2022 Awards Post-Ceremony Program

AAPM 2022

JULY 10–14 | WASHINGTON, DC

64TH ANNUAL MEETING & EXHIBITION

CELEBRATING MEDICAL PHYSICS
TRANSFORMING HUMAN HEALTH

AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

2022 PROGRAM

J. Daniel Bourland, MSPH, PhD, DABR
AAPM President

Honoring Deceased AAPM Members

AAPM Fellowships, Grants & Other Awards

MedPhys Slam

Grand Challenges

Jack Fowler Early-Career Investigator Award

Jack Krohmer Early-Career Investigator Award

John R. Cameron Early-Career Investigator Symposium Awards

Arthur Boyer Award for Innovation in Medical Physics Education

Journal of Applied Clinical Medical Physics Best 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 an Outstanding General Medical Physics Article

Medical Physics Journal Best Paper Awards

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

Recognition of 50+ Years of AAPM Membership

Honorary Membership

Recognition of 2020 and 2021 Classes of AAPM Fellows

2022 Fellows

2022 John S. Laughlin Early-Career Scientist Award

Recognition of 2020 Marvin M.D. Williams Professional Achievement Award Recipient

2022 Marvin M.D. Williams Professional Achievement Award

Recognition of 2020 Edith H. Quimby Lifetime Achievement Award Recipient

2022 Edith H. Quimby Lifetime Achievement Award

Recognition of 2020 William D. Coolidge Gold Medal Recipient

2022 William D. Coolidge Gold Medal

Closing Remarks Reception Immediately Following

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.

AAPM FELLOWSHIPS, GRANTS, & OTHER AWARDS

AAPM/RSNA Doctoral and Masters Graduate Fellowship

Four $10,000 Doctoral Awards

- Two awards for first year Doctoral Students. The recipients are:

  Jakob Marshall, University of British Columbia

  Lucas McCullum, Massachusetts General Hospital/Harvard Medical School

- Two awards for second year or higher Doctoral Students. The recipients are:

  Mark D'Souza, Ryerson University

  Kevin Liu, MD Anderson Cancer Center

- AAPM/RSNA Doctoral and Masters Graduate Fellowship; Three $10,000 MS Awards

  Awarded to a first- or second-year MS students. The recipients are:

  Dixin Chen, University of Pennsylvania

  Jingong Zhao, Duke University Medical Center

  Robert Dawson, University of Florida

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 2022 grant recipient is:

Ramish Ashraf, PhD

2022 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 $6,000 stipend from AAPM. The AAPM Southwest Chapter provided additional support. The DREAM Fellows for 2022 are:

Allison Cartee

Oscar Martin Alonso Cortes

Grace Catherine Francis

Brianna Rose McCrae

Bridget Eleanor Patrick

Jesiah K. Showers

Olivia I. Stojak

AAPM/RSNA Imaging Physics Residency Program Grant

These grant awards, funded by the AAPM and RSNA, provide support for institutions to provide positions in Diagnostic Imaging Physics and/or Nuclear Medicine Physics residencies. Each year two deserving high quality residency programs are selected to receive support for two residents each to receive matching support during their training. The 2022 awardees are:

University of Washington (Director: Kalpana Kanal, PhD)

University of Kentucky (Director: Jie Zhang, PhD)

2022 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 $6,000 stipend from AAPM. The AAPM Arizona Chapter provided additional support. The Summer Undergraduate Fellows for 2022 are:

Santiago Aguirre

Huay Din

Nathan Aaron Dobranski

Franziska Evelyn Eisenhuth

Matthew J. Gopaulchan

Erica Lynn Heller

Eric D. Hornfeck

Erika Jank

Naomi Michelle Jensen

Marlin Emanuel Keller III

Anthony Gary Leja

Olivia Magneson

Joseph Skovron

Austin M. Trebley

Pierangelis M. Valerio

Elena Grace Vasquez

Summer School Tuition Scholarships

These scholarships are offered to applicants who are early in their careers in medical physics. The 2022 scholarship recipients were:

Ramish Ashraf, PhD

Yushi Chang, PhD

Zachary Christ, PSM

Sagarika Jain, MS

Sharon Lebron, PhD

Chingling Teng, PhD

Yawei Zhang, 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 EXHG 2022 Round 1 Travel Grant recipients are:

Yulun He, PhD

Felix Mathew, PhD

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 2022 Associates are:

Muhammad Ramish Ashraf, PhD

Jie Fu, PhD

Yu Gao, PhD

Rachael Hachadorian, PhD

Casey Lee, PhD

Kelly Nealon, PhD

Xingyu Nie, PhD

Lauren Smith, PhD

AAPM Best Awards

This Travel Fellowship is 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. Sponsored by BEST Medical International and the AAPM Education Council through the AAPM Education & Research Fund. The 2022 Travel Fellowship recipients are:

Christian De Caro

Lian Duan

Mohamed Eldib

Ke Lu

Qihui Lyu

Rachel Petragallo

Joshua Wancura

Hui Wang

Zhenyu Yang

Yang Zhang

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 Grant recipients for 2022 are:

Scott Bright, MD Anderson Cancer Center

Davide Brivio, Brigham and Women's Hospital

Zijian Deng, University of Texas Southwestern Medical Center

Md Belayat Hossain, University of Pittsburgh

2022 AAPM International Council Collaborative Microgrants

The International Council provided pilot grant funding for selected projects in regions around the world, including Africa, Latin America, Eastern Mediterranean, Western Pacific, and South-East Asia.The projects are focused on conducting needs assessment on technologies to advance care, research and education and address global health disparities.

These grants are supported by the American Institute of Physics (AIP) Venture Fund (VF) Member Society Grants Program through the AAPM International Council Project for Increasing Access to Medical Physics

Education and Research Excellence (AMPERE) for Global Health. The 2022 Microgrant recipients are:

Recipient 1: PI Team Members: *Paulo Roberto Costa, PhD, Monica O. Bernardo, PhD, Martha Edith Oyuela, PhD, Denise Y. Nersissian, PhD*

Recipient 2: PI Team Members: *Dr. Adeneye Samuel Olaolu, Dr. Jumaa Dachi Kisukari, Dr. Thokozani Mkhize, Dr. Heng Li, Prof. Joerg Lehmann, and Dr. Katy Graef*

Recipient 3: PI Team Members: *Kyle J. Gallagher, PhD, Wassim Jalbout, PhD, Phillip J. Taddei, PhD, Bassem Youssef, MD*

Recipient 4: PI Team Members: *Robin Hill, PhD and Chi Do Duc*

Recipient 5: PI Team Members: *Afua Yorke, PhD, Eric C.D.K Addison, PhD, Ernest Osei, PhD, and Eric C. Ford, PhD*

Recipient 6: PI Team Members: *Baozhou Sun, PhD, Jacaranda Van Rheenen, PhD, Minjmaa Minjgee, PhD, Enkhtsetseg Vanchinbazar, Msc*

Early Career Investigator in Imaging Travel Award

The Science Council has established a travel award administered by the Research Committee to support the attendance of an early-career, research-oriented AAPM member to participate in the Medical Imaging Technology Showcase (MedTech), sponsored by the Academy of Radiology and Biomedical Imaging Research (the Academy). Awardees become part of the Academy's Council of Early Career Investigators in Imaging (CECI^2) and in turn participate in a year of both virtual and in-person training sessions and meetings, along with advocating in Washington, DC for federal investments in imaging research. The CECI^2 program also serves as a valuable networking and educational resource for its members. 2022 AAPM CECI^2 representative is:

Megan C. Jacobsen, PhD, University of Texas MD Anderson Cancer Center

MEDPHYS SLAM

MedPhys Slam is a research communication competition for student, resident, and junior members of the AAPM in which participants prepare a three-minute presentation aimed at sharing the significance of their science to the general public in a compelling and coherent manner. The 2022 participants were judged by a non-medical physics panel on two equally weighted categories: comprehension/content and communication/engagement.

First Place: *Ellie Bacon, "The Warping of Bladders"*
Tie for Second Place:

1. *Savannah Decker, "Revolutionizing Radiation Therapy: Seeing a "Blind" Procedure with Cherenkov Imaging"*
2. *Mahsa Servati, "Know Your Enemy: Characterization of Brain Tumor Heterogeneity"*

People's Choice: *Savannah Decker, "Revolutionizing Radiation Therapy: Seeing a "Blind" Procedure with Cherenkov Imaging"*

GRAND CHALLENGES

The Standardizing Imaging Protocols for Quantitative SPECT/C Post-Yttrium-90 Microspheres Delivery Challenge (SIRPRISE)

This Challenge seeks to standardize a clinically practical acquisition and reconstruction protocol for SPECT scans that are acquired to quantify and localize Y-90 delivery for radioembolization. The advancement of Y-90 radioembolization from a palliative setting to a more frontline therapy will depend on the ability to determine the absorbed doses to tissues, which is a critical future component of managing patient follow-up. Furthermore, undertreated areas of tumor could be identified to allow for alternative or adjuvant therapies. The following top-performing teams presented their methods and were announced at the 2022 AAPM Grand Challenges Symposium:

W***inning Team:*** *Laura Buchanan, PhD, Jamie Campopiano, Michael Oumano, PhD, Mark Rivard, PhD, Michelle Schwer, MS, all Rhode Island Hospital*
Runner-up: *Nichole M. Maughan, PhD, Richard Laforest, PhD, Jose L. Garcia, MS, Justin Mikell, PhD, Alireza Ehtesham, PhD, Jacqueline E. Zoberi, PhD, all Washington University in St. Louis*

Organizers: *Diane Alvarez, Miami Cancer Institute; William Dezarn, PhD, Wake Forest University; Wendy Siman, PhD, University of Colorado; and Shirin Enger, PhD, and Peter Kim, both McGill University*

The Truth-Based CT Reconstruction Challenge (TrueCT)

This Challenge takes advantage of the resources of the recently funded Center for Virtual Imaging Trials (CVIT) to create a dataset of realistic CT images of virtual patients with known ground truth to provide an objective evaluation of CT reconstruction methods. The increased use of "approximating" reconstruction methods in CT, including iterative reconstruction (IR) and deep learning (DL) methods, creates uncertainty in how much native information might be distorted in the reconstruction process. With knowledge of the true underlying anatomy and physiology, the precise limitation of the reconstruction process can be objectively quantified. The following top-performing teams presented their methods and were announced at the 2022 AAPM Grand Challenges Symposium:

Winning Team: *Xiao Wang, PhD, Issac Lyngaas, PhD, Muralikrishnan Gopalakrishnan Meena, PhD, Amir Ziabari, PhD, Singanallur Venkatakrishnan, PhD, Balint Joo, PhD, Matthew Norman, PhD, Anuj Kapadia, PhD, and Tom Beck, PhD, all Oak Ridge National Laboratory, and Gregery Buzzard, PhD, and Charles Bouman, PhD, both Purdue University*
Runner-up: *Wei Wang, PhD, Shenzhen University*
Organizers: *Ehsan Samei, PhD, Ehsan Abadi, PhD and Paul Segars, PhD, all Duke University*

The Deep-Learning for Inverse Problems: Spectral Computed Tomography Image Reconstruction Challenge (DL-Spectral CT)

This follows the successful DL-Sparse-View CT Challenge presented at AAPM's 2021 Annual Meeting. Spectral CT, based on dual-energy CT, represents a cutting-edge technology that is gaining interest in the medical imaging community. A major effort in spectral CT research is the development of image reconstruction that can yield quantitative images from spectral CT transmission data. The DL-Spectral CT Challenge seeks to address a tomographic imaging problem that is of current research interest with potential clinical implications. The top-performing teams presented their methods earlier today at the AAPM Grand Challenges Symposium.

Winning Team: *Genwei Ma, PhD, Capital Normal University, and Xing Zhao, PhD, Capital Normal University and Southern University of Science and Technology*

Runner-up: *Xiaoyu Hu, PhD, and Xun Jia, PhD, both University of Texas Southwestern Medical Center*
Organizers: *Emil Sidky, PhD, and Xiaochuan Pan, PhD, both University of Chicago*

JACK FOWLER EARLY-CAREER INVESTIGATOR AWARD

Established in honor of Dr. Jack Fowler, PhD, Emeritus Professor of Human Oncology and Medical Physics, University of Wisconsin. Early-Career Investigators were encouraged to submit abstracts for the competition. The top scoring submission determined by abstract reviewers was selected and the 2022 award is presented to: ***Stephanie Bennett, PhD***

JACK KROHMER EARLY-CAREER 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 2022 award is presented to: ***Brian Anderson, PhD***

JOHN R. CAMERON EARLY-CAREER INVESTIGATOR SYMPOSIUM AWARDS

The 10 Early-Career 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 are:

First Place: *Qihui Lyu, University of California, Los Angeles, for the abstract entitled: "Pair Production Tomography Imaging"*
Second Place: *Rachel Petragallo, UCLA, for the abstract entitled "A Multi-Institutional, Convolutional Neural Network-Based Approach to the*

Detection of Vertebral Body Mis-Alignments in Planar X-Ray Setup Images"
Third Place: *Constance Owens, University of Texas MD Anderson Cancer Center, for the abstract entitled: "Development and Validation of a Population-Based Anatomical Colorectal Model for Radiation Dosimetry in Late Effects Studies of Childhood Cancer Survivors"*

ARTHUR BOYER AWARD FOR INNOVATION IN MEDICAL PHYSICS EDUCATION

The Arthur Boyer Award for Innovation in Medical Physics Education is supported by a generous lead donation by Arthur and Suzanne Boyer which is supplemented by donations to The Boyer Innovation in Medical Physics Education Fund. This award is given for an innovative program, presented at the AAPM Annual Meeting, in the medical physics education of physicists, physicians, ancillary personnel and the public. The 2022 winner was announced during the ceremony:

Joseph Schulz, Stanford Health Care, for the abstract entitled: "An Affordable Platform for Virtual Reality-Based Patient Education in Radiation Therapy"

JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS BEST 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 2021 is presented to: ***Amarjit Saini, Chris Tichacek, William Johansson, Gage Redler, Geoffrey Zhang, Eduardo G. Moros, Muqeem Qayyum, and Vladimir Feygelman*** for their paper entitled "Unlocking a closed system: dosimetric commissioning of a ring gantry linear accelerator in a multivendor environment," *Journal of Applied Clinical Medical Physics* 2021; 22:2:21–34.

Edwin C. Mccullough Award of Excellence for an Outstanding Medical Imaging Physics Article

The Edwin C. McCullough Award of Excellence for an outstanding medical imaging physics article published in *JACMP* in 2021 is presented to: ***Toshimune Ito, Yohji Matsusaka, Masahisa Onoguchi, Hajime Ichikawa, Koichi Okuda, Takayuki Shibutani, Masaaki Shishido, and Kozo Sato*** for their paper entitled "Experimental evaluation of the GE NM/CT 870 CZT clinical SPECT system equipped with WEHR and MEHRS collimator," *Journal of Applied Clinical Medical Physics* 2021; 22:2: 165–177.

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 2021 is presented to: ***Luis Muñoz, Tomas Kron, Marco Petasecca, Joseph Bucci, Michael Jackson, Peter Metcalfe, Anatoly B. Rosenfeld, and Giordano Biasi*** for their paper entitled "Consistency of small-field dosimetry, on and off axis, in beam-matched linacs used for stereotactic radiosurgery," *Journal of Applied Clinical Medical Physics,* 2021; 22:2:185–193.

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 2021 is presented to: ***Kai Huang, Dong Joo Rhee, Rachel Ger, Rick Layman, Jinzhong Yang, Carlos E. Cardenas, and Laurence E. Court*** for their paper entitled "Impact of slice thickness, pixel size, and CT dose on the performance of automatic contouring algorithms," *Journal of Applied Clinical Medical Physics,* 2021; 22:5: 168–174.

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 2021 is presented to: ***Elias Eulig, Joscha Maier, Michael Knaup, N. Robert Bennett, Klaus Hörndler, Adam S. Wang, and Marc Kachelrieß*** for their paper entitled "Deep learning-based reconstruction of interventional tools and devices from four X-ray

projections for tomographic interventional guidance," *Medical Physics*, 2021, 48: 5837-5850

Farrington Daniels Paper Award

The Farrington Daniels Award for an outstanding paper on radiation therapy dosimetry, planning or delivery published in *Medical Physics* in 2021 is presented to: ***Athena Evalour Simbahon Paz, Kilian-Simon Baumann, Uli Andreas Weber, Matthias Witt, Klemens Zink, Marco Durante, and Christian Graeff*** for their paper entitled "Compensating for beam modulation due to microscopic lung heterogeneities in carbon ion therapy treatment planning," *Medical Physics*, 2021, 48: 8052-8061.

RECOGNITION OF 50+ YEARS OF AAPM MEMBERSHIP

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:

Franklin Rath, MS

Bruce Tromberg, PhD

RECOGNITION OF 2020 AND 2021 CLASSES OF AAPM FELLOWS

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

2020 Fellows

Hania Al-Hallaq, PhD
Parham Alaei, PhD
Frank Ascoli, MS
Laura Cervino, PhD
Karen Drukker, PhD
Jonas Fontenot, PhD
David Gladstone, ScD
Kristi Hendrickson, PhD
Loretta Johnson, PhD
David Jordan, PhD

Siyong Kim, PhD
Harold Li, MS
Joseph Och, PhD
Mark Pankuch, PhD
Jose Perez-Calatayud, PhD
Lei Ren, PhD
Yi Rong, PhD
Mihaela Rosu-Bubulac, PhD
David Schlesinger, PhD
Varun Sehgal, PhD
Chengyu Shi, PhD
William Song, PhD
Sotirios Stathakis, PhD
Rowan Thomson, PhD
Yoichi Watanabe, PhD
John Weiser, PhD
Habib Zaidi, PhD
Jie Zhang, PhD

The 2020 Fellows were awarded virtually. Scan the QR code to view their biographies on page 15 of the AAPM 2020 Awards & Honors Ceremony Program.

2021 Fellows

Jenghwa Chang, PhD
Erli Chen, MS
Quan Chen, PhD
Jaydev Dave, PhD
Keyvan Farahani, PhD
Ryan Foster, PhD
Alonso Gutierrez, PhD
Scott Hadley, PhD
Michael Howard, PhD
Grace Gwe-Ya Kim, PhD
Eugene Lief, PhD
Liyong Lin, PhD
Holly Lincoln, MS
An Liu, PhD
Dale Michael Lovelock, PhD
Wei Luo, PhD
Alex Markovic, PhD
Rebecca (Marsh) Milman, PhD
Andrea Molineu, MS
Ke Nie, PhD
Jennifer O'Daniel, PhD
Stephanie Parker, MS
Marianne Plunkett, MS
Julianne Pollard-Larkin, PhD
Gregory Sharp, PhD
Koren Smith, MS
Stephen Thompson, MS
Neelam Tyagi, PhD
Michelle Wells, MS
Ning Wen, PhD
Xiaowei Zhu, MS

The 2021 Fellows were awarded virtually. Scan the QR code to view their biographies on page 15 of the AAPM 2021 Awards & Honors Ceremony Program.

2022 FELLOWS

Ahmad Al-Basheer, PhD
Erin Angel, PhD
Predrag Bakic, PhD
Jean-Pierre Bissonnette, PhD
Samuel Brady, PhD
Karen Brown, MHP
John Fan, PhD
Christine Gnaster, MS
Dustin Gress, MS
Jimm Grimm, PhD
Katie Hulme, MS
Mary Ellen Jafari, MS
Rojano Kashani, PhD
Rick Layman, PhD
Baojun Li, PhD
Heng Li, PhD
Tian Liu, PhD
James Mechalakos, PhD
Christopher Melhus, PhD
Vitali Moiseenko, PhD
Angélica A. Pérez-Andújar, PhD
Tarun Podder, PhD
Dan Ruan, PhD
Amit Sawant, PhD
Deborah Schofield, PhD
Leah Schubert, PhD
William Sensakovic, PhD
Mark Supanich, PhD
Xiangyang Tang, PhD
Sameer Tipnis, PhD
Ronald Tosh, PhD
Alisa Walz-Flannigan, PhD
Kamil Yenice, PhD
David Zamora, MS
Dandan Zheng, PhD
Xiaohong Joe Zhou, PhD

JOHN S. LAUGHLIN EARLY-CAREER SCIENTIST AWARD

This award recognizes outstanding scientific achievement in medical physics by an early-career scientist member of AAPM. The 2022 recipient is: **Grace Jianan Gang, 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 2022 recipients are:

Steven Goetsch, PhD **Pei-Jan Lin, PhD**

EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD

This award recognizes AAPM members whose careers have been notable based on their outstanding achievements. The 2022 recipients are:

Indra Das, PhD **Martin Yaffe, 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 2022 recipient is: **Jacob Van Dyk, DSc**

HONORARY MEMBERSHIP

Franklin Rath, MS

Frank Rath, MSIE is an emeritus faculty member in the College of Engineering at the University of Wisconsin – Madison. He spent 32 years working with a wide variety of designers and manufacturers of many different products and devices including pharmaceutical, medical device and equipment, aerospace, consumer products, and equipment in the automotive and transportation industries. He also taught many engineering students how to develop and implement robust design and manufacturing processes using industrial engineering tools such as process mapping, failure mode and effects analysis, fault tree analysis, and root cause analysis.

He began his work with AAPM by joining Task Group 100 in 2010, has taught several seminars and given many presentations and technical sessions related to FMEA. He is currently a member of Working Group 100, charged with fostering the implementation of TG100 across all types of clinics to improve treatment quality and patient safety. Mr. Rath is currently working on a protype learning opportunity for TG100 risk-based quality management tools for a potential AAPM YouTube channel.

Bruce Tromberg, PhD

Dr. Tromberg is the Director of the National Institute of Biomedical Imaging and Bioengineering (NIBIB) at the National Institutes of Health (NIH), where he oversees a portfolio of research programs focused on developing, translating, and commercializing engineering, physical science, and computational technologies in biology and medicine. In addition, he leads NIBIB's Rapid Acceleration of Diagnostics (RADx Tech) innovation initiative to increase SARS-COV-2 testing capacity and performance. Prior to joining NIH in January 2019, he was a professor of Biomedical Engineering and Surgery at the University of California, Irvine (UCI). During this time, he served as director of the Beckman Laser Institute and Medical Clinic (BLIMC) (2003-2018) and the Laser Microbeam and Medical

Program (LAMMP), an NIH National Biomedical Technology Center at the BLIMC (1997-2018). Dr. Tromberg specializes in the development of optics and photonics technologies for biomedical imaging and therapy. He has co-authored more than 450 publications and holds 24 patents in new technology development, as well as bench-to-bedside clinical translation, validation, and commercialization of devices.

2022 FELLOWS

Ahmad Al-Basheer, PhD

Dr. Al-Basheer earned his PhD in Medical Physics from the University of Florida and his MPH from the Medical College of Georgia (MCG). After he joined MCG in 2008, Dr. Al-Basheer became the Chief Medical Physicist and founding director of the Augusta University Medical Physics Residency Program. His earlier work included the development of an innovative model of deterministic calculation methods for radiation oncology applications. His current research interests involve utilizing radiation therapy to increase the efficacy of check point blockade inhibitors. He is a member of the AAPM Global Needs Assessment Committee, Vice Chair of the Medical Physics 3.0 Committee, and the head of AAPM Working Group for MP3.0 Resources Development. Internationally, he is actively involved as an advocate for medical physics in the Middle East. In 2019, he was the Program Director of the AAPM/ISEP Workshop on Advances in Radiotherapy and Diagnostic Physics in Amman, Jordan.

Erin Angel, PhD

Erin Angel is a diagnostic medical physicist and an executive at GE Healthcare where she leads medical affairs for the U.S. and Canada. With more than 19 years in the medical imaging industry, she has held roles directing medical affairs and product management, including the CT business for Canon Medical Systems, USA. Dr. Angel was instrumental in bringing deep learning reconstruction and deep learning spectral CT

to market. To support medical imaging during the COVID-19 pandemic, she co-invented an isolated CT solution with rapid UV decontamination. She has a PhD in Biomedical Physics from UCLA, and a BS in Physics, and a BA in Business Economics from UCSB. Dr. Angel remains committed to the profession of medical physics and remains active in scientific research, mentorship/outreach, and scientific and professional societies including AAPM, RSNA, ABR, ACR, and MITA.

Predrag Bakic, PhD

Predrag R. Bakic is Associate Professor of Radiology at the University of Pennsylvania, and Researcher in Diagnostic Radiology at Lund University. After receiving his PhD from Lehigh University in 2000, Dr. Bakic joined Thomas Jefferson University as a postdoctoral fellow, before moving to the University of Pennsylvania in 2003. He has published 200+ papers; served as PI/Co-Investigator on 20+ research grants; and mentored 24 PhD, Masters, and postdoc students. His research is focused on simulation-based optimization of breast imaging systems by virtual clinical trials a technique that is advantageous over conventional trials by reducing cost, duration, and patient risk. Recently, he integrated breast tomosynthesis and mechanical imaging in a simultaneous acquisition, offering high tumor detection accuracy and reduced false positives. An AAPM member since 2009, Dr. Bakic serves as Chair of the Taskgroup on Virtual Tools for the Validation of X-ray Breast Imaging Systems and Vice-Chair of the Breast X-ray Imaging Subcommittee.

Jean-Pierre Bissonnette, PhD

Dr. Jean-Pierre Bissonnette is the Associate Head for Professional and Academic Affairs for the Department of Medical Physics at the Princess Margaret Cancer Centre, where he has been employed since 2003. He obtained his M.Sc. from McGill University and his PhD from the University of Western Ontario in 1996. He is an Associate Professor at the University

of Toronto Departments of Radiation Oncology and Medical Biophysics. With 75 peer-reviewed publications, Dr. Bissonnette has been active in several areas relevant to radiotherapy, including quality assurance and patient safety, high-precision radiotherapy for the brain and the lung, post-graduate education, and using PET, CT, and CBCT images to monitor treatment response for lung cancer patients. He chaired the AAPM TG-179 task group on CT-based image-guidance. Current research topics include dose reconstruction based on image-guidance images, image-based adaptation of therapy, and using statistical tools to rationalize and limit the cost of quality control.

Samuel Brady, PhD

Dr. Brady earned a BS in Physics from Utah Valley University, and a MS and PhD in Medical Physics at Duke University. He is currently an Associate Professor at the University of Cincinnati and Chief Physicist at Cincinnati Children's Hospital. He has dedicated his career to the advancement of pediatric imaging, seeking to bring important issues regarding pediatric imaging forward through education and research. Through research, he has worked to reduce radiation dose, improve image quality, and implement AI to improve pediatric clinical outcomes. As an educator, he has had many opportunities to lecture and teach physicians, physicists, and technologists both nationally and internationally on topics related to the advancement of medical physics imaging. Dr. Brady has served on various task groups, working groups, and committees of the AAPM. Additionally, he has served the larger medical physics community through the ACR, ABR, IAEA, IEC, SPR, SNMMI, and The Image Gently Alliance. Dr. Brady is married to Natalie, and they have three children: Nicholas, Christian, and Madison.

Karen Brown, MHP

Karen Brown is a Diagnostic Imaging Physicist at Penn State College of Medicine. Her passion is Radiology resident physics education. Ms. Brown began teaching residents in 2004 at Geisinger Medical Center. In 2008, she joined the faculty at Penn State where she has received multiple awards for teaching excellence. In addition to her positions with Geisinger and Penn State, Ms. Brown provides physics education for several other residency programs and has trained over 300 resident physicians. In 2020, she obtained her graduate certificate in Adult Medical Education from Penn State University and co-founded Sybil Digital Learning, an online physics education platform. Ms. Brown has served on many AAPM, ABR, and RSNA committees and working groups. She is past chair of the ABR Diagnostic Radiology Core Physics Examination Committee and co-editor of the AAPM Radiology Residency Physics Curriculum.

John Fan, PhD

John Fan earned his undergraduate degree in Physics from Nanjing University in China, where he was awarded a CUSPEA fellowship for graduate study at SUNY Albany. After receiving his PhD in Biophysics, he completed postdoctoral fellowships at Northwestern University, and then Loyola Medical School, where he started his medical physics career. Dr. Fan has been a Chief Medical Physicist for NorthShore Edward-Elmhurst Health System in the Chicagoland area. His interests have been focused on providing patients with safe and effective treatments. To date, he has coauthored over 30 publications and 2 book chapters. He was also active in the AAPM Midwest Chapter Board, where he has served as chapter president. Dr. Fan is also a world-renowned nature photographer. He has won numerous awards, and his works frequently appear in publications and exhibitions worldwide. He has written 2 books in photography and serves as a curator in one of the world's leading online photography galleries.

Christine Gnaster, MS

Mrs. Gnaster is a therapy medical physicist, who received her BS in Nuclear and Radiological Engineering from Georgia Tech and her MS in Radiological Medical Physics from the University of Kentucky. She has spent the first half of her career in the clinic and the latter half working in product development and is currently the Director of Products at Radformation. Christine is grateful to have contributed both directly to patient care in a clinic and via clinical software to patients throughout the world. Christine has worked on many committees and working groups within the AAPM — her first in 2007, as an officer in the SEAAPM. She is particularly passionate about bringing awareness to and support for non-clinical professionals. Christine is fulfilled in her work with the Working Group for Non-Clinical Professionals — and has already seen the fruits of the group's work. She currently serves on the Finance Committee, the Rules Committee, and as Vice-Chair of the Professional Services Committee.

Dustin Gress, MS

Dustin Gress earned his Bachelor's and Master's degrees in Nuclear Engineering and Radiological Sciences at the University of Michigan. Gress then worked as a diagnostic physicist for 7+ years at Upstate Medical Physics, where he served as Deputy Director of the first CAMPEP-accredited private practice residency program in imaging physics. Mr. Gress then spent 6.5 years in the Department of Imaging Physics at MD Anderson Cancer Center, supporting NM, PET, IR, mammography, and CT. He served as a Clinical Coordinator in MD Anderson's Residency Program in Imaging Physics, and as an Instructor in its Medical Physics Graduate Program. Since May 2018, he has been Senior Advisor for Medical Physics at the American College of Radiology, providing internal medical physics expertise across departments and projects, including government relations, public relations, registries, accreditation, guidance, among others. Mr. Gress is board certified in Diagnostic Radiologic Physics

by the ABR, and Nuclear Medicine Physics and Instrumentation by the ABSNM.

Jimm Grimm, PhD

Dr. Jimm Grimm is co-chair of the AAPM Working Group on Biological Effects of Hypofractionated Radiotherapy/ SBRT (WGSBRT). The main WGSBRT product is the May 2021 Special Issue of *Red Journal on HyTEC: High Dose per Fraction, Hypofractionated Treatment Effects in the Clinic*. The simple goal of HyTEC was to create Normal Tissue Complication Probability (NTCP) and Tumor Control Probability (TCP) models from Stereotactic Body Radiation Therapy (SBRT) / Stereotactic Ablative Body Radiotherapy (SABR) published data rigorously in the same fashion as QUANTEC, but limited reporting standards made this challenging. Therefore, the summary clinical tables were simplified with current best NTCP/ TCP estimates, and the conclusion of each HyTEC paper is a section on reporting standards to enable future projects to quantify radiation benefit/risk tradeoffs more accurately. Dr. Grimm is the Lead CyberKnife Physicist at Geisinger Health System with a clinical focus, having commissioned several treatment machines and providing the physics service for thousands of SBRT patients.

Katie Hulme, MS

Ms. Hulme earned her MS in Medical Physics from MD Anderson Cancer Center in 2010 and received her certification in Diagnostic Medical Physics from the ABR in 2014. Ms. Hulme joined the Cleveland Clinic in 2010, where she currently serves as the primary physicist for mammography and digital breast tomosynthesis in addition to acting as mentor for several rotations in their diagnostic physics residency program. Ms. Hulme is actively involved in AAPM, where she is a member of multiple task groups and is Chair of Task Group No. 368 - Methodology for Establishing Exam-Specific Target Exposure Indices in General Radiography. She has delivered several invited talks at AAPM meetings. She also serves on

committees for the ACR and ABR, including the ACR Subcommittee on Breast X-ray Imaging Physics. Ms. Hulme is mom to two awesome kids, enjoys hanging out in the woods in her back yard, and running long distances in her spare time.

Mary Ellen Jafari, MS

Ms. Jafari is currently a diagnostic medical physicist at Atlantic Health System in New Jersey and serves as a Radiation Safety Officer. She received a BS in Physics and MS in Medical Physics, both from the University of Wisconsin-Madison. Mary Ellen has supported the AAPM for many years, as a member of numerous committees, including the Nominating Committee and the Radiography and Fluoroscopy Subcommittee, as well as serving as a member of the current Board of Directors. She was awarded Fellowship in the American College of Radiology in 2021 for her record of extensive service to the ACR. Mary Ellen obtained MRSE and MRSO certifications and serves on the Board of Directors of the American Board of MR Safety. She is known nationally and internationally for speaking on MR Physics and MR Safety.

Rojano Kashani, PhD

Dr. Kashani is an Associate Professor and Clinical Chief of Physics and Dosimetry in the Department of Radiation Oncology at University Hospitals, Case Western Reserve University. She earned her doctoral degree from the University of Michigan in 2009. After completing her residency program at Washington University in St. Louis in 2011, she joined the department as a physics faculty member where she continued to work until 2017. During this time, she led the SBRT programs, and implemented the first MR-guided online adaptive radiotherapy program in 2014. She has been an active member of AAPM, serving on several committees and task groups,

including TISC, and TG324. She is an active member of ASTRO and NRG, currently serves as the physics PI on a lung SBRT trial, and recently joined the GU core committee as a member. Her research interests include adaptive radiotherapy, cardiac radioablation, and clinical implementation of novel treatment techniques.

Rick Layman, PhD

Dr. Layman is an Associate Professor in the Department of Imaging Physics at the University of Texas MD Anderson Cancer Center. He completed his PhD in Biophysics at the Ohio State University and is board certified by the ABR in Diagnostic Medical Physics. Dr. Layman became a full member of the AAPM in 2004, where he has contributed as Track Director for the Annual Meeting, Co-Chairman of TG299 on QC in Multi-Energy CT, and member of the CT Subcommittee, in addition to four other committees and task groups. Dr. Layman's academic interest is in the development of quantitative advanced CT, where he has been awarded several grants from industry sponsors: the Cancer Prevention & Research Institute of Texas (CPRIT) and NIH. Most recently, Dr. Layman was awarded an NIH S10 grant to bring the first commercial photon-counting detector CT system for small animal imaging to the State of Texas.

Baojun Li, PhD

Dr. Li joined Boston University Medical Center in 2009 and currently serves as Chief Imaging Physicist and Associate Professor of Radiology at BU School of Medicine. At BUMC, his research interests include novel clinical applications of dual-energy CT and MR/CT/US texture analysis. Prior to serving at BUMC, he worked as a Senior Scientist at the Applied Science Lab of GE Healthcare for seven years, where he led the research and development of Rad Tomosynthesis, Low-dose CT, and Dual-energy CT, resulting in three commercial products, multiple industrial awards, and 23 issued patents. Dr. Li is a frequent lecturer nationally on CT technology. He continues to perform research

and volunteers for professional organizations such as AAPM, RSNA, and ABR, and currently serves as a liaison between AAPM and the Society of Cardiac CT. Dr. Li received his PhD from the University of Iowa College of Engineering and BS/MS degrees from Nanjing University College of Physics.

Heng Li, PhD

Dr. Li is an Associate Professor in the Department of Radiation Oncology and Molecular Radiation Sciences at the Johns Hopkins University. He serves as the Chief Proton Physicist of the Johns Hopkins Proton Therapy Center, located at the Sibley Memorial Hospital, Washington D.C. He completed his PhD degree in Electrical and Computer Engineering at the University of Virginia, Charlottesville, VA. His professional interests are in radiation dosimetry, treatment delivery, and motion management in proton therapy. Before joining Johns Hopkins Medicine in April 2019, he was an Associate Professor at the Department of Radiation Physics, the University of Texas MD Anderson Cancer Center.

Tian Liu, PhD

Dr. Tian Liu is an Associate Professor and Director of Medical Physics in the Department of Radiation Oncology at Emory University. She received her PhD in Medical Physics from Columbia University in 2003. She is a board-certified radiation oncology physicist and plays an important leadership role in the clinical, research and education programs at Emory Winship Cancer Institute. Dr. Liu has been active in AAPM and served in multiple leadership roles, including the Chair of the Ultrasound Subcommittee. She has 20 years of experience in the field of ultrasound, radiation oncology, and medical physics. Dr. Liu and her group have pioneered several quantitative ultrasound technologies to evaluate radiation-associated side effects following radiotherapy of prostate, breast, GYN, lung, and head-and-neck cancers. She has co-authored over 150 peer-reviewed manuscripts and been awarded 4 patents.

James Mechalakos, PhD

Jim Mechalakos began his medical physics career as a fellow at MSKCC in 1998. He was then appointed Assistant Chief at 2 MSKCC regional facilities before returning to the Main Campus in 2003 to join the Treatment Planning section as a senior physicist. He became Section Head of Treatment Planning in 2009 and saw the group almost double in size during the almost 10 years he was in charge. He then stepped down as Treatment Planning head to become the chief of MSKCC's newly built David H. Koch Center, which houses MSK's first MR Linac. His research interests include setup error and organ motion, head and neck treatment planning, radiation safety, IGRT, electronic charting, reirradiation, and safety in MRgRT. He has served on numerous AAPM committees and task groups as member or chair, including chairing TG262 on Electronic Charting. He has taught radiotherapy physics to Radiation Oncology residents for the past 10 years, as well as mentored MSKCC residents and junior faculty.

Christopher S. Melhus, PhD

Dr. Melhus earned a BA in Physics from Reed College, an MSc in Nuclear Engineering from MIT, a PhD in Radiological Science from the Harvard-MIT Division of Health Sciences and Technology, and was board certified by the American Board of Radiology in Therapeutic Medical Physics in 2008. Early exposure to the field of radiation science as a Senior Reactor Operator led to his current role as Chief of Radiation Oncology Physics at Tufts Medical Center and Associate Professor of Radiation Oncology at Tufts University School of Medicine. He is dedicated to teaching as the Medical Physics course director for the Tufts-Brown-UMASS Radiation Oncology Residency Program and was recognized by ARRO in 2013 as Teacher of the Year. Chris is very active within the AAPM Brachytherapy Subcommittee, contributing to multiple Work Groups, Task Group Reports, and an upcoming MPPG Report. Outside of work, he enjoys spending time with his family, running, and playing the piano.

Vitali Moiseenko, PhD

Vitali Moiseenko is a professor at the University of California San Diego, where he leads research with a primary focus on analyzing outcomes data in cancer patients receiving radiation therapy. Having completed his post-doctoral fellowship at the National Radiological Protection Board, UK, he moved to Canada in 1995. Dr. Vitali obtained his board certification from the Canadian College of Physicists in Medicine in 2004. He has extensively published on the topic of radiation-induced toxicity in cancer patients with emphasis on adverse effects seen in patients treated for genitourinary, gastrointestinal, and head&neck cancers. Dr. Vitali has 150 peer-reviewed papers, 7 book chapters and 2 AAPM Task Group reports published. He has served on the editorial board of the *International Journal of Radiation Oncology Biology Physics* and has been voted top reviewer for this journal twice. Dr. Vitali has also served on the AAPM QUANTEC, HyTEC and PENTEC working groups.

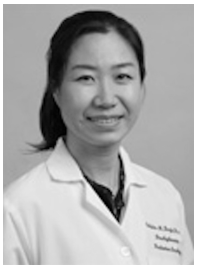
Angélica A. Pérez-Andújar, PhD

Dr. Angélica A. Pérez-Andújar currently serves as the Chief Physicist for the Memorial Sloan Kettering Center in Westchester, NY. She has a PhD in Medical Physics from the University of Wisconsin- Madison. Dr. Pérez-Andújar devoted many years to the study of neutron doses in proton therapy and, more recently, has specialized in the field of multiple brain metastases and SRS treatments. Dr. Pérez-Andújar is a champion of Equity, Diversity, and Inclusion. She was the chair of the Diversity Committee for the Department of Radiation Oncology at the University of California- San Francisco where she was an Assistant Professor. Currently, she is the Vice-Chair of the AAPM Diversity and Inclusion Subcommittee. She also serves as the chair of the AAPM Task Group 210 and has long served on the SFP and WPSC subcommittees, among other groups within the AAPM. Dr. Pérez-Andújar is passionate about mentoring and teaching the next generation of medical physicists.

Tarun Podder, PhD

Dr. Podder is a professor of Radiation Oncology and Biomedical Engineering at Case Western Reserve University, Cleveland. He has more than 25 years of experience in robotics and applications of robotics in medicine, and over 15 years of experience as a medical physicist. He is one of the early physicists to lead the initiatives of robot-assisted brachytherapy. Dr. Podder has authored or co-authored more than 250 scholarly articles and book chapters on medical robotics, tumor motion management, SBRT, and brachytherapy, leading to Google-Scholar h-index of 31 and an i-10 index of 71. He was awarded multiple grants by federal agencies and industries. He has been serving as the director of physics residency program since 2013. Dr. Podder has served as chair and member of several AAPM Task Groups and Working Groups. He is an active member of various scientific societies including ASTRO, ASME, IEEE-RAS, ISTE, IASTED, and EMBC.

Dan Ruan, PhD



Dr. Ruan is trained in Mathematics, Statistics and Engineering. She has worked extensively in medical signal and image processing by developing wholistic methodologies incorporating physical, physiological, clinical considerations with systematic signal processing strategies. Her current work emphasizes the comprehension and characterization of (in)stability and general applicability of learning methods in the medical context, and innovative development to enhance robustness, adaptivity, and generalization. She has authored and co-authored more than 100 peer reviewed publications. Dr. Ruan is the director of informatics at UCLA radiation oncology department, continuously developing and managing a comprehensive data image registry and the companion informatics platform. She is an associate editor for *Medical Physics Journal* and serves on various steering committees and workgroups for ASTRO and AAPM. Dr. Ruan is passionate about

teaching. She offers courses in both the Bioengineering Department and in the Physics and Biology in Medicine (PBM) Program She also mentors graduate students and residents.

Amit Sawant, PhD

Amit Sawant serves as Professor and Vice Chair for Medical Physics in the Department of Radiation Oncology at the University of Maryland, Baltimore. He completed his PhD in Biomedical Engineering from the University of Michigan, Ann Arbor, followed by a postdoctoral fellowship at Stanford University. Dr. Sawant's research interests include the development of novel forms of pre-clinical and clinical imaging, real-time motion management, functional avoidance in lung RT, small animal IGRT, and proton and electron FLASH radiotherapy. He currently serves as PI on two active NIH R01 grants (~$4.7 million total costs), and several extramurally funded research projects from industrial partners. He also leads a team of 27 faculty medical physicists that support six clinical practices across the state of Maryland, delivering radiation treatments to > 250 patients daily.

Debbie Schofield, PhD

Dr. Schofield spent the first four years of her career at Duke University conducting research on Department of Defense funded projects. In 2004, she made the shift to therapeutic medical physics and has spent the last 18 years working in both academic and community hospital programs. Dr. Schofield is an active participant on multiple AAPM committees and task groups. She is currently the chair of the Technical Exhibits Sub-Committee and has served as President of the Florida AAPM. For the last decade, Dr. Schofield has worked with the ACR's Radiation Oncology Accreditation Program as both a surveyor and a committee member. One of her current goals is to further investigate the toll of burnout in the medical physics community.

Leah Schubert, PhD

Dr. Leah Schubert is an Associate Professor in the Radiation Oncology Department at the University of Colorado School of Medicine. Upon joining the University of Colorado in 2012, Dr. Schubert was integral in designing their medical physics residency program, for which she serves as the program's director. She also helped to establish the department's interprofessional quality and safety program, which she co-chairs and leads quality improvement initiatives. Dr. Schubert is active on the national level. She currently chairs two committees and serves as member on six other committees for AAPM, SDAMPP, ABR, and ACR. Dr. Schubert has mentored 13 residents, given over 15 invited presentations, and has published 16 peer reviewed articles and 48 abstracts. She received her PhD in Medical Physics from the University of Wisconsin in 2009, is certified by the American Board of Radiology, and is the proud mother of two young children.

William Sensakovic, PhD

William Sensakovic is a board-certified diagnostic medical physicist. He graduated from The University of Chicago with degrees in physics and mathematics and a PhD in medical physics. During research post-graduate positions at Rush University and The University of Chicago he honed his teaching skills with concurrent positions as Adjunct Professor at Trinity College and Instructor at Rosalind Franklin University. Dr. Sensakovic became a clinical medical physicist at AdventHealth in Florida where he was also appointed Assistant Professor at Florida State and Associate Professor at The University of Central Florida. During that time, he also started his educational business: Telerad Physics Teaching. Dr. Sensakovic is currently Chair of Radiology Medical Physics at Mayo Clinic in Arizona where his interests include magnetic resonance safety, image analysis, product development, and advocacy. He is active in several organizations

including American College of Radiology, American Board of Magnetic Resonance Safety, and American Association of Physicists in Medicine.

Mark Supanich, PhD

Dr. Mark Supanich started his physics journey working in experimental cosmology labs at UW-Madison (including a 6-week rotation in Antarctica) and UPenn before his radiologist uncle introduced him to the field of medical physics and the program at UW-Madison where he earned his PhD in 2009. Dr. Supanich then completed a Diagnostic Medical Physics residency at Henry Ford Hospital and stayed on for 2 years as Senior Staff. He achieved DABR certification from the ABR in 2012. Dr. Supanich joined Rush University Medical Center as an Assistant Professor in the Department of Radiology and Nuclear Medicine in 2013 and was later appointed Division Head for Medical Physics and Research. He was promoted to Associate Professor in 2022. Dr. Supanich has been actively involved in AAPM professionally and scientifically since his residency days and has chaired the Working Group on IEC coordination, AAPM TG 238, and the Alliance for Quality CT.

Xiangyang Tang, PhD

Xiangyang Tang, PhD, is currently a professor at the Department of Radiology and Imaging Sciences, Emory University. Since his joining GE as a scientist at its Applied Science Lab (2001-2009), he has been making contributions to the scientific and technological advancements in MDCT, CBCT, photon-counting and phase-contrast CT, and is the inventor of 19 US patents, author of more than 180 papers in scientific journals, proceedings and conferences, and lecturer at over 100 national and international presentations and seminars. In addition to being one of the earliest scientists working on CBCT, he developed the image reconstruction solutions for GE's two flagship CT products (LightSpeed-VCT and CH750HD). He is serving Medical Physics as Senior Associate Editor, and also serves on five AAPM

subcommittees and the CAMPEP Medical Physics Residency Program Accreditation Committee. He is the Associate Director of Emory Medical Physics and Imaging Residence Program and served on the RSNA scientific committee and numerous NIH study sections.

Sameer Tipnis, PhD

Dr. Tipnis is currently a Professor of Radiology, Chief of Medical Physics, and Radiation Safety Officer at the Department of Radiology and Radiological Science at the Medical University of South Carolina (MUSC). He is board certified by the American Board of Radiology (ABR) in Diagnostic Medical Physics and Nuclear Medical Physics. At MUSC, he provides guidance on optimizing imaging protocols in CT, Nuclear Medicine, and radiation safety. He teaches radiology residents, cardiology fellows, and medical students about the physics of clinical imaging and ionizing radiation. Dr. Tipnis chairs AAPM's task group TG361 on the recommended use and management of protective garments and is a member of sub-committees for radiation protection and radiology resident education. He serves as a co-chair of the ABR Part I qualifying exam committee, and as an oral examiner for ABR's Diagnostic and Nuclear Medicine certifying exams. He is currently the section editor for radiology physics for Contemporary Diagnostic Radiology and a member of the editorial board for the Encyclopedia of Medical Physics. He is a faculty member at the biennially organized College on Medical Physics, at the International Centre for Theoretical Physics, Trieste, Italy. Dr. Tipnis has published over 40 research articles related to radiation exposure and techniques in radiological imaging, and the development of scintillators.

Ron Tosh, PhD

Ron Tosh is a physicist in the Radiation Physics Division working in the Dosimetry Group on standards and instrumentation for absorbed dose. He joined NIST in 2004 after several years as a sales engineer for National Instruments (now NI). Prior to that, he did experimental research in molecular-beam scattering as a postdoc at the University of Delaware. He received both his MS and PhD in Physics from the University of Pittsburgh, with a research emphasis in atomic physics and gaseous electronics. Current projects at NIST include development of calorimetry standards for absorbed dose in beams of gamma rays, x-rays, electrons, and protons used in medicine and industry. Research activities include work on ultrasonic and interferometric imaging for calorimetry and nanosensor development for dosimetry applications. He has served as Chair of the AAPM Calibration Laboratory Accreditation Subcommittee (CLA) and currently chairs the CLA Executive Committee.

Alisa Walz-Flannigan, PhD

Following her PhD in Atomic Physics from the University of Michigan, Dr. Walz-Flannigan transitioned to medical physics through a fellowship at the Johns Hopkins University and a residency with the Mayo Clinic. She stayed on staff at Mayo for over a decade where she mentored many residents, updated the radiography program, created structures for commissioning imaging systems, and drove the formation of Mayo's LGBTI Health Task Force amongst other projects. In 2019, Alisa had the opportunity to broaden her work in medical imaging with the Marshfield Clinic, where she currently leads the Medical Physics Section of Radiology. She continues to teach through the Marshfield Clinic's School of Radiography and contributes to the AAPM Virtual Library. Dr. Walz-Flannigan has served on AAPM subcommittees and task groups as a member and as a chair. She is blessed with a wonderful family and is very grateful for friends and mentors from Carleton, U-Mich, Bell Labs, Mayo, MCHS, and AAPM.

Kamil Yenice, PhD

Dr. Yenice received his PhD in Physics from the University of Toledo and completed an MS degree in Medical Physics at Wayne State University. After starting his medical physics career at New York Hospital, he joined the Memorial Sloan-Kettering Cancer Center faculty in 1999 and worked in the early development of the spine SBRT program. He then joined the University of Chicago faculty in 2005, where he has been the Chief of Clinical Physics since 2007 and the Director of the CAMPEP residency program since 2015. He has served on and lead multiple AAPM committees including the WGIMRT, Annual Meeting Education Program, TG-101 on SBRT, and has been an Editorial Board Member of JACMP for 9 years. He is passionate about patient safety and practice accreditation and is currently serving as the Physics Chair of the ASTRO APEx Committee. His primary clinical and research interests lie in stereotactic radiotherapy methods and physics.

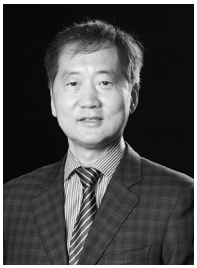
David Zamora, MS

David Zamora was born in Texas as the son of two educators. After an introduction to imaging physics at the MD Anderson, he attained his MS degree in Medical Physics. Since 2010, he has worked as a medical physicist at the University of Washington. One of David's professional goals is to know a little bit about a lot of things, a paradigm he believes better serves physics practice. He has helped author task group publications in CT, radiography, fluoroscopy, and physics education through active volunteering for the AAPM and the ABR. David has had countless encouraging mentors in the field, each of whom he appreciates immensely. What is next on the horizon? Currently, he is trying out forensic radiology. Outside of work, David is "dad" to two wonderful sons, and receives unwavering support from his wife and best friend. He and his family love travel, especially in the beautiful Pacific Northwest.

Dandan Zheng, PhD

Dr. Dandan Zheng is a Professor and Director of Medical Physics in the Department of Radiation Oncology at the University of Rochester. She earned her doctoral degree from the University of California Davis and completed a postdoctoral fellowship at Virginia Commonwealth University, where she also served on the faculty. Prior to joining the University of Rochester, Dr. Zheng worked at the University of Nebraska and served as Director of the Medical Physics Residency. Dr. Zheng volunteers widely on educational and scientific activities, serving 11 AAPM committees including Education Council and the Research Committee. She also serves on committees for CAMPEP, SDAMPP, ASTRO, and IOMP. Dr. Zheng has authored or co-authored 60 articles, 4 book chapters, and over 100 conference abstracts. She is also an associate editor for 6 journals, the book review editor for the JACMP, and an avid reviewer who has won Outstanding Reviewer from the IJROBP and from PMB.

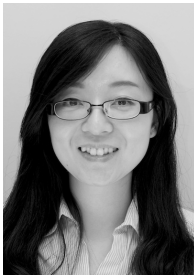
Xiaohong Joe Zhou, PhD



Dr. Zhou is a tenured Professor of Radiology, Neurosurgery, and Biomedical Engineering at the University of Illinois College of Medicine at Chicago (UIC). He received his B.Sc. degree from Peking University and PhD degree from University of Illinois at Urbana-Champaign. Following postdoctoral training at Duke University, Dr. Zhou joined General Electric Healthcare as a Senior Physicist and was on the faculty of M. D. Anderson Cancer Center. Presently, he serves as Chief Medical Physicist of UIC, while maintaining an active research program on MRI. Dr. Zhou is a diplomat of the American Board of Radiology, the American Board of Medical Physics, and the American Board of Magnetic Resonance Safety. As an NIH-funded investigator, he has been granted 35 US patents on various MRI technologies. He is a Fellow of the ISMRM, a Fellow of the AIMBE, and a recipient of Distinguished Investigator Award by the Academy for Radiology and Biomedical Imaging Research.

2022 JOHN S. LAUGHLIN EARLY-CAREER SCIENTIST AWARD

Grace Jianan Gang, PhD



Dr. Gang received her Bachelor of Applied Science and PhD in Biomedical Engineering from the University of Toronto. She is currently an Assistant Research Professor in the Department of Biomedical Engineering at Johns Hopkins University and will join the Department of Radiology at the University of Pennsylvania in the near future. Her work centers around image quality modeling, assessment, and optimization for advanced X-ray imaging modalities. Her research spans a wide range of topics from x-ray detector physics, analytical and model-based image reconstruction, system modeling and optimization, to human visual perception. Dr. Gang has developed a strong research program and has been the recipient of numerous awards, most notably first place in the Johns R. Cameron Young Investigator Symposium in 2013, the AAPM Research Seed Grant Funding in 2014, the Moses and Sylvia Greenfield Award in 2015, and the Jack Fowler Junior Investigator Award in 2018. Dr. Gang's current research interests includes the development and performance analysis of deep learning algorithms, standardization of radiomics features using knowledge of imaging physics, and design of spectral CT systems to enhance the sensitivity and quantitation accuracy of contrast agents. She currently serves as the Principal Investigator of three R01 grants from the NIH. Outside of research, Dr. Gang is actively involved in the education mission. She co-developed and is currently instructing an imaging course where undergraduate students are introduced to optical imaging concepts through hands-on experimentation with a custom-built microscope. During the pandemic, she adapted the course for online instruction using remote-controlled components. Her effort was recognized by an intramural award from JHU for advancing teaching technology.

MARVIN M. D. WILLIAMS PROFESSIONAL ACHIEVEMENT AWARD RECIPIENTS

1989: Gail D. Adams
1990: Peter R. Almond
1991: Ann E. Wright
1992: John S. Laughlin
1993: Robert O. Gorson
1994: Robert J. Shalek
1995: Nagalingam Suntharalingam
1996: James A. Purdy
1997: Colin G. Orton
1998: Faiz M. Khan
1999: Jimmy O. Fenn
2000: Moses A. Greenfield
2001: Stewart C. Bushong
2002: Bhudatt R. Paliwal
2003: James B. Smathers
2004: Kenneth R. Hogstrom
2005: Edwin C. McCullough
2006: Edward S. Sternick
2007: Michael D. Mills
2008: Edward Lee Nickoloff
2009: Melissa Carol Martin
2010: Walter Grant
2011: Benjamin R. Archer
2012: William F. Hanson
2013: Marilyn Stovall
2014: Herbert W. Mower
2015: Christopher H. Marshall
Jean M. St. Germain
2016: Keith J. Strauss
2017: Stephen Balter
Michael T. Gillin
2018: Muthana S.A.L. Al-Ghazi
Louis K. Wagner
2019: Bruce J. Gerbi
Larry E. Sweeney
2020: Priscilla Butler
Christopher Serago
2022: Steven Goetsch
Pei-Jan Paul Lin

The 2020 Marvin M. D. Williams Professional Achievement Medal recipients were awarded virtually to ***Priscilla Butler, MS & Christopher Serago, PhD***.

Scan the QR code to view their biographies on page 32 of the AAPM 2020 Awards & Honors Ceremony Program.

2022 MARVIN M.D. WILLIAMS PROFESSIONAL ACHIEVEMENT AWARD

Steven Goetsch, PhD

Steven Goetsch received his Doctorate in Medical Physics from the University of Wisconsin Madison in 1983. He had previously received a BS degree in Physics from Michigan State University and an MS in Health Physics from Northwestern University. After working as a Radiation Safety Officer in the Chicago area for four years, he spent five years as a graduate student in Madison, working under Frank Herbert Attix and Paul M. DeLuca, Jr. He served as Chief Physicist, and later Director, of the University of Wisconsin Accredited Dosimetry Calibration Laboratory from 1983 to 1990. He was active in the AAPM, becoming North Central Chapter President and Chapter Representative to the AAPM Board. Dr. Goetsch then moved to Los Angeles where he accepted a position as Hospital Physicist and Assistant Clinical Professor at UCLA Medical Center. He began a 32 year involvement with the AAPM Southern California Chapter, becoming Chapter President and then serving for 20 years as Education Chair. Dr. Goetsch moved to San Diego in 1994, becoming the Chief Physicist at the San Diego Gamma Knife Center for the next 26 years. Dr. Goetsch also served as an instructor in the San Diego State University Medical Physics program from 1996 to 2011 and at John Patrick University from 2010 to the present. During his time in San Diego, Dr. Goetsch worked part time in Radiation Oncology programs at Sharp Health, Scripps Health and Palomar Medical Center. He is married to Mona Goetsch, and his son David works as a health physicist at the University of Southern California.

Pei-Jan Paul Lin, PhD

Dr. Lin received his Master's Degree from DePaul University (Chicago) and Doctor of Philosophy from University of Tsukuba (Japan). He received his medical physics training at Rush Presbyterian St. Luke's Hospital (1972-1974).

He joined Northwestern University Medical School (NUMS) and Northwestern Memorial Hospital (NMH), both of Chicago in 1974. He became a professor of radiology in Medical Physics at NUMS (1989). He was an adjunct professor of radiology at Aichi Medical University of Nagoya, Japan (1999), and a visiting professor at Hainan Medical College of Hainan, China (2011). He is currently a professor of radiology and is chairman, Division of Diagnostic Medical Physics at Virginia Commonwealth University (VCU) and chief physicist for the Clinical Radiation Safety Office.

Dr. Lin was a recipient of Distinguished Alumni Award of DePaul University (1987). He is a Fellow of ACR, AAPM and ACMP.

He served as chief of medical physics at NMH, Children's Memorial Hospital (Chicago), Beth Israel Deaconess Medical Center (Boston) and, currently, VCU Medical Center (Richmond).

Dr. Lin worked to promote practical medical physics for the clinically oriented medical physicists by joining various TGs of AAPM, chaired a number of TGs and served two terms as the chair of Diagnostic X-ray Imaging Committee which is called, currently, Radiography and Fluoroscopy Subcommittee of the Science Council. In addition, he has served as associate editor and reviewer for a number of medical physics journals as contribution to the radiology community and provided free medical physics to underserved community as well.

EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD RECIPIENTS

1996: Arnold Feldman
1997: Robert O. Gorson
1998: John Hale
Jon H. Trueblood
Kenneth A. Wright
1999: Perry Sprawls
Joe P. Windham
2000: William F. Hanson
Mary L. Meurk
2002: Amos Norman
2003: Stewart C. Bushong
2003: Radhe Mohan
2004: Donald E. Herbert
2006: Azam Niroomand-Rad
2007: Lawrence N. Rothenberg
Marilyn Stovall
2008: James M. Galvin
Kenneth R. Kase
2009: James A. Deye
Lawrence E. Reinstein
Raymond L. Tanner
2010: Benjamin R. Archer
Laurence P. Clarke
2011: Joel E. Gray
Martin S. Weinhous
2012: Charles A. Mistretta
Edward S. Sternick
Kenneth N. Vanek
2013: Caridad Borras
Norbert J. Pelc
George Starkschall
2014: Howard Ira Amols
Bruce H. Curran
Edward Lee Nickoloff
2015: Larry A. DeWerd
Kunio Doi
Melissa Carol Martin
2016: Wendell R. Lutz
Robert J. Pizzutiello
Michael V. Yester
2017: G. Donald Frey
John W. Wong
2018: Jerry D. Allison
Frank J. Bova
2019: James C. Chu
Ellen D. Yorke
2020: Frederic Fahey
X. George Xu
2022: Indra Das
Martin Yaffe

The 2020 Edith H. Quimby Lifetime Achievement Medal recipients were awarded virtually to ***Frederic Fahey, DSc & X. George Xu, PhD***.

Scan the QR code to view their biographies on page 35 of the AAPM 2020 Awards & Honors Ceremony Program.

2022 EDITH H. QUIMBY LIFETIME ACHIEVEMENT AWARD

Indra Das, PhD

Indra J Das, PhD is Director of Medical Physics and Dosimetry in the Department of Radiation Oncology at Northwestern Memorial Hospital and Vice Chair and Professor at Northwestern University Feinberg School of Medicine in Chicago. He received his early education (BSc, MSc and Dip RP) in India and worked as a Medical Physicist in India and Iran for over 8 years, before moving to the United States, where he received his MS in Medical Physics from the University of Wisconsin, Madison in 1984 and PhD in Biomedical Physics from University of Minnesota, Minneapolis in 1988. He is board certified by ABR in 1989, ABMP in 1990, and maintains MOC for ABR. He has worked in major academic centers such as the University of Massachusetts, Worcester, Fox Chase Cancer Center, Philadelphia, University of Pennsylvania, Philadelphia, Indiana University School of Medicine, Indianapolis, NYU Langone School of Medicine, NY, and Northwestern University, Chicago. The last three places he held the position of Vice Chair, Professor and Director of Medical Physics. He is probably one of the best clinical physicists, but more so, he is a superb experimentalist. His research focuses on radiation dosimetry, small field dosimetry, treatment planning, dose prescription, electron beam, proton beam, and MR-Linac. To his credit, he has over 240 peer-reviewed papers, 460 abstracts, 27 books/chapters, and over 250 invited talks all over world. He has mentored many national and international students for their PhD and Post doc. He has authored some of the seminal AAPM task groups such as Task Group 63, 66, 69, 75, 103, 106, 155, 235 and 256. He is a fellow of IPEM, AAPM, ACMP, ACR and ASTRO. He is currently on the editorial boards of Medical Physics, British Journal of Radiology, Journal of Radiation Research and serve as Chair of IOP publishing. He is recipient of the Farrington Daniels award, Dr. Ramaiah Naidu Life Time achievement award (India), Academic Gold Medal (IPEM), and now Edith Quimby Life Time Achievement award of the AAPM.

Martin Yaffe, PhD

Martin Yaffe is a medical physicist and imaging scientist at Sunnybrook Research Institute and Professor of Medical Biophysics at The University of Toronto. His research over the past 40 years has focused on the earlier detection, diagnosis and characterization of cancer. His lab pioneered the development of digital mammography, now used worldwide, and in collaboration with epidemiologist, Dr. Norman Boyd and multiple other collaborators, contributed to the understanding of breast density in its dual roles as a risk factor for breast cancer and in masking its detection in mammograms. He has a strong interest in breast cancer screening and has used the NCI CISNET and Canadian OncoSim models for microsimulation to study its optimizations, the phenomenon of overdetection and the effect of COVID disruptions on breast cancer outcomes. He is a member of the leadership team of the TMIST trial (MAC-22/ ECOG-ACRIN 1151) and serves as its Canadian Study Chair. Over his career, he has been committed to improvement of image quality in mammography. He has chaired working groups of ICRU and IAEA, focussing on mammography quality and his group has developed custom phantoms and test procedures for that purpose, and created special programs for both the DMIST and TMIST trials. He created the biomarker Imaging Research Laboratory (BIRL) to apply imaging science to the quantitative analysis of pathologic and radiomic cancer biomarkers to improve their value for use in prognosis and prediction. He is Co-Director of the Imaging Research Program of The Ontario Institute for Cancer Research. He was inducted as a Member of The Order of Canada in 2015 and as Fellow of The Royal Society of Canada in 2021.

WILLIAM D. COOLIDGE GOLD MEDAL RECIPIENTS

1972: William D. Coolidge
1973: Robert J. Shalek
1974: John S. Laughlin
1975: Marvin M. D. Williams
1976: Harold E. Johns
1977: Edith E. Quimby
1978: Lawrence H. Lanzl
1979: Herbert M. Parker
1980: John R. Cameron
1981: James G. Kereiakes
1982: Gail D. Adams
1983: Edward W. Webster
1984: Robley D. Evans
1985: Jack S. Krohmer
1986: Warren K. Sinclair
1987: Gordon L. Brownell
1988: John R. Cunningham
1989: William R. Hendee
1990: Peter R. Almond
1991: Moses A. Greenfield
1992: Nagalingam Suntharalingam
1993: Colin G. Orton
1994: F. Herb Attix
1995: Robert Loevinger
1996: Leonard Stanton
1997: James A. Purdy
1998: Bengt E. Bjarngard
1999: Faiz M. Khan
2000: Lowell L. Anderson
2001: Ravinder Nath
2002: Bhudatt R. Paliwal
2003: Kenneth R. Hogstrom
2004: C. Clifton Ling
2005: Gary T. Barnes
2006: Ervin B. Podgorsak
2007: Arthur L. Boyer
2008: Paul L. Carson
2009: Willi A. Kalender
2010: David W. O. Rogers
2011: Richard L. Morin
2012: Stephen R. Thomas
2013: Benedick A. Fraass
2014: Thomas Rockwell Mackie
2015: Maryellen L. Giger
2016: Paul M. DeLuca
2017: Jatinder R. Palta
2018: Radhe Mohan
2019: John Boone
2020: Randall Ten Haken
2022: Jacob Van Dyk

The 2020 William D. Coolidge Gold Medal recipient was awarded virtually to ***Randall Ten Haken, PhD***.

Scan the QR code to view his biography on page 38 of the AAPM 2020 Awards & Honors Ceremony Program.

2022 WILLIAM D. COOLIDGE GOLD MEDAL

Jacob Van Dyk, DSc

Jacob (Jake) Van Dyk is Professor Emeritus of Oncology and Medical Biophysics at Western University, London, Canada, and former Manager of Physics and Engineering at the London Regional Cancer Program (LRCP). He has over 40 years of experience in the practical facets of radiotherapy physics with 24 years at the Princess Margaret Hospital (PMH) in Toronto (1971-1995); 15 years at the LRCP (1995-2010); and nearly two years at the International Atomic Energy Agency (IAEA), Vienna, Austria (2009-2011). While at PMH, he took a one-year leave of absence (1974-1975) to work at the cancer center in Geneva, Switzerland.

His research included practical aspects of radiation dosimetry and treatment planning, the assessment of radiobiological response, especially as related to lung injury, and multiple aspects of the implementation of modern technology into clinical practice. He also addressed outcome optimization and uncertainty propagation in conformal and intensity-modulated radiation therapy. This included the development of "test phantoms" which were commercialized as QUASAR Phantoms by Modus Medical Devices. Since his retirement, he worked on various projects related to radiotherapy resource analysis and technical guidance, especially in lower income contexts.

He has won various awards, e.g., teaching awards in Toronto and London; elected Fellow of the AAPM in 1997; COMP's Gold Medal in 2011; COMP's inaugural Fellow (FCOMP) in 2012. In 2013, he was selected as one out of 50 medical physicists by the IOMP "who have made an outstanding contribution to the advancement of medical physics over the last 50 years." In May 2014, he was awarded an honorary Doctor of Science degree at Western University. In 2019, he received the IOMP International Day of Medical Physics (IDMP) Award for "promoting medical physics to a larger audience and highlighting the contributions medical physicists make for patient care."

He served on the Board of the AAPM (1992-1994), multiple other AAPM committees, and organized various symposia for the ASMs. He was the President of the Canadian College of Physicists in Medicine (CCPM) for four years and was an examiner for over 15 years. He participates on the boards and task groups of various professional, national, and international organizations, and is a consultant for the IAEA and the WHO. He has been a lecturer/speaker in over 41 countries. In addition to about 200 publications, he has published four volumes (~2,634 pages) of The Modern Technology of Radiation Oncology: A Compendium for Medical Physicists and Radiation Oncologists. Recently, he published a book with Springer, entitled True Tales of Medical Physics: Insights into a Life-Saving Specialty, in which award-winning medical physicists have contributed career vignettes and words of wisdom intended for medical and non-medical physics audiences. The Foreword is written by Rafael Grossi, the Director General of the IAEA.

He was a founding member of "Medical Physics for World Benefit" (www.mpwb.org), which is devoted to providing medical physics support to lower income settings throughout the world.

Jake happily shares his life with his wife, Christine, children, Tonia, Jon, Ben, and Amy, along with four grandchildren and two great-grandchildren!

Congratulations

to all of the Award Recipients!

American Association of Physicists in Medicine
1631 Prince Street • Alexandria, VA 22314
www.aapm.org

Music provided by Cherry Blossom String Quartet