwin C. McCullough	2005	Larry E. Sweeney	2019
Edward S. Sternick	2006		

## MARVIN M. D. WILLIAMS PROFESSIONAL ACHIEVEMENT AWARD



### **BRUCE J. GERBI, PHD**

Dr. Bruce John Gerbi started his career in medical physics at the University of Pittsburgh, in the medical physics program headed by Andrew Bukovitz. Following the completion of his degree, Dr. Gerbi took a position at the Mallinckrodt Institute of Radiology in St Louis, MO under the direction of Dr. James Purdy. This was followed by several years in San Antonio, TX working for a private radiology group and gaining experience in both radiation oncology and diagnostic radiology. In 1982, Dr. Gerbi started a career at the University of Minnesota under the direction of Faiz M. Khan, PhD who later became his PhD advisor. After the retirement of Dr. Khan, he headed the U of MN Physics section for 10 years in addition to being the Director of the Medical Physics residency program and later the Director of the Medical Physics graduate program.

Along with Dr. Khan, Dr. Gerbi coedited the 3rd edition of Treatment Planning in Radiation Oncology. He was chair of Task Group 70: Recommendations for clinical electron beam dosimetry, and has published 71 articles, 20 book chapters, and two books. At the U of MN, he participated in the education of more than 20 medical physics residents. From 2006 to 2012, he was Chair of the REPRC, the Residency Education Physics Review Committee of CAMPEP increasing the number of CAMPEP accredited residency programs from 10 to 75 and the number of resident graduates per year from around 15 to 95.

Post retirement in 2017, he continues to conduct CAMPEP reviews of medical physics residency programs.



### **LARRY E. SWEENEY, PHD**

Larry E. Sweeney began his career in Radiological Physics in 1973 at the St. Francis Hospital in Pittsburgh, PA. During that time, he worked with colleagues in Nuclear Medicine, in addition to his extensive work in Radiation Oncology with a Betatron. Dr. Sweeney received an MS in Radiological Physics from Carnegie Mellon University in 1976 and became certified by the

ABR in 1978 in Radiological Physics. He then entered a new program at the University of Pittsburgh and Presbyterian Hospital. After completing a PhD in 1981, Dr. Sweeney joined three other Physicists at Northwest Medical Physics Center in Seattle. Over the next 35+ years, he provided various levels of Physics coverage to 20 different Radiation Oncology Centers within Washington, as well as nationwide. His work ranged from radiation surveys and clinical onsite coverage through positions as Chief of Physics and Radiation Safety Officer. Implementing state of the art techniques in community settings was a primary focus. Dr. Sweeney was President from 2001 to 2004 and CFO from 2005 to 2016, at which time he also instituted a Medical Physics Intern program in 2005 and a Medical Physics Therapy Residency program in 2006. (CAMPEP 2009)

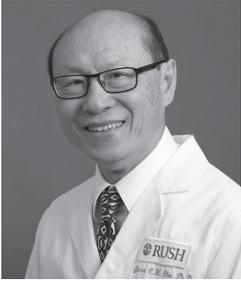
During his 45-year career, he has been professionally involved within AAPM, SDAMPP, ACR, ASTRO and ACMP as a general member, committee member, officer and member of the Board of Directors. Dr. Sweeney has also served as AAPM Trustee to the MDCB and as a Part III Examiner for the ABR. Teaching and publications have also been an integral area of interest.

With his family, including Leanne, spouse of 40+ years, and son Brandon, he has enjoyed activities involving water, snow and mountains.

## EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD RECIPIENTS

Arnold Feldman	1996	Joel E. Gray	2011
Robert O. Gorson	1997	Martin S. Weinhaus	2011
John Hale	1998	Charles A. Mistretta	2012
Jon H. Trueblood	1998	Edward S. Sternick	2012
Kenneth A. Wright	1998	Kenneth N. Vanek	2012
Perry Sprawls	1999	Caridad Borrás	2013
Joe P. Windham	1999	Norbert J. Pelc	2013
William F. Hanson	2000	George Starkschall	2013
Mary L. Meurk	2000	Howard Ira Amols	2014
Amos Norman	2002	Bruce H. Curran	2014
Stewart C. Bushong	2003	Edward Lee Nickoloff	2014
Radhe Mohan	2003	Larry A. DeWerd	2015
Donald E. Herbert	2004	Kunio Doi	2015
Azam Niroomand-Rad	2006	Melissa Carol Martin	2015
Lawrence N. Rothenberg	2007	Wendell R. Lutz	2016
Marilyn Stovall	2007	Robert J. Pizzutiello	2016
James M. Galvin	2008	Michael V. Yester	2016
Kenneth R. Kase	2008	G. Donald Frey	2017
James A. Deye	2009	John W. Wong	2017
Lawrence E. Reinstein	2009	Jerry D. Allison	2018
Raymond L. Tanner	2009	Frank J. Bova	2018
Benjamin R. Archer	2010	James C. Chu	2019
Laurence P. Clarke	2010	Ellen D. Yorke	2019

## EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD



### **JAMES C. CHU, PHD**

Dr. James C. H. Chu was born in Nanking, China and raised in Taipei, Taiwan. He received a BS in physics from Tunghai University, Taichung, Taiwan in 1970, an MS from University of Texas Southwestern Medical Center, Dallas, Tx, in 1975, and a PhD from MD Anderson Cancer Center, Houston, Tx, in 1978. Dr. Chu then joined the faculty of the University of Pennsylvania School of Medicine and received tenure there. After 12 years at Penn, which

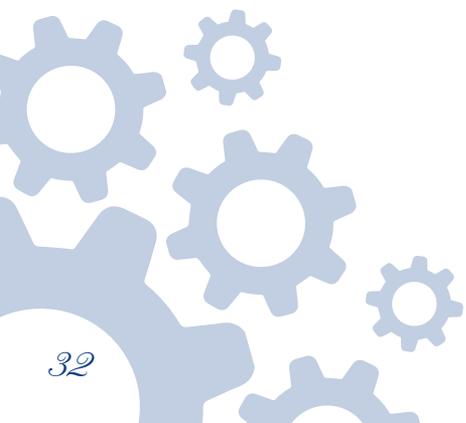
also included six years as chief physicist at Fox Chase Cancer Center, Dr. Chu joined Rush-Presbyterian-St. Luke's Medical Center, which is now known as Rush University Medical Center. From his arrival at Rush in 1990 until his retirement in 2017, Dr. Chu served as both the chairman of Rush's Department of Medical Physics, which later became the Department of Medical Physics and Advanced Imaging, and the chief physicist in the clinic. Dr. Chu is certified in both therapeutic medical physics and diagnostic medical physics by the American Board of Radiology, and in radiation oncology physics by the American Board of Medical Physics. Dr. Chu has been active in education, research, and clinical services in medical physics throughout his career. He remains active after his retirement, working part-time on a NIH-funded image guidance project for lung cancer treatments. He feels very fortunate to have had help from many extremely talented and devoted mentors, friends, colleagues, and trainees, and the support of his family, particularly his wife Sherry and son Michael, over the years. He is very grateful and honored to receive this lifetime achievement award.



### **ELLEN D. YORKE, PHD**

After receiving a doctorate in theoretical solid state physics (1967) and teaching undergraduate physics at a new campus of the University of Maryland for 12 years, Ellen Yorke transitioned into therapeutic medical physics under the mentorship of Dr. Clifton Ling at George Washington University Medical Center in 1983 and became a full-time medical physicist in the Radiation Oncology department at GWU in 1985. Dr. Yorke moved to the University of

Pennsylvania in 1997 and to Memorial Sloan Kettering (MSK) in 1998, and has been in the Treatment Planning group ever since doing a mixture of clinical boots-on-the-ground work and clinically-based research. Her main interests are respiratory motion control (through which she actually gets to work with patients!), relating complications outcomes to planned (and ultimately delivered) doses and patient safety. Dr. Yorke has been an AAPM member since 1983 and notes that AAPM offers expanding pathways into all of her areas of interest. She feels fortunate in being able to take part in informal collaborative efforts like Quantec, formal efforts like the Therapy Physics Committee, TG100 and (now) TG275 and the Working Group on Biological Effects of SBRT (aka HyTEC). In addition to thanking all the many people who have helped her throughout her journey, she gives special thanks to her long-suffering husband, Jim, and kids (Bekra, Margaret and Robert) who have put up with her wanderings and odd schedules for many years.





## WILLIAM D. COOLIDGE GOLD MEDAL RECIPIENTS

William D. Coolidge	1972	Leonard Stanton	1996
Robert J. Shalek	1973	James A. Purdy	1997
John S. Laughlin	1974	Bengt E. Bjarngard	1998
Marvin M. D. Williams	1975	Faiz M. Khan	1999
Harold E. Johns	1976	Lowell L. Anderson	2000
Edith E. Quimby	1977	Ravinder Nath	2001
Lawrence H. Lanzl	1978	Bhudatt R. Paliwal	2002
Herbert M. Parker	1979	Kenneth R. Hogstrom	2003
John R. Cameron	1980	C. Clifton Ling	2004
James G. Kereiakes	1981	Gary T. Barnes	2005
Gail D. Adams	1982	Ervin B. Podgorsak	2006
Edward W. Webster	1983	Arthur L. Boyer	2007
Robley D. Evans	1984	Paul L. Carson	2008
Jack S. Krohmer	1985	Willi A. Kalender	2009
Warren K. Sinclair	1986	David W. O. Rogers	2010
Gordon L. Brownell	1987	Richard L. Morin	2011
John R. Cunningham	1988	Stephen R. Thomas	2012
William R. Hendee	1989	Benedick A. Fraass	2013
Peter R. Almond	1990	Thomas Rockwell Mackie	2014
Moses A. Greenfield	1991	Maryellen L. Giger	2015
Nagalingam Suntharalingam	1992	Paul M. DeLuca	2016
Colin G. Orton	1993	Jatinder R. Palta	2017
F. Herb Attix	1994	Radhe Mohan	2018
Robert Loevinger	1995	John Boone	2019

# WILLIAM D. COOLIDGE GOLD MEDAL

## JOHN M. BOONE, PHD

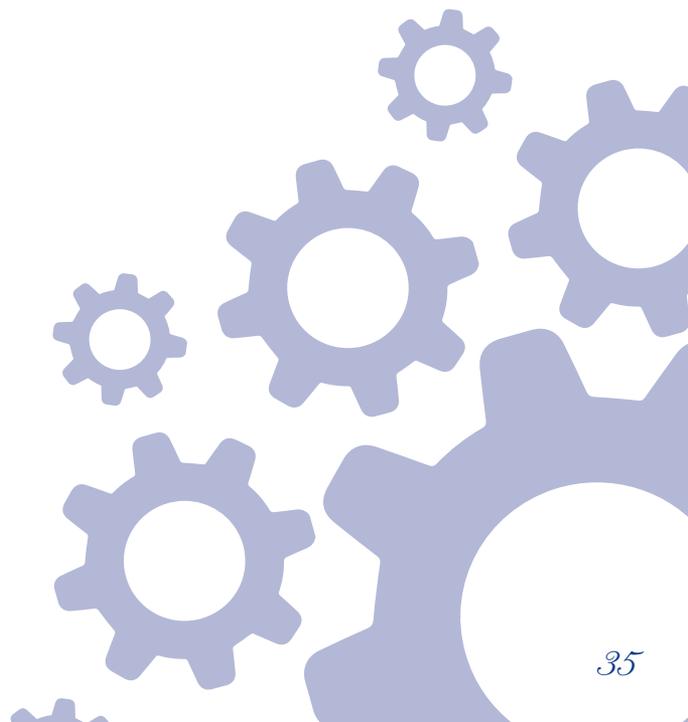


John M. Boone was born in Los Angeles and was raised in Southern and then Northern California. He graduated from the University of California Berkeley in biophysics, where he also was a member of the Cal sailing team. He went on to receive masters and doctorate degrees at University of California Irvine in radiological sciences, where he also served as commodore of the UCI Sailing Association. This journey also included employment as a retail worker, short-order cook, construction worker, mailman, and boat maintenance worker. He started his academic career at University of Missouri Columbia (1985), and then moved to Thomas Jefferson University in Philadelphia (1987). He joined the faculty at the University of California Davis in 1992, where he is professor of radiology (and chief of medical physics) and professor of biomedical engineering. He was certified by the American Board of Radiology in diagnostic radiological physics in 1988. Dr. Boone has research interests including x-ray spectral modeling, image analysis, Monte Carlo assessment of radiation dose in radiography, mammography, and computed tomography, and the development of breast computed tomography systems. He published the first paper on neural networks in *Medical Physics* in 1990. He has over 200 peer-reviewed publications and has received about \$25 million in external funding for research. Dr. Boone has been the director for resident physics education at UC Davis for 27 years, and also teaches graduate students in the biomedical engineering program. He is co-author of the textbook, the Essential Physics of Medical Imaging, with friends Jerry Bushberg, Tony Seibert, and Ed Leidholdt. He has lectured in 35 medical imaging courses around the world, many of them sponsored by AAPM's ISEP program. Dr. Boone has mentored 15 graduate students and 10 postdocs over the past 25 years. Dr. Boone served as associate editor and deputy editor for *Medical Physics*, and also served as the first chair of the Journal Business Management Committee, overseeing the transition to the on-line journal. He was scientific program committee chair for the AAPM annual meeting in Boston (1995). He has served on 15 AAPM task groups, including 3 as chair. He was the vice chair and then chair of Science Council for total of 12 years, and



was instrumental in reorganizing the imaging components of Science Council during that stint—which led to the creation of the imaging physics committee (IPC), which he also chaired. Dr. Boone was a member of the *Medical Physics*, website, and newsletter editorial boards. He was elected to the presidential chain in 2013; serving as AAPM president in 2015 and board chair in 2016. Dr. Boone is a fellow of the AAPM, the American College of Radiology, the Society of Breast Imaging, the American Institute for Medical and Biological Engineering (AIMBE), and the Society for Photo-optical Instrumentation Engineers (SPIE). He is a commissioner (and current treasurer) of the International Commission on Radiation Units (ICRU).

John has two wonderful kids—daughter Emily and son Julian, who both live in California.



*Music provided by Cella Vida*



*Congratulations*

to all of the Award Recipients!

American Association of Physicists in Medicine

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