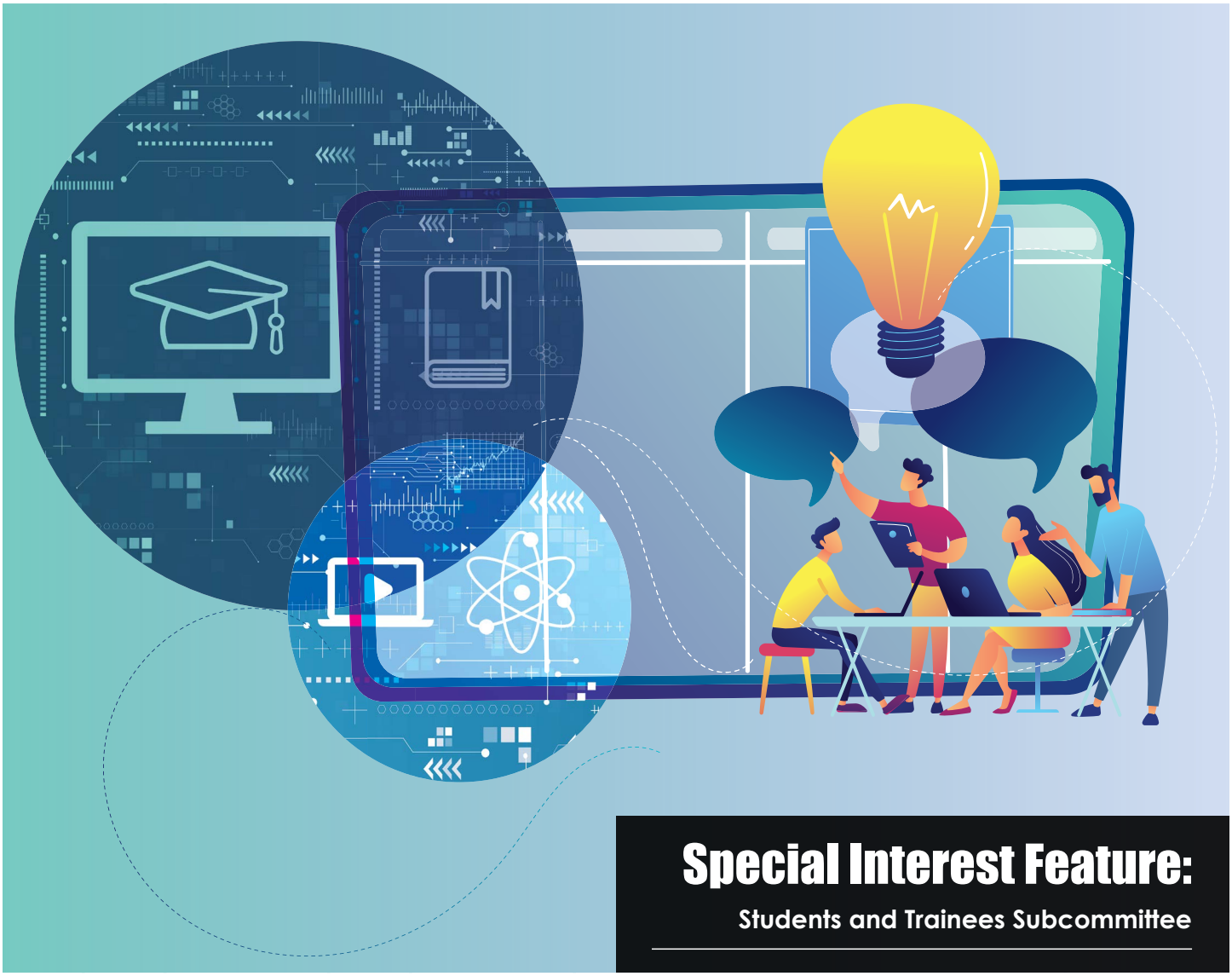
AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

IMPROVING HEALTH THROUGH MEDICAL PHYSICS

AAPM NEWSLETTER

March/April 2024 | Volume 49, No.2



Special Interest Feature:

Students and Trainees Subcommittee

IN THIS ISSUE:

SAVE *the* DATES

2024 AAPM MEETINGS

MARCH

23–26 **Spring Clinical Meeting**
Registration Now Open!

JUNE

17–22 **Summer School**
Registration Opens: March 13

JULY

18–19 **TG100, Train the Trainer**
Pre-Conference to the Annual Meeting & Exhibition
Registration Opens: March 20

20 **AI for Clinical Medical Physicists**
Pre-Conference to the Annual Meeting & Exhibition
Registration Opens: March 20

JULY

20–21 **Review Courses**
Pre-Conference to the Annual Meeting & Exhibition
Registration Opens: March 20

21–25 **66th Annual Meeting & Exhibition**
Registration Opens: March 20

OCTOBER

28–29 **Innovations in QA: Moving Toward Efficient QA Programs** | *Virtual*
Registration Opens: June 26

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

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EVENTS/ANNOUNCEMENTS

EDITORIAL BOARD

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SUBMISSION INFORMATION

To keep all reports uniform, we kindly request that submissions be made through a QuestionPro portal.

Questions? Contact Nancy Vazquez

PUBLISHING SCHEDULE

The AAPM Newsletter is produced bi-monthly.
Next issue: May/June 2024
Submission Deadline: March 29
Posted Online: Week of April 29

CORPORATE AFFILIATE ADVERTISING

Advertising Rates & Deadlines

CONNECT WITH US!

EDITOR'S NOTE

I welcome all readers to send me any suggestions or comments on any of the articles or features to assist me in making the AAPM Newsletter a more effective and engaging publication and to enhance the overall readership experience. Thank you.

2024 **AAPM** EXPANDING HORIZONS TRAVEL GRANT

Deadline: March 15

The **EXPANDING HORIZONS TRAVEL GRANT** program is designed to provide students and trainees with an opportunity to broaden the scope of scientific meetings attended in their career. The proposed meeting should introduce new and relevant topics which may ultimately be incorporated into current or future medical physics research and progress the field in new directions.

Program Year 2024 will be broken into two application cycles: **Spring** (Round 1) and **Fall** (Round 2).

The total amount of support funding for use towards travel and/or meeting registration will be based on attendance type: **$1,500 if attending IN-PERSON** or **$500 if attending VIRTUALLY/ONLINE ONLY**.

Please Note: $250 of the total award amount — *regardless of attendance type* — is contingent on a short presentation given by awardee at the next available AAPM Annual Meeting & Exhibition.

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

IMPORTANT FALL DEADLINES

- Open: February 1, 2024
- **Deadline: March 15, 2024**
- Award Decisions: May 1, 2024

REQUIRED DOCUMENTS

- Cover Letter/Personal Statement
  - Long-term career goals
  - Motivation to attend proposed meeting
  - Expected scientific value of attendance on dissertation project or future research
- Curriculum Vitae
  - Limit to education, publications, presentations, and any relevant awards
- Letter of Recommendation
  - Must also confirm that additional expenses outside of total award amount will be covered
- Budget/Overall Expected Expenses

APPLY TODAY:
https://aapm.me/EXHG

ELIGIBILITY CRITERIA

- Proposed meeting cannot be specifically related to medical physics.
- Proposed meeting must take place between July 1 – December 31, 2024.
- Must be a current graduate student, post-doctoral candidate, or current resident within five years of graduation at time of submission.
- Must be an AAPM member in good standing at the time of submission.
- Must not be a past Expanding Horizons awardee.

EXAMPLES OF INELIGIBLE MEETINGS

- Any AAPM-sponsored meeting
- American Society of Radiation Oncology (ASTRO) Annual Meeting
- Radiological Society of North America (RSNA) Annual Meeting
- Any meeting regularly attended by institutional group/program (judged on case-by-case basis)
- Any meeting that has previously been supported by an Expanding Horizons Travel Grant under the same Faculty/Advisor/Principal Investigator

QUESTIONS? exhg@aapm.org | www.aapm.org

Highlighting Students, Mentorship, and Science Advocacy

NEWSLETTER EDITOR'S REPORT

Welcome to the March/April 2024 edition of the AAPM Newsletter. The year is off to a busy start and this issue highlights some of the many activities AAPM members are involved in. The Special Interest Group feature for this issue is from the Students & Trainees Subcommittee with a recap of the 2023 Residency Fair and other activities. There's also a report from the Education Council with a review from the 2023 Workshop on Improving the Teaching and Mentoring of Medical Physics, and another mentoring success story from the Professional Mentorship Working Group. Consider signing up for the first-ever "Speed Mentoring" event when you register for the 2024 Annual Meeting & Exhibition in Los Angeles! This issue also has two reports from the Society of Directors of Academic Medical Physics Programs (SDAMPP) on conversations they hosted on balancing research during residency, and visa options for international medical physics residency applicants.

Speaking of international students, the Legislative and Regulatory Affairs Report highlights AAPM's advocacy efforts. The report lists several legislative bills under consideration; one, the Keep STEM Talent Act, would make it easier for international students earning advanced STEM degrees in the US to work in the US after graduation. The AAPM's Government and Regulatory Affairs Committee (GRAC) is also planning to start a State Champions Program to grow AAPM's advocacy at the state level, so keep an eye out for more information. On a more scientific topic, MIDRC (Medical Imaging and Data Resource Center) is celebrating the beginning of its 4th federally funded year and will start to include oncological images and metadata in its data repositories. Check out the full newsletter for these reports and more!

We hope every AAPM member finds something of interest in every issue of the Newsletter. All AAPM members are encouraged to submit content and ideas for the Newsletter either directly to the Editor or through the submission link on the Newsletter page. Please enjoy this issue of the Newsletter and send us your feedback and ideas for future editions. And as always, share the Newsletter articles you enjoy with your social media network; the Newsletter is available for all to read. ■

Jennifer Pursley, PhD
Massachusetts General Hospital

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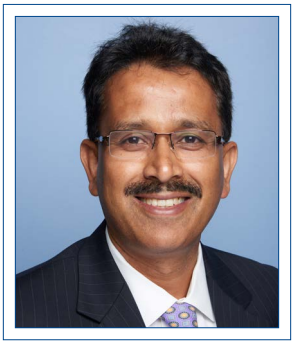
Forging Ahead Together: Reflections from the President-Elect

PRESIDENT-ELECT'S REPORT



M Mahesh, PhD
Johns Hopkins University

It is with great pleasure — and also with humility — that I write this column. As I began my official duties as the AAPM President-Elect, I feel it is a great opportunity for me to visit our chapters. I consider those who are active in leading our chapters critical members that provide grassroot efforts forming the backbone of AAPM. My belief is that only by working together we will be able to further strengthen our organization, allowing us to do even more for the field of medical physics. AAPM is a diverse organization with over 10,000 members that includes medical physicists from engineering, health physics, magnetic resonance, nuclear medicine, radiation oncology, radiation safety, radiology, ultrasound, and other specialties. Thanks to the recent overhaul of membership categories, it is now simplified to just four categories.

As most know, I had the opportunity to serve as AAPM Newsletter Editor (2006-2015) before becoming AAPM Treasurer (2016-2021). These two roles provided me a greater understanding of the wide range of activities and the strengths of AAPM and also the fiscal challenges we face as an organization.

Soon after I was elected to the presidential chain, **Steven Goetsch** from the AAPM-South Central Chapter invited me to speak at their chapter meeting in January 2024. This was my first visit to an AAPM chapter and I am looking forward to visiting other chapters (signed up to visit five chapters so far) throughout this year.

Leaders gathered at the AAPM Southern California Chapter Meeting held in January 2024.

My visit to AAPM-SCC was very eventful, providing a great opportunity to meet with the chapter leaders and share an expanded version of my theme for next year. The meeting was well attended and had considerable vendor support. One of the AAPM-SCC members shared information with me about the biomedical physics program at the

PRESIDENT-ELECT'S REPORT, Cont.

undergraduate level at Fresno State University which led to further discussions. As of now, I am invited to speak at Fresno State with the goal of highlighting the importance of such programs to our field. I also intend to share my views with the University leadership regarding the importance of such undergraduate programs to our future workforce. I will report back after my visit in a future NL article.

Before I sat down to write this column, I received permission from the NL editor for a due date extension in order to report on all five Council retreats held at AAPM headquarters. One common message I took from attending them is that we at AAPM are blessed with strong talent, dedicated volunteers eager to push forward and promote our field of medical physics in their respective areas.

The **Education Council** retreat met all day February 2 and was focused on its current and future activities. Council Chair J**oann Prisciandaro** and Vice-Chair **Jay Burmeister** discussed with other Council members how to address new and emerging areas such as Artificial Intelligence, theranostics, and a few other topics. The discussions included resources for medical physicists as educators and trainers, modules on physics and radiation biology for radiation therapy residents, and possibilities of leveraging content in order to raise revenues to the organization.

Science Council, the largest council with the largest budget, had lengthy discussions about task groups currently in the pipeline and had lot to hear from various committees. Council Chair **Jan Seuntjens**, Vice-Chair **Ingrid Reiser** — along with **Ioannis Sechopoulos**, Imaging Physics Committee Chair and **Dimitris Mihailidis**, Therapy Physics Committee Chair — engaged other members of the Council in constructive deliberations on task group activities, blue sky discussions, and other topics. ASTRO Director of Quality Improvement Samantha Dawes was invited, and she gave an in-person update on the RO-ILS program.

International Council, the infant among our councils, met February 8-9 to learn about their subcommittee activities and their planning for future. Council Chair **Jatinder Palta** and Vice-Chair **Ana Maria Marques de Silva** and other Council members shared their current and planned activities. On the second day, May Abdel-Wahab MD, Director Division of Human Health, IAEA, Vienna, Austria, gave a key-note presentation on IAEA activities and she stated how much they are looking forward to working with AAPM members to address the challenge of human health.

Administrative Council, the home to all activities related to administering the organization, met February 22-23. This Council has a new chair, **Bette Blankenship**, and Vice-Chair, **Holly Lincoln**, for 2024. It was nice to hear from them and other members of the Council shared their current and planned activities. Several topics were discussed over two days including input from **Marcus Yoon** our Corporate Advisory Board Chair. In addition to the discussion, the face-to-face interactions with those who attended was very valuable for me to learn how passionate and dedicated they all are.

Professional Council, a very important council that supports and promotes what we as medical physicists do in our careers, met March 3-4. This council is led by Chair **Rebecca Milman** and Vice-Chair **Russell Tarver** both of whom I have known and worked with before; I am very pleased to see them leading this council at a crucial juncture as work-force issues are not confined to AAPM but are also an issue our physician colleagues, radiologists, radiation oncologists and nuclear medicine specialists are facing. It was reassuring to know that members of this Council are working with others on this challenging issue. Even though I was only able to participate in part of the retreat, it was still worth my visit to headquarters to meet face-to-face with all participating members.

Education Council Retreat

While attending as an invited speaker at the European College of Radiology (ECR) meeting in Vienna, Austria, I met with many medical physics colleagues in the **European**

PRESIDENT-ELECT'S REPORT, Cont.

Federation of Organizations for Medical Physics (EFOMP). The leadership of EFOMP wants to further strengthen its ties with AAPM under an already existing MOU. There have been a few joint task group reports on topics that are of interests to both organizations; it is very important for AAPM to create an environment where we invite medical physicists working outside the United States to join our organization (goal of increasing membership) and together we can do lot more for our patients in the long run.

With regards to equity and diversity, I am very proud to see that three of our five councils are now led by women — recognition within the volunteer community of their hard work and the leadership skills they all bring to the organization.

Even though I wanted to keep this article as short as possible, I felt it is my duty as President-Elect to share what I experienced by attending chapter meetings and council retreats. Attending the retreats also gave me a great opportunity to spend time with our new Executive Director **David Gammel**. Once again, I am humbled by having this opportunity to serve AAPM as your President-Elect. ■

Science Council Retreat

International Council Retreat

Volunteers are essential to furthering the AAPM mission of *advancing medicine through excellence in the science, education, and professional practice of medical physics*. Become a part of this dynamic community via the AAPM Committee Classifieds. Exciting new opportunities are posted regularly; bookmark or check back often to explore the latest possibilities to get involved!

#AAPM2024

AAPM 2024

66TH ANNUAL MEETING & EXHIBITION JULY 21–25 | LOS ANGELES, CA

EMBRACING CHANGE. **IMPACTING** PATIENT CARE.

IMPORTANT DATES:

MARCH 20: Registration and Housing Open

APRIL 24: Authors Notified of Proffered Abstract Disposition

MAY 9: Annual Meeting Program Available Online

aapm.me/annual

AAPM2025

67TH ANNUAL MEETING & EXHIBITION | July 27–31 | Washington, DC

NEW!

In 2025 AAPM will be planning earlier for the Annual Meeting Program! The RFP will now open August 27, 2024

RFP Opens	Tuesday, **August 27**, 2024
RFP Closes	Thursday, **October 10**, 2024
Abstract Submission Site Opens for Proffered Abstract Submissions	Tuesday, **November 5**, 2024
Deadline for **Proffered Abstract Submissions**	Tuesday, **January 14**, 2025
Authors Notified of Presentation Disposition	Thursday, **April 24**, 2025
Online Meeting Program Goes Live	Friday, **May 9**, 2025

Field Notes from the Executive Director

EXECUTIVE DIRECTOR'S REPORT

I wanted to share some insights from my first few months as part of the AAPM team. It's been an enlightening period filled with exploration and engagement. Throughout January and February, my focus has been listening, questioning, and learning. I've had the opportunity to delve into the inner workings of AAPM, gain a broader understanding of medical physics, and connect with the dedicated team here at headquarters.

One standout moment was our exhibitor site visit in Los Angeles. I learned about the plans for our upcoming Annual Meeting and met with representatives from our exhibitors and sponsors. The buzz around the event in the dynamic city of LA is palpable!

Following LA, I joined AAPM President **Todd Pawlicki** in San Diego, where we visited the UCSD School of Medicine. It was eye-opening to observe several radiation oncology treatments and tour a proton therapy clinic. Witnessing the work and dedication of medical physicists as critical members of the treatment team was inspirational for me.

Later this month, I'm excited to join President-Elect **M Mahesh** at Johns Hopkins to explore the imaging and diagnostic aspects of medical physics. I'm eager to continue exploring various facets of the discipline, including research, in the coming months.

Council retreat season has begun at HQ, and I've already had the opportunity to meet with the Education and Science Councils as of this writing. The retreats have been an excellent opportunity to engage with the important work of our Council members and to meet many of you face-to-face for the first time. I look forward meeting with the International, Professional, and Administrative Councils in the coming weeks.

In addition to these engagements, I've been working with the Executive Committee and officers to kickstart our strategic planning process for the year ahead. Stay tuned for more information on that project and how it will shape the future of AAPM.

Finally, I encourage you to get in touch with me at dgammel@aapm.org if you have ideas, thoughts, concerns or questions about AAPM. I'd love to hear from you!

Thank you for your warm welcome into the AAPM community. I'm excited about the journey ahead and the opportunity to collaborate with the membership and staff on improving health through medical physics. ■

C. David Gammel
Executive Director, AAPM HQ

T. Pawlicki and C.D. Gammel touring the UCSD Proton Center.

AAPM SCIENCE COUNCIL ASSOCIATES
MENTORSHIP PROGRAM

THE AAPM SCIENCE COUNCIL ASSOCIATES MENTORSHIP PROGRAM (SCAMP) 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 the advancement of science within AAPM. SCAMP uses the process of shadowing to integrate the Associates into scientific activities of the organization. Our review working group will select eight Associates then assign each one to a Mentor from the AAPM Science Council, Research Committee, Data Sciences Committee, Therapy Physics Committee, Imaging Physics Committee, Technology Assessment Committee, or subgroups thereof. The Associate will participate in selected meetings of their assigned Mentor's Committees and join a task group (chosen with input from the Mentor). Other shadowing AAPM-related activities include abstract review, Young Investigator judging, committee activities at the Annual Meeting, etc.

The Science Council (SC) Associates will participate in the program through the end of the following calendar year. Each Associate will be reimbursed up to $2000 to cover the costs (travel-related expenses including flight, hotel, and meeting registration) to attend the 2024 Annual Meeting in Los Angeles, CA and the 2025 Annual Meeting in Washington, DC.

OPEN FOR APPLICATIONS:

January 8, 2024

DEADLINE:

April 3, 2024

ELIGIBILITY CRITERIA:

- Early career Medical Physicists within five years of earning a doctoral degree. Applicants must have completed their PhD and be either currently in a residency/post-doc position or beginning their career in order to apply.
- Must be a member of AAPM at the time of application (any membership category) and maintain membership for the duration of the award period.

  Pending membership status not acceptable

  Prior SCAMP recipients are ineligible

DIRECT INQUIRIES: scamp@aapm.org

APPLICATION REQUIREMENTS:

- Cover letter outlining current contributions to Medical Physics research, describing future career plans, and reasons for interest in mentorship within Science Council and its committees specifically.
- The cover letter should specify the committee(s) and/or committee member(s) of interest — e.g., Science Council, Research Committee, Therapy Physics Committee, Imaging Physics Committee, or Technology Assessment Committee, and/or member(s) therein.
- A diversity statement limited to one single-spaced page that describes how you have supported and will support and achieve SCAMP and AAPM's goals of equity, diversity and inclusion, especially as it relates to supporting the role of women and underrepresented groups in the field.
- CV (no more than four pages).
- Brief letter of support from institution during the SCAMP tenure. This letter indicates support for the time commitment that SCAMP requires. Not a letter of recommendation.
- Please combine and submit all application documents as one PDF

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https://aapm.me/SCAMP

Outlook on 2024 Government Affairs

LEGISLATIVE AND REGULATORY AFFAIRS REPORT

Intro

This year promises to be a busy one for AAPM's government relations. To begin, AAPM aims to elevate its advocacy efforts through the implementation of the *State Champions Program*. This network will bring together AAPM members across states that have an interest in affecting the regulatory and legislative landscapes for their respective localities. Meanwhile, pending legislation holds our attention at both state and federal levels, some of which we are actively supporting while others are flagged for monitoring or opposition. Topping things off, it is an election year! The report below expounds on what 2024 may hold for AAPM's government relations.

State Champions Program

Last year served as a turning point for our Government and Regulatory Affairs Committee (GRAC). GRAC's strategy has typically been viewed as reactive or pertaining to issues of limited scope. Moving forward, we hope to grow our advocacy, to strengthen our reputation for matters relating to medical physics, and to be more proactive in influencing public policy. The *State Champions Program* is our solution to achieving this transformation. Conceived last year, the program is anticipated to take form over the next several months. AAPM member volunteers from each state will serve to multiply GRAC's efforts, making AAPM many times more impactful at the state level. Below are some of the objectives for 2024:

- Train state champions on advocacy tools and strategies;
- Evaluate the regulatory landscapes in each state;
- Establish goals for the state champions (i.e., analyzing state regulations, meeting with regulatory agency leaders, collaborating on grassroots advocacy, hosting district visits); and
- Increase engagement with local regulatory and policy changes impacting our field.

We are excited to begin this journey in a more official capacity this coming year. Through the expanded collaboration of state champion volunteers, AAPM can drive positive changes for medical physics and the patients our members serve. Additionally, we hope that this pursuit will raise awareness of AAPM's advocacy efforts across our membership.

Legislative Activities

The 118th Congress is at risk of becoming one of the least productive sets of lawmakers that the U.S. has experienced in recent decades. With many ongoing debates (i.e., continuing resolutions for 2024's budget, negotiating support for international conflicts, U.S. border security), there does not appear to be much room for anything else. On top of that, it might feel like we are living in a political drama. The 2024 election will only heighten that sense.

David Crowley
Senior Government Relations Manager, AAPM HQ

MRV AAPM

Missouri River Valley Chapter of the AAPM

Join the Missouri River Valley (MRV) Chapter of AAPM in St. Louis for our 2024 Spring Meeting — River Reflections: MedPhys in the MRV!

We'll be hosting our first in-person meeting since the pandemic just before the Spring Clinical Meeting (also in St. Louis!) on March 22 on the WashU campus. Our keynote session will include AAPM President, Todd Pawlicki and AAPM Executive Director, David Gammel!

And we'll have invited speakers from across our chapter and our popular trainee competitions — the MedPhys SLAM and Early-Career Investigators Symposium. So join us in St. Louis, all AAPM members are welcome!

For more info and to register, go here.

Missouri River Valley Chapter Meeting

March 22, 2024 | 8:00 am-5:00 pm CDT

Charles F. Knight Executive Conference Center in St. Louis

LEGISLATIVE AND REGULATORY AFFAIRS REPORT, Cont.

Significant political maneuvering will take place to either advance or halt legislation between now and November's elections. Despite this bleak outlook, AAPM continues to engage on several legislative issues. For many of these, it's about playing the long game. Even if not successful in this Congress, AAPM will have educated lawmakers on the issues and built the necessary relationships for when the winds shift to favor our causes. Below are a list of U.S. or state bills that AAPM's government relations are currently engaged in:

United States House Bill 6800, Department of Veterans Affairs Therapeutic Medical Physicist Pay Cap Relief Act

Throughout 2023, AAPM and our federal lobbying partners at Capitol Associates, Inc. met several times with congressional staffers to educate them on the impacts of a below market salary cap for Veterans Affairs (VA) therapy medical physicists (TMP). The salary cap leads to difficulties for the VA to recruit and retain in-house TMP staffing. The VA can cover these vacancies through expensive contract services, often costing 2–3x the TMP market rate. Federal statute sets the salary cap, which requires a legislative solution for any long-term fixes. Fortunately, AAPM succeeded in having the above bill introduced to the House near the end of 2023. This is thanks to the sponsor Rep. Cherfilus-McCormick [D-FL] and co-sponsors Reps. Kiggans [R-VA] and Mace [R-SC]. To learn more, read Rep. Cherfilus-McCormik's December press release or reach out to AAPM's Working Group on Practice in Veterans Affairs Centers.

United States Senate Bill 2384, Keep STEM Talent Act of 2023

This bill gained AAPM's attention in January 2024 when we were asked to offer an endorsement. Sen. Durbin [D-IL] introduced the bill back in July 2023. On the surface, this bill would make it easier for international students earning

advanced STEM degrees to remain working in the U.S. after graduation. There are some added provisions to this bill; these are bulleted at the bottom of Sen. Durbin's press release. The points aim to protect domestic workers from being displaced. This is achieved by preventing companies from hiring foreign students at lower wages. AAPM is sensitive to ongoing discussions and needs for increasing our medical physics workforce. We generally support this bill as an opportunity to broaden the potential pipeline for new medical physicists in the U.S.

United States House Bill 6815, Nuclear Medicine Clarification Act of 2023

This bill is a parallel legislative effort by supporters of nuclear medicine extravasation reporting. In May 2020, a medical device manufacturer petitioned the U.S. Nuclear Regulatory Commission (NRC) for rulemaking that would suspend the exemption for reporting extravasations as medical events. More background can be read on the NRC's website. The NRC sought further public input last year, and AAPM submitted comments in September 2023. We expect a proposed rule and draft implementation guidance in fall of 2024.

Regarding H.R. 6815, advocates for extravasation reporting have sought a legislative fix to bypass the extended timeframe of rulemaking. They succeeded in getting Rep. Griffith [R-VA] to introduce this bill in December 2023. If the bill is passed, it will force the NRC to a more expeditious outcome. Presently, the bill is not specific to the application of nuclear medicine, whether diagnostic or therapeutic. Given AAPM's September comments, we will not support this bill unless it undergoes significant amendments.

Massachusetts House Bill 2175, An Act Relative to Medical Physics

AAPM continues to support the efforts of Massachusetts medical physicists seeking to establish licensure in their Commonwealth. This was reported on in more detail back in our November/December 2023 Newsletter. Aside from preparing our members for their public hearing testimonies, AAPM has since met with both the bill sponsor, Rep. Sean Garballey [D], and staff for the Joint Committee on Public Health. AAPM is hopeful that this is the year the bill will be reported out favorably from the Committee. This would provide the opportunity for the bill to be read and voted on before Massachusetts legislators.

Meetings

Spring Clinical Meeting, March 23-26, St. Louis, MO

GRAC will host a symposium session at the upcoming **Spring Clinical Meeting**. In fact, we will be closing out the meeting as the final session on Tuesday, March 26. This session will examine AAPM's government relations program, efforts on key issues, details of the legislative landscape, and more. Much of what is in this Newsletter report will be discussed more in-depth at the session. We will have speakers from NRC, Conference of Radiation Control Program Directors (CRCPD), and Capitol Associates, Inc. Additionally, a panel of session speakers and representatives from the American Board of Radiology (ABR) will discuss the decision and impacts of discontinuing the authorized medical physicist (AMP) designations on board certifications.

Annual Meeting, July 21-25, Los Angeles, CA

This summer we will be hosting another session at our **Annual Meeting**. We will take a deeper dive into the *State Champions Program*, along with some of the advocacy tools and strategies that will be implemented in support of that program. For the second half of the session, GRAC will host a panel discussion on the options for regulatory recognition of the medical physics profession across the various states. Discussions will include experiences from both licensure and registration states. We will also examine the benefits of fair and consistent credentialing for our field. Ultimately, the goal of these credentialing mechanisms is to enhance patient safety and improve clinical outcomes.

Closing

Hopefully this report illuminates some of the activities and priorities for AAPM's government relations for 2024. We look forward to serving our membership and building a more robust advocacy platform for AAPM in the coming year. If you have any questions, would like to learn more, or wish to raise an issue for us to follow, please reach out to me at david@aapm.org. ■

Advocacy: What I learned from my time on the Hill

AAPM MEMBER EXPERIENCES IN CONGRESS

During the 2022 AAPM Annual Meeting & Exhibition in Washington, DC, I had the opportunity to revisit a significant chapter in my past. I met with a former colleague at Ebenezers, our favorite coffee spot, which was almost equidistant between work and home in DC. Two blocks southeast of the coffee shop was Daniel Webster Residence, our old dormitory. Two blocks south was the entrance to where we worked together: the Senate Hart building.

Nearly a decade prior, I was hired to spend a summer on the Hill as a Senate page. This program, reserved for 16- and 17-year-olds, is a once-in-a-lifetime opportunity to serve as the paper messenger of the Capitol. The duties — ranging from amendment runs delivering crucial legislative documents to chasing senators down for a vote across the three Senate buildings — although monumental, were carried out in the seemingly mundane navy uniform of a page. Yet, from working through a filibuster to confirming a new judge, my real-life experiences on the Senate Floor were moments most people would only witness on C-SPAN. It was within these moments that I learned about the profound impact of participating in the legislative process.

Reflecting on my experience, I often ponder the rationale behind entrusting such sensitive responsibilities to teenagers. Why do we deserve to have Capitol police-equivalent access to the cast-iron dome and all its secret rooms? Why do we get to make copies of legislation and carry them around to offices across the Hill? Would we even understand how cool it is when we're eating homemade cookies and drinking root beer floats in the office of an ex-Saturday Night Live writer and performer turned senator? It was only upon returning home and sharing my experiences with my stepfather, who is involved in the entertainment industry, that I fully grasped what it meant to share an afternoon treat with Senator Al Franken and his wife.

Now, as a medical physicist in training, I've come to understand the significance of having had such an opportunity. The answer lies in the vision of cultivating the next generation of leaders. The Senate page program understands that this generation of young leaders are the greatest advocates. If you give them the proper resources and training not just to succeed, but to truly ***understand*** what it means and what it takes to run the show — whether it be at the local, state, or national level — then you empower them to get the job done right. Furthermore, allotting this big responsibility in an important place provides the most direct perspective of what's at stake, who's involved, who's affected, and understanding how to distribute wins and losses as compromise is exercised. These are key traits of leadership.

The Senate page program instills a belief in the potential of young leaders to effect change, a principle equally applicable to the realm of science. The Rotunda, the beautiful center of Capitol Hill, contains a frescoed frieze across

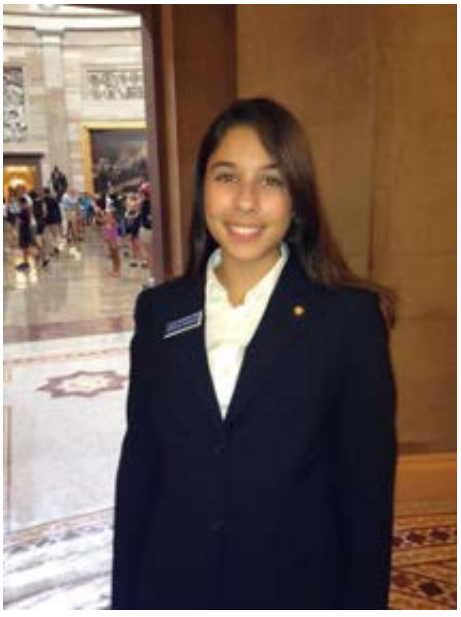
Barbara Marquez
PhD Candidate, Medical Physics
MD Anderson Cancer Center

the dome top with painted sceneries of everything from the landing of Columbus to the birth of aviation. It reminds me a lot of the Sistine Chapel. There are six allegorical groups lining the perimeter of the Rotunda frieze: scenes of war, science, marine, commerce, mechanics, and agriculture. The science group pictures the Roman goddess Minerva imparting wisdom to luminaries like Benjamin Franklin, Robert Fulton, and Samuel F.B. Morse. The frieze reminds the viewer that all these themes — and more — have a place in modern-day government.

So, if the enduring connection between science and governance is quite literally painted as a motif on the ceiling of our Capitol building, who is there to represent the scientists? As medical physicists, we are at the forefront of advancing safe and effective practices in healthcare, but our work transcends the confines of research and clinical trials. Our expertise should not only improve medical practice, but it should also shape the standards and regulations that govern them! Advocacy is the bridge that connects our scientific endeavors to policy and the reality around us. It is through advocacy that our research gains a voice, having the potential to influence key decisions that impact public health.

So, how do we bring medical physicists to the table (or, in my case, the Senate floor)? My journey from Capitol Hill to the laboratory has been unconventional, but it instilled in my heart a deep passion for advocacy and leadership that extends beyond the realm of my immediate charge as a future medical physicist. This passion caught the attention of **M Mahesh**, PhD, AAPM President-Elect, who recognizes the importance of our profession's voice in legislative and policy discussions. He reached out to me, drawing on my unique experiences to underscore his mission of promoting advocacy among medical physicists. Joining in Dr. Mahesh's theme, I reflect on this chapter of my life and leave a few closing thoughts.

Witnessing firsthand the interplay between science and policy has equipped me with a unique perspective on the importance of informed decision-making in our government. Specifically, it is the duty of the scientist to rise to the occasion and participate in legislative leadership. Medical physicists are already united at a professional, national level; moreover, we have a committee dedicated to bridging that gap between science and policy. We must leverage our medical physics organization and raise our collective voice in advocacy. We are empowered to utilize our expertise to open the corridors of legislative decision-making, where the future of healthcare is shaped, to our profession. It is incumbent upon us to ensure that our science does not just innovate, but that it informs and influences in this space. After all, who will advocate for medical physics, if not us? ■



Barbara Marquez in Senate page uniform and as a graduate student visiting Webster Hall dorm in 2022.

ASTRO Proposes New Radiation Oncology Payment Legislation

HEALTH POLICY AND ECONOMIC ISSUES REPORT

Medicare Physician Fee Schedule

At the June 23, 2023 ASTRO Board of Directors meeting, the board approved spearheading a new Radiation Oncology Case Rate payment program (ROCR) for "traditional" Medicare Part B beneficiaries[1]. ROCR would not apply to Medicare Advantage beneficiaries (i.e., Medicare Part C) or patients with private/commercial insurance. This program would change radiation oncology payment from fee-for-service to one payment per patient-case for most treatment sites (15 sites included in ROCR, see Table 1). ASTRO has chosen to work with Congress on this initiative, a different approach than prior efforts on the Radiation Oncology Alternative Payment Model when ASTRO worked directly with the Centers for Medicare and Medicaid Services (CMS).

Table 1. Cancer Types included in ROCR

Anal	Bladder	Bone Metastases
Brain Metastases	Breast	Cervical
Central Nervous System	Colorectal	Head and Neck
Lung	Lymphoma	Pancreatic
Prostate	Upper GI	Uterine

ASTRO has several goals with a case rate-based payment system, but the primary goal is to stabilize payment after years of reimbursement cuts to physicians and freestanding cancer centers paid under the Medicare Physician Fee Schedule. Other stated advantages of the program include allowing providers to determine the best course of treatment for patients (e.g., IMRT, SBRT, 3D, etc.) and unifying payment levels across care delivery settings (e.g., freestanding cancer centers vs. hospital outpatient departments).

Nearly all radiation oncology practices that participate in traditional Medicare Part B would be impacted on both technical and professional reimbursement. Proton therapy, brachytherapy and radiopharmaceuticals would be exempt from ROCR and continue separate payment under Medicare fee-for-service. Services provided in the hospital inpatient setting, ambulatory surgical centers and 11 PPS-exempt cancer hospitals[2] would be excluded from the case-based payment and would continue separate fee-for-service payment.

Several details of the program are still being deliberated and your consideration and input is important. For example, the initial proposal includes a bonus payment for being an accredited facility. A different component includes additional payments ($500 per patient) to cover transportation services for underserved patients. Should this proposal become law these

Blake Dirksen, MS
Mercy Medical Center

For additional information including Medicare rule summaries, 2024 final payments and impacts visit the AAPM website.

types of details will have a significant impact on radiation oncology and how we care for our patients.

Depending on several factors, reimbursement for your department could go up or down under the ROCR payment system. It is an important time to think about how this would impact your department, the profession of medical physics, and the field of radiation oncology.

The AAPM Professional Economics Committee continues to monitor the progress of the proposed legislation and recommends interested members to engage with their reimbursement specialists to stay informed. We ask that you take some time to talk to your department leadership about the potential impacts of this proposed payment policy and reach out to ASTRO or the AAPM Professional Economics Committee if you have questions or concerns. ■

[1]https://www.astro.org/Advocacy/Key-Issues/ROCR

[2]https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/pps-exempt-cancer-hospitals-pchs

ACR Accreditation & More: Info for Medical Physicists

UPDATES FROM ACR HQ

Direct Supervision Requirements for Administration of Contrast Media

With the end of the Public Health Emergency, ACR recommends that sites follow the ACR's CT and MR accreditation requirements for onsite supervision of contrast administration and management. CT and MRI Accreditation intravascular contrast media requirements available here.

The following providers may be considered capable of providing direct supervision of intravenous contrast material administration*, subject to applicable state and federal laws:

- A radiologist (MD/DO)

Or one of the following under the general supervision of a radiologist:

- Non-radiologist physicians (MD/DO)
- Advanced practice provider (NP, PA)
- Registered nurses following a symptom- and sign-driven treatment algorithm

*Note: supervision in this context only applies to administration of intravenous contrast media, not to the supervision of the radiologic examination or procedures.

We recognize that sites may need some flexibility in transitioning over to these requirements. In order to accommodate this need and for consistency with CMS, the ACR will continue to accept remote supervision for contrast through December 31, 2024. ACR will have additional recommendations for safe practices related to contrast management in the near future.

Mammography Accreditation Program: Clarification of Required Documentation of Qualifications

All mammography interpretating physicians, radiologic technologists, and medical physicists (including part-time and locum tenens staff) must meet MQSA requirements and must have initial and continuing qualification documentation available at the facility for any on-site visits. In addition, a qualification form for attestation of qualifications is required for initial, renewal and reinstatement applications. These qualification forms are attached to the bottom of each article hyperlinked above for the respective personnel roles.

Reminder: NMAP & PETAP Changes Effective January 1, 2024

Effective Jan. 1, 2024, the definition of a small rectangular field camera for nuclear medicine phantoms changed to the smallest dimension < 32 cm (current requirement is the longest dimension < 32 cm). The purpose of this update is to better identify scanners with a small field of view (FOV) and differentiate the small FOV scanners from those with a large FOV. Please refer to the Phantom Testing: Nuclear Medicine article for details.

Dustin A. Gress, MS
Senior Advisor for Medical Physics
ACR Quality and Safety, Reston, VA

In each issue of this newsletter, I present information of particular importance or relevance for medical physicists. You may also check out the ACR's accreditation support page for more accreditation information and QC forms. **Thank You** to all the other staff that keep ACR programs running and assist with creating the content in this column.

Congratulations to Aashish C. Gupta, ACR's 2024 Medical Physics Graduate Student Scholarship awardee! Mr. Gupta is a PhD student at UT MD Anderson UTHealth Houston Graduate School of Biomedical Sciences. Mr. Gutpa's research involves development of AI models for auto-contouring of liver segments for modeling treatment and response. He will receive full funding to attend the ACR Annual Meeting April 13-17, 2024 in DC, to observe the business and governance of the ACR and network with medical physicists and physicians active with the ACR.

Also effective Jan. 1, 2024, the mean background criteria for PET phantoms changed to 0.90-1.10 for SUV measurements. The aim for this update is to reduce the variability tolerance of the background SUV to +/- 10% from the previous +/- 15%. This change helps to improve the accuracy of scanner calibration and SUV measurements.

Please refer to the Phantom Criteria and Phantom Testing: PET articles for details.

Be sure to carefully review program requirements before submitting for accreditation. If you have questions about these changes, please submit a support ticket. Select "Accreditation" for Support Team and "Ultrasound/NM/PET Technical" for Category.

Important New(ish) Standards From Industry, With Free Downloads

NEMA XR-27 – X-Ray Equipment for Interventional Procedures User Quality Control Mode

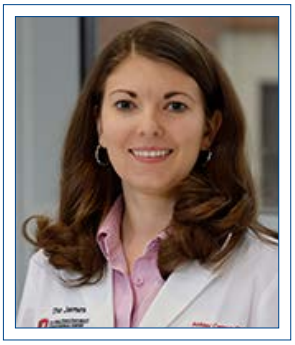
Applies to x-ray equipment intended to perform interventional procedures and defines a minimum set of requirements designed to more easily facilitate quality control at the facility level. User quality control mode is available on most new equipment models starting in 2017. Free download here.

NEMA XR-31 – Standard Attributes on X-ray Equipment for Interventional Procedures

Offers healthcare providers a reference to identify key features which contribute to enhanced patient care and to help manage patient radiation dose delivery, while still enabling the system to provide sufficient image quality needed by the physician. Free download here. ■

Review of 2023 Workshop on Improving the Teaching and Mentoring of Medical Physics

EDUCATION COUNCIL REPORT



Ashley Cetnar, PhD
The Ohio State University

Information about the Event

One of the three key pillars of the profession of medical physics is teaching. However, very few medical physicists have received formal training in teaching and learning. On September 11 and 12, 2023 a virtual specialty meeting was hosted by the AAPM Teaching and Mentoring Workshops Subcommittee exploring best practices for teaching and learning. The workshop included sessions on topics related to the upcoming TG-366 report featuring best practices in teaching and mentoring in medical physics. The format included presentations, question/answer time with speakers, and small group discussions after topics.

The meeting started with the historical perspective on how AAPM has continued to develop opportunities for medical physicists to grow as educators and a background for best practices in physics education research presented by **Vic Montemayor**. The next session focused on classroom instruction and active learning strategies with a presentation prepared by **Beth Bossart, TK Lee**, and **Harish Malhotra**. The following session focused on assessing the effectiveness of teaching with **Ashley Cetnar** and **Lin Ding** and the first day concluded with residency mentoring and clinical education with **Maria Mamalui, Jay Burmeister**, and **Ken Homann**. The second day of the meeting started with methods and strategies for virtual and remote teaching with **Marija Popovic, Megan Hyun**, and **Shirin Enger** and teaching and mentoring beyond the traditional classrooms and residency programs with **Jess Fagerstrom**. Later **Kristi Hendrickson** presented on diversity, equity, and inclusion and unconscious bias in teaching and mentoring, and the meeting concluded with AAPM Education Council Updates from Council Chair, **Joann Prisciandaro**.

Results from the Program Evaluation

Participants

Ninety-one registrants from eight countries were able to join this virtual meeting. Most of the participants were involved in teaching medical physics or medical residents at their institutions (see Figure 1).

Program Evaluation Responses

Participants in the meeting were invited to complete a program evaluation. These results are helpful for program organizers to improve programming in the future. Examples of participant program evaluation responses are shown in Figure 2 with categories scored with a Likert-scale rating where 5 is the highest score and 1 is the lowest score. We observe that categories are highly rated by participants receiving mostly 5s and 4s in the evaluation.

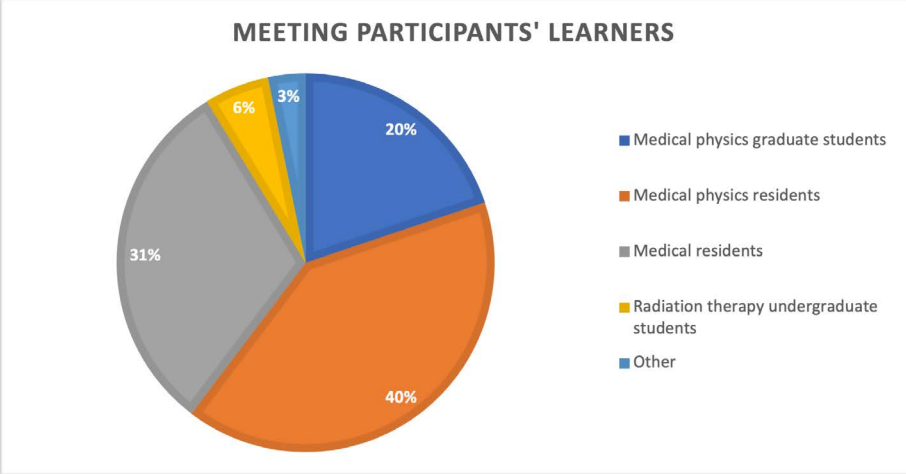


Figure 1: Learners taught by meeting registrants at the 2023 specialty meeting.

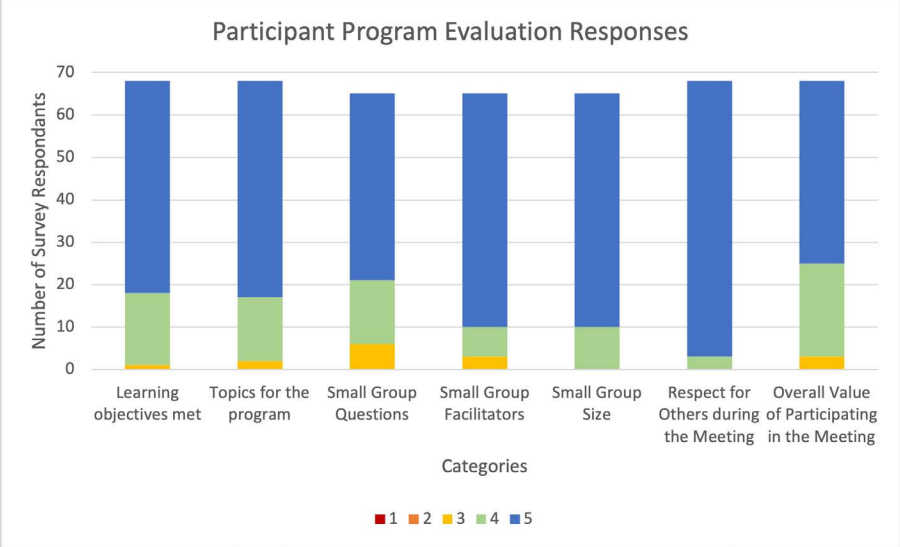


Figure 2: Examples of participant program evaluation responses with categories scored with Likert-scale rating where 5 is the highest score and 1 is the lowest score.

Participants were asked what their action plans are for implementation of what was learned during the meeting. Many of the participants shared they are interested in implementing active learning approaches, incorporating ideas of the flipped classroom, just-in-time teaching, and project-based learning. Participants also indicated that they are looking at improving methods of assessment for learners and integrating technology for supporting virtual learning and online modules to enhance student learning. There was also a theme of reflection upon current teaching methods, a greater awareness of teaching resources available, inspiration to develop outreach programs, and desire to share what was learned during the meeting with others in their institutions.

Small Group Discussions

One of the unique aspects about the format of this virtual meeting was the dedicated time for small group discussions to promote discourse about the topics with others in the field. This was a popular aspect of the meeting with attendees with one sharing: "The small group setting are great ways to "translate" the topics to individual experiences and discuss, learn, and brainstorm solutions together." Participants appreciated the many similarities shared with other educators and common barriers that colleagues face in teaching. Within the discussion groups, participants appreciated the opportunity to hear different approaches and ideas for teaching and examples of successful applications of the teaching methods presented in the lectures during the meeting. One of the challenges in a virtual setting is optimizing groups to enhance learning for the participants. In our meeting we chose to pre-assign groups and facilitators that remained the same throughout the meeting. There are challenges on how to best engage learns in virtual platforms, and there is a balance between how much time is dedicated for didactic presentations and how much time is dedicated to active learning during a 2-day meeting. One of the questions asked in the program evaluation was related to the amount of time for presentations and discussion and the results showed that this was balanced during the meeting shown in Figure 3.

Plans for the Future

While the 2023 workshop was the first teaching and mentoring meeting hosted in a virtual format, this has not been the first specialty meeting on the topic. Participants

EDUCATION COUNCIL, Cont.

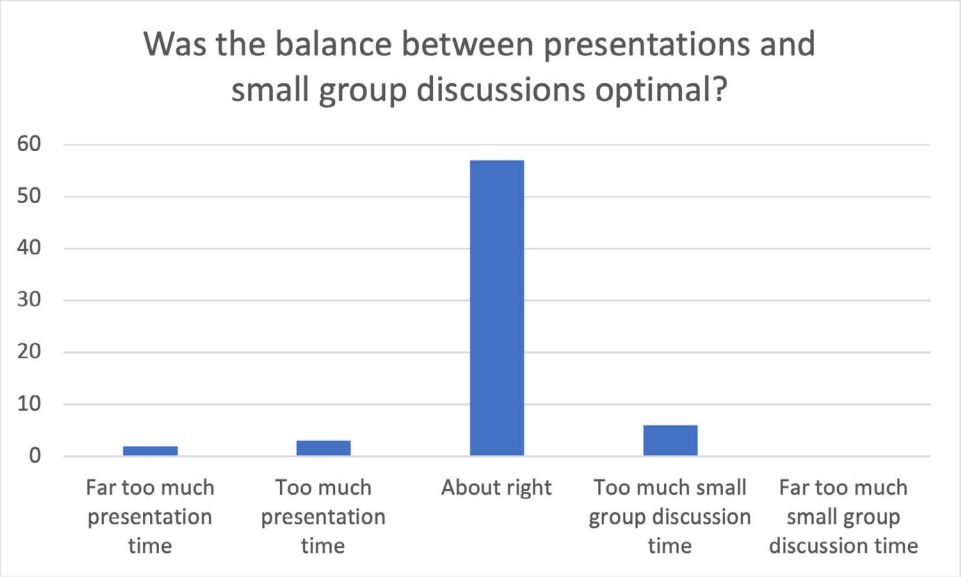


Figure 3: Participant responses for amount of time for presentations and group discussions.

were asked if they would attend another meeting on teaching and mentoring was offered in future, and 96% of the participants responded that they would attend (Figure 4). Originally this workshop was planned to be in person but pivoted to a virtual format to increase accessibility of the meeting and decrease overall cost to promote increased participation. There are strengths and weaknesses to hosting meetings in a virtual setting, so a follow-up question related to in-person versus virtual was also asked, and there was no consensus for which venue was preferred by participants (Figure 5).

The topics for the meeting were based on the chapters of the drafted TG-366 report that we hope will be published soon for reference to all educators in our field. The Teaching and Mentoring Workshops Subcommittee is thankful for the opportunity to host this specialty meeting to the members of the organizations and as result of the program evaluations, we hope to plan additional workshops for members in the future. We would like to thank registrants for attending the meeting, speakers for sharing their expertise, small group facilitators for leading sessions, Education Council for supporting the event, and all the AAPM staff members who made the event a success. ■

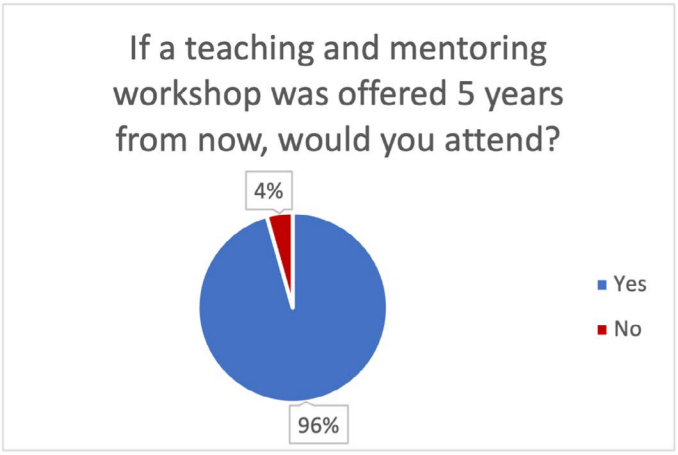


Figure 4: Attendance for a future workshop on teaching and learning.

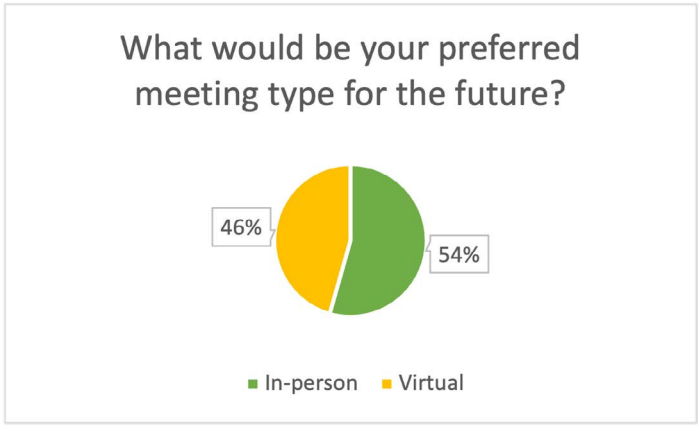
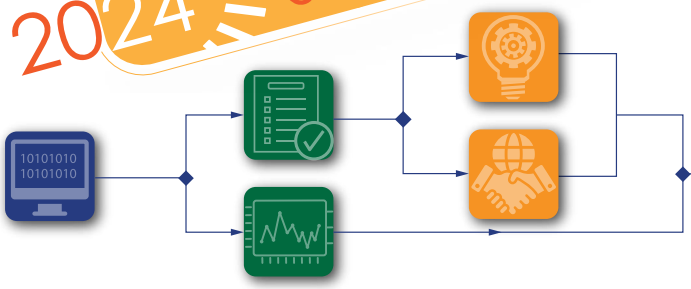


Figure 5: Preferred meeting format for the future.

AAPM 2024 SUMMER SCHOOL

WORKFLOW OPTIMIZATION IN RADIATION ONCOLOGY:
From Theory to Clinical Implementation



JUNE 17-22
Dartmouth College
Hanover, New Hampshire

Led by Program Directors:

Colleen Fox, PhD, DABR, Dartmouth Health • Reshma Munbodh, PhD, DABR, Smilow Cancer Hospital at Saint Francis Hospital

This 4.5-day Summer School aims to provide practical insights into radiation oncology workflows and offer valuable insights on incorporating technology into daily operations. Participants will gain a foundational understanding of operations theory, along with essential skills in project management, change management, and resource management. The program will cover techniques for modeling and monitoring workflows and introduce implementation strategies for cutting-edge tools like auto-contouring, automated planning, and scripting.

REGISTRATION OPENS: *March 13*

SCHOLARSHIP DEADLINE: *April 15*

EARLY BIRD DEADLINE: *May 6*

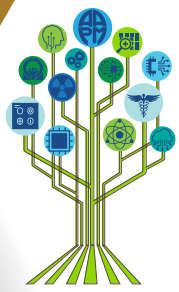
For more information, visit: aapm.me/school

AAPM 2024
66TH ANNUAL MEETING & EXHIBITION | JULY 21–25 | LOS ANGELES, CA

EMBRACING CHANGE. IMPACTING PATIENT CARE.

PRE-CONFERENCE EVENTS

JULY 20 — ARTIFICIAL INTELLIGENCE FOR CLINICAL MEDICALPHYSICISTS



TRAIN THE TRAINER WORKSHOP — **JULY 18–19**

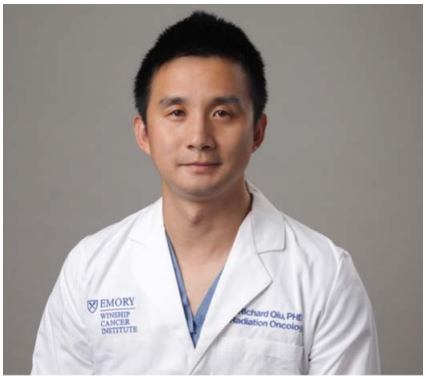
AAPM Specialty Meetings

JULY 20–21 — 2024 REVIEW COURSES

AAPM Mentorship Program: Success Stories

PROFESSIONAL MENTORSHIP WORKING GROUP REPORT

Continuing in our series of Mentorship success stories, we present the experience of **Richard Qiu, PhD**, a medical physicist and assistant professor at Winship Cancer Institute/Emory University and his mentor, **Young Lee-Bartlett, PhD**, a Medical Physicist at Elekta Medical Systems and Adjunct Professor at Toronto Metropolitan University. They were paired through the AAPM Mentorship Program, a complimentary service available to all AAPM members. If you wish to engage in the AAPM Mentorship Program either as a mentee or mentor, please visit https://www.aapm.org/memb/mentorship. If you are presently enrolled and have a mentorship success story to share, kindly reach out to us at Mentorship.Program@aapm.org.



My Transformation Through the AAPM Mentorship Program

Richard Qiu, PhD
Winship Cancer Institute
Emory University

Navigating the maze of early career choices in medical physics, I sometimes found myself at a crossroads. It was a draining period, where the excitement of my early professional days was increasingly overshadowed by a persistent question: "What comes next?"

At the AAPM Annual Meeting in Houston, my former mentor suggested the AAPM Mentorship Program, which could be of help to me. Skeptically, I applied without expecting much — how wrong I was to doubt.

The program introduced me to **Dr. Young Lee**, whose journey from an academic physicist to an industry innovator post-MBA resonated with my crossroad. Her statement of interest within her profile on the AAPM Mentorship Program website wasn't just a paragraph on a webpage; it was a manifesto of her commitment to guide those young professionals, a testament to the genuine care she held for her fellow physicists.

My application was a humble plea for direction:

"I seek guidance to navigate my next professional milestone within the medical physics community. Despite prior setbacks in committee applications, I am eager to refine my efforts and carve a meaningful path forward."

Within a week of applying, I was matched with Dr. Lee. Initially hesitant, I procrastinated in reaching out. But when Dr. Lee proactively checked in, I seized the opportunity, setting up our first meeting.

Jeremy Hoisak, PhD
Chair, Professional Mentorship Working Group
UC San Diego

Save the date! The AAPM Mentorship Program will be hosting our first ever "Speed Mentoring" event at the 2024 Annual Meeting and Exhibition in Los Angeles, CA. This event will be held on Wednesday July 24, 2024, 4:30– 6:00 pm.

At this fast-paced event, participants will have the opportunity to meet one on one with multiple mentors in short 10 minute conversations. It's a great opportunity to get focused help on specific career development questions and get diverse perspectives on your challenges and goals! The event will conclude with an open-ended social to provide participants with the opportunity to mingle, follow up and network.

The Speed Mentoring event will have limited capacity so be sure to sign up when registering for the Annual Meeting. Meeting attendees who are interested in serving as mentors at the event can also sign-up at that time.

Our bi-weekly discussions quickly became more than just a mentor-mentee check-in; they were a transformative experience. Dr. Lee had a knack for aligning my scattered goals and reinvigorating my approach to my career —and to life itself.

Our discussions weren't limited to career advancement. They ventured into philosophy, exploring how life, with its constraints, is an optimization challenge. Dr. Lee shared the narrative of her career, from her decision to study abroad to her work in the United Kingdom and her eventual return to Canada. I spoke of my struggles with the dichotomy of academia and industry, my hesitations stemming from a deeply ingrained fear of imperfection, a cultural shadow I grew up with that penalized any misstep. These fears had cocooned me in a comfort zone that I mistook for safety.

Dr. Lee's guidance was both simple and profound: stop overthinking and start doing. She connected me with her network, individuals who had served on various AAPM subcommittees, and thus, began the process of unwrapping the layers of self-doubt and apprehension. We discussed the intricacies of the AAPM subcommittees and strategized my potential involvement. Action items were set, networking began, and slowly but surely, I found myself emerging from the shell of fear. Dr. Lee had not just opened doors for me; she had shown me how to turn the handle and step through them myself.

Communication improved, as evidenced by our subsequent exchanges and my proactive steps to join subcommittee meetings and engage with the AAPM community. This wasn't just about securing a spot on a committee; it was about claiming my place in the professional landscape of medical physics. I attended virtual meetings, reached out to committee members, and found myself increasingly immersed in the world I had once viewed from the sidelines.

This shift in mindset also inspired me to apply my insights to Emory's Medical Physics Faculty Search Committee. In my application, I expressed a fervent desire to contribute, emphasizing my unique journey:

"I bring a unique perspective rooted in my recent transition from residency to establishing a professional role within the Emory community. My understanding of early-career challenges and commitment to DEI initiatives can help attract a diverse pool of candidates."

Acceptance into the committee was a milestone, affirming my newfound courage to engage more deeply within my field.

Overall, the AAPM Mentorship program transcended a mere professional development opportunity; it became a transformative expedition that redefined my work ethic, communication style, and life satisfaction. It instilled in me the wisdom to operate within life's constraints while maximizing every moment for an enriched experience.

I share my journey with the hope that it might spark your curiosity about the untapped potential of the AAPM Mentorship Program. Your path will undoubtedly be unique, shaped by your personal aspirations and challenges. The only way to discover the possibilities it holds for you is to step forward and seize the opportunity. I encourage you to take that step— the insights and growth that await you could be transformative

Mentor's Perspective

(Young Lee, PhD MBA, Elekta | Adjunct Professor, Toronto Metropolitan University)

Many potential AAPM mentors may be reluctant to sign up to be a mentor as they believe this commitment requires a lot of effort and time all for the benefit of the mentee. It is true that there is a time and mental commitment that comes with being a mentor, but it is a role that has been hugely fulfilling and exciting for me and I wanted to share my experiences in this article.

My role as a mentor over the years not only through the AAPM program has been an enjoyable experience, full of meeting amazing young medical physicists with lots of new ideas, questions, and open minds. Not only was I able to meet future heads of sections, departments, and researchers but I was also able to learn of our changing

fields through their eyes. Chatting through some of their career's worries made me also think about my own and allowed me to be open to sharing my experiences and ideas to help them make better choices, think about their values, and prioritize their work. I was able to connect some of my mentees with my network, which has not only helped them grow but also allowed me to grow my own network. My mentorship experiences have been positive, having had the satisfaction of watching my mentees turn into great medical physicists, becoming great mentors themselves and also being happier with their career choices and paths.

The AAPM Mentorship program allows mentor-mentee relationships to develop through a need rather than a "known network". It allows mentees to find mentors that they believe could help them with their current problems through reading one's "Statement of Interest" as well as reading through their CVs. Furthermore, there is a structure/guideline that allows some basic "rules" to be established in such a way that if the relationship is not productive, you can part ways and take on a new mentor/mentee. I would love to see all AAPM members get involved in this program! ■

AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

AAPM Grand Challenge:

QUANTITATIVE INTRAVOXEL INCOHERENT MOTION (IVIM) DIFFUSION MRI RECONSTRUCTION (IVIM-dMRI RECON)

Don't miss this exciting opportunity! Team registration is open NOW for the AAPM IVIM-dMRI Grand Challenge (organized by AAPM's Working Group on Grand Challenges and AAPM members from Johns Hopkins University and the University of Texas Southwestern).

In this Challenge, participants will be provided with k-space data of breast dMRI generated via rigorous simulations that accurately represent the dMRI signal generation process associated with the IVIM model across a range of diffusion weighting (b-values), and will be asked to derive IVIM parameter maps and compete for the most accurate reconstruction results.

The two top-performing teams (one member per team) will be awarded complimentary meeting registration to attend the 2024 AAPM Annual Meeting & Exhibition in Los Angeles, CA from July 21-25, 2024, where they'll be acknowledged during the Awards & Honors Ceremony and present on their methodologies during a dedicated Grand Challenge symposium.

Register via the Challenge website here:
https://qtim-challenges.southcentralus.cloudapp.azure.com/competitions/6/
Learn more on AAPM's Grand Challenge page here: https://www.aapm.org/GrandChallenge/IVIM-dMRI/

For Questions,

please reach out to any member of the Working Group on Grand Challenges (WGGC) or AAPM staff member Emily Townley.

Competition is the fuel that ignites innovation.
We hope to see you at the finish line!

Special Interest Feature: Students & Trainees Subcommittee Report

Connecting Next-Generation Medical Physicists:Highlights from the 2023 Residency Fair — Activities and Future Ventures by the Students and Trainees Subcommittee

David Adam, PhD, Johns Hopkins University | **Sarah Aubert, PhD**, Princess Margaret Cancer Centre | **Hana Baroudi, MS**, MD Anderson Cancer Center | **Kai-Cheng Chuang, PhD**, Duke University Medical Center | **Savannah Decker**, Dartmouth College | **Huiming Dong, PhD**, University of California Los Angeles (UCLA) | **Kai Huang, PhD**, University of Maryland Medical Center | **Claire Park, PhD**, Brigham and Women's Hospital, Harvard Medical School | **Colin Schaeffer, PhD**, Henry Ford Health | **Rachel Trevillian, PhD**, Cooper University Health Care

Introduction

Since its initial launch in 2015, the **AAPM Medical Physics Residency Fair** stands as a staple event at the **AAPM Annual Meeting & Exhibition**. Organized by the AAPM Students and Trainees Subcommittee (STSC), the event reflects the STSC's core mission and commitment of connecting, engaging, and supporting students and trainees as next-generation medical physicists. While historically focused solely on connecting prospective candidates with residency programs, the event's role has dramatically expanded to connecting like-minded students and residents, extending accessibility of the fair through virtual platforms[1], expanding advocacy efforts for international candidates, and informing prospective applicants about the MedPhys Match process. Our commitment to fostering a strong and connected medical physics community remains unwavering.

With great excitement, we share and reflect on our activities and initiatives from the STSC 2023 Residency Fair subcommittee (**David Adam, Sarah Aubert, Hana Baroudi, Kelsey Bittinger, Emilie Carpentier, Kai-Cheng Chuang, Savannah Decker, Aly Khalifa, Pav Ramesh, Colin Schaeffer, Mahsa Servati, Krista White, Emily Thompson, Rachel Trevillian, Huiming Dong**, and **Claire Park**) and describe future ventures.

AAPM 2023 Residency Fair Activities at the 65th Annual Meeting & Exhibition in Houston, Texas

The highly anticipated **AAPM 2023 Residency Fair** was successfully organized and executed at the **AAPM 65th Annual Meeting & Exhibition in Houston, Texas**, on Sunday, July 23.

The AAPM Residency Fair serves as a premiere platform to facilitate connections between prospective applicants with representatives from various medical physics residency programs. The number of participating programs has quickly grown, with this year's event boasting participation from 86 programs comprising 62 therapy programs and 24 imaging programs. In response to attendee and program feedback, this year's fair featured extended 90-minute time slots to optimize the time available for attendees to explore and evaluate numerous programs across North America. Hundreds of students and trainees took advantage of the opportunity to gather information about participating programs and engage with program directors, faculty, and current residents. The dynamic atmosphere was further enhanced by the presence of key professional and industry players, including the American Institute of Physics, American Board of Radiology, and Varian Siemens Healthineers. Their participation not only added to the vibrancy of the event but also offered a comprehensive overview of available resources for students and trainees. Looking forward, the STSC aims to build on the continued success of this event, solidifying the Residency Fair as an integral and recurring element tailored to students and trainees at the AAPM Annual Meeting.

Beyond the on-site AAPM Residency Fair, the STSC orchestrated the inaugural **Resident & Prospective Applicants Connect** in Houston, Texas. This initiative was designed to foster a more relaxed, casual environment for students and trainees applying to medical physics residency programs to connect with current residents. While this event welcomed all students and trainees, it was specifically directed at prospective candidates applying in the **2024 MedPhys Match Cycle**. Two in-person sessions were hosted on-site on Monday, July 24, and Tuesday, July 25, drawing in over 120 students and trainees and over 80 participating residents. Of the residents who participated in the sessions, 70% were enrolled in a therapy residency program, while the other 30% were enrolled in an imaging residency program, ensuring representation across both specialties. Both groups gave overwhelmingly positive feedback. Prospective candidates expressed a heightened sense of preparation for the upcoming MedPhys Match cycle, while residents reported enjoying the opportunity to engage with prospective candidates and fellow residents. Additionally, 90% of all participants indicated they would eagerly participate in the event at future meetings and would recommend the event to other residents and prospective candidates. Encouraged by the success, the STSC plans to continue hosting this event at future Annual Meetings, further enhancing the opportunities for connection between next-generation medical physicists.

STSC Virtual Residency Fair Activities

The STSC 2023 Virtual Residency Fair was once again hosted and complemented the in-person events, offering an additional avenue for students and trainees to connect with residency programs. Initially created in response to the unprecedented challenges posed by COVID-19, the virtual event remains a crucial portion of STSC's activities and outreach, catering especially for those unable to attend the in-person AAPM Annual Meeting & Exhibition.[1] This year's Virtual Fair spanned September 2023 on Mondays, Wednesdays, and Fridays to accommodate information sessions with each individual residency

Members of STSC at the AAPM 2023 Residency Fair in Houston, Texas, hosting 86 participating residency programs and hundreds of students and trainees, as aspiring medical physicists.

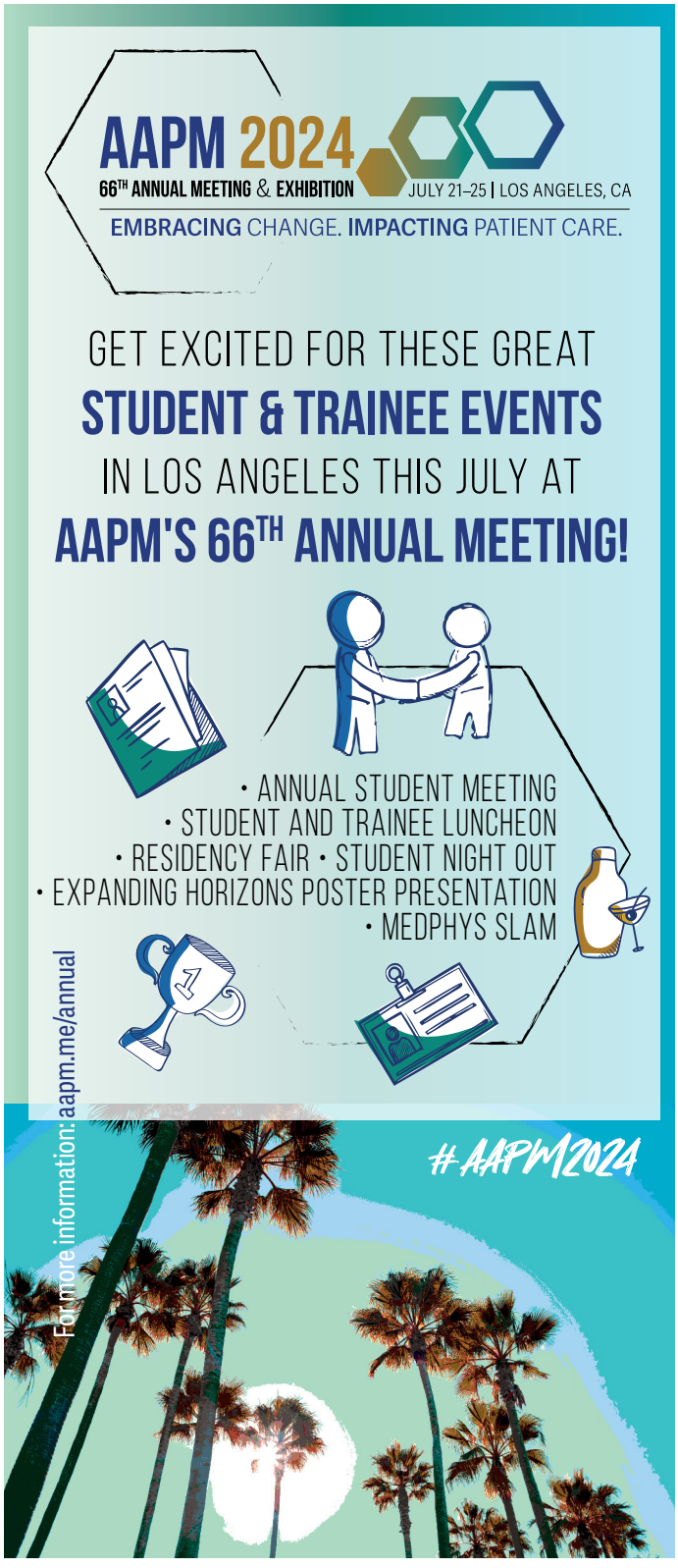
program. Similar to previous events, the STSC 2023 Virtual Fair witnessed high interest and engagement, with an excellent turnout of 88 residency programs and nearly 300 registered prospective applicants. In alignment with the feedback and improvements from the on-site event, each participating program was allocated an extended 80-minute time slot, providing attendees the flexibility to navigate between concurrent sessions.

Diligently curated by STSC members, the shared Residency Fair Resource Drive was created to store a wealth of resources for both on-site and virtual events. This publicly-available resource repository includes guiding questions for virtual residency fair events, program-specific brochures and presentations, and an updated program information spreadsheet with details about each residency program.

In tandem with the 2023 Virtual Residency Fair, the STSC also organized the **International Candidates Visa Information Webinar** on September 8th, 2023. This special webinar aimed to equip international candidates with information and insights from current medical physics residents, **Ke Lu** (Duke University), **Laszlo Zalavari** (Stanford University), **Chieh-Wen Liu** (Cleveland Clinic), and **Stella Xing** (Harvard University), who successfully navigated the residency application process with programs in the United States as international students. Additionally, the webinar featured **Joseph Dise, PhD**, Chair of the AAPM Subcommittee on the Oversight of MedPhys Match. With over 60 international participants, this initiative not only provided crucial information for shaping application decisions but also fostered connections between international candidates and residents who navigated the US Match and Visa process. Information about how programs are offering Visa assistance, along with the webinar slides from all speakers, are made publicly available on the shared resource drive. The STSC aims to sustain and expand initiatives focused on international candidate advocacy, hosting similar events at future on-site and virtual events. We hope that this nurtures continued support for international students and trainees.

Collaboration & Outreach

The STSC further strengthened its collaboration with the Canadian Organization of Medical Physics (COMP) by launching the **MedPhys Match 2023 Post-Match Survey** in March 2023. Spearheaded by COMP members, **Haley Patrick, PhD** (BC Cancer Vancouver) and **Sarah Morris, PhD**



(NYU Langone Health), this student-led initiative aimed to collect experiences and provide comprehensive insights from the perspective of MedPhys Match 2023 participants. The results, presented in a data-driven manner and published in an AAPM Newsletter Article[2], focused on demystifying various factors influencing perceived Match success, serving as valuable advice to future candidates.

Continuing our commitment to fostering a stronger and connected medical physics community, the STSC has implemented significant enhancements to its online engagement strategy. Strategic communication and social media initiatives across various online platforms have been a key focus. This approach not only better showcases STSC activities but also delivers valuable insights, updates, and educational content to students and trainees. Ultimately, it elevates the visibility of the community's achievements and contributions, fostering a stronger connection between students and trainees and contributing to the overall growth and cohesion of the medical physics community.

Future Ventures

Looking ahead, the Students and Trainees Subcommittee is dedicated to intensifying its efforts in assisting potential applicants in navigating the entire Match application and interview process. The details of our forthcoming activities and initiatives in 2024 are currently in the planning stages and will be announced in the coming months. As part of our commitment to continuous improvement and growth, we invite feedback and proposals from our student and trainee members, residency program representatives, as well as those who participated in our events. With this collaborative approach, we aim to enhance our current activities and generate innovative ideas that will benefit the medical physics student and trainee community. We welcome the submission of feedback and proposals until the end of April 2024, inviting your insights to shape future ventures of the STSC subcommittee. ■

[1] *https://issuu.com/aapmdocs/docs/4801/28*

[2] *https://issuu.com/aapmdocs/docs/4805/43*

AAPM SPRING CLINICAL MEETING | 2025

In 2025 AAPM will be planning earlier for the Spring Clinical Program!
The RFP will now open May 15, 2024

RFP Opens	Wednesday, **May 15**, 2024
RFP Closes	Wednesday, **June 12**, 2024
Abstract Submission Site Opens for Proffered Abstract Submissions	Wednesday, **July 24**, 2024
Deadline for **Proffered Abstract Submissions**	Wednesday, **August 28**, 2024
Authors Notified of Presentation Disposition	Wednesday, **October 16**, 2024
Online Meeting Program Goes Live	Wednesday, **November 13**, 2024

Highlights of the SDAMPP Coffee Break Discussion on "Balancing Research During Residency"

SDAMPP EDUCATION PRACTICES COMMITTEE REPORT

Introduction

The delicate balance between clinical training and research is an ongoing challenge for medical physics residency programs. During a recent SDAMPP coffee break, program directors came together and shared their ideas to help navigate through questions about how to optimize between research and robust clinical training. This article summarizes the strategies that medical physics residency program directors employ to help residents effectively manage the research time.

Dedicated Research Time and Program Duration

The duration of the residency program is one of the most significant differences in how research is approached and managed among different programs. Some programs structure a three or four-year format with two-year clinical training, so there is built-in time for research. This type of program can be helpful for residents from non-traditional pathways who would like to get more experience with medical physics research and can also provide a springboard for residents who are interested in a more research-focused academic career. However, some programs expressed concerns that a smaller pool of applicants might be interested in this option. For two-year programs, it can be challenging to allocate dedicated research time for residents because program directors must be mindful of the 24-month clinical training requirement by CAMPEP.

What is Research?

Even when starting the discussion at the most basic level - defining the word research, it was clear that programs had different ideas of what it means to involve residents in research. Some programs lean towards engaging residents in what is often termed "Big R" types of research, which is often characterized by a more structured scientific investigation that aims to generate new knowledge, theories, or technologies. While other programs prioritize or require residents' involvement in more "Little r" types of research focusing on clinical quality improvement projects. Additionally, some programs offer residents the autonomy to determine their preferred research focus, allowing them to align their interests with the type of research they wish to pursue.

Resident's Interest & Project Assignment Process

Understanding residents' inclination towards research is crucial in tailoring the program to their needs. It is critically important to align the expectations between resident candidates and the programs during the interview/matching so the incoming residents have an understanding of the program's values and mission. It's observed that some residents may prefer a break before working on new research projects. Residents may wish to diversify their

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Michael Speidel, PhD
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Lydia Wilson, PhD
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Da Zhang, PhD

research experience rather than continue projects from their previous studies. Some medical physics residency programs provide a structured approach in which residents are presented with a scope of potential projects and are given the opportunity to express their preferences. Alternatively, residents may be welcome to propose their own research ideas.

Project Limitations and Management

To prevent an overwhelming research workload, some programs manage the number of projects residents undertake throughout their residency. Program directors play a pivotal role in spacing out projects over the course of the program. This strategic approach is designed to ensure that residents receive a well-rounded and manageable research experience without compromising the intensity of their clinical training. Effective mentorship becomes essential for guiding residents on project selection and providing insights on what is publishable. A separate mentor from clinical training can facilitate a balanced approach to clinical and research activities. A structured project proposal process, with the program director serving as a checkpoint, can prevent an overwhelming number of requests and ensure the quality of research projects. Program directors emphasize the importance of thoughtful mentorship to strike a balance between research and clinical training. Some programs make it clear from the beginning that participation in research is contingent on success in clinical training, reinforcing the commitment to a well-rounded educational experience.

Expectations for Publications and Presentations

The expectation for residents to present and publish their research during residency also varies between programs. Some programs have no formal requirements, while others require the submission of an abstract or manuscript. Many programs offer financial support for residents to attend meetings, with additional funding incentives for those whose abstracts are accepted.

Conclusion

The strategies outlined here offer valuable insights as medical physics program directors try to manage research in a clinical training setting. We aim to help by addressing resident preferences, implementing effective project management, and fostering a balanced approach; programs establish an infrastructure to support residents in achieving their research goals during their residency. ■

Our Condolences

Peter D. Esser, PhD • Ulf F. Rosenow, PhD • David M. Strongosky, MMSc • Sharon A. Thompson, MS

Our deepest sympathies go out to the families. We will all feel the loss in the Medical Physics community.

If you have information on the passing of members, please inform HQ ASAP so that these members can be remembered appropriately. We respectfully request the notification via email to: 2024.aapm@aapm.org
(Please include supporting information so that we can take appropriate steps.)

Visa Options for International Medical Physics Residency Applicants

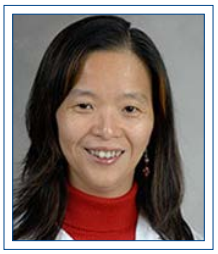
SUMMARY FROM SDAMPP COFFEE BREAK

The Society of Directors of Academic Medical Physics Programs (SDAMPP) organized a coffee break on October 17, 2023, to discuss Visa options and related issues for international medical physics residency applicants. Michelle Larson-Krieg, JD, presented on "Immigration Options for Graduate Programs and Residents" with an opportunity for discussion that followed her presentation. Michelle is the former Director of International Student and Scholar Services at the University of Colorado Denver | Anschutz Medical Campus. This article summarizes what we learned from Michelle and provides key takeaways for program directors and prospective residents in the coming match season. Program directors and prospective residents should be aware that changes to immigration law and regulations can affect the details provided in the following article, but major changes have historically been rare. Thus, the general information presented below is expected to be valid in the near future.

A list of current visa options for medical physics residents is provided in Figure 1. The most common visa type for medical physics residency applicants is F-1 (OPT). A foreign national who earns an academic degree in the US while in F-1 student status is generally eligible for 12 months of Optional Practical Training (OPT) following the completion of that degree. Medical Physics (CIP Code 51.2205) is on the DHS STEM Designated Degree Program List of degrees eligible for STEM OPT Extensions. Students graduating with a medical physics graduate degree or from a medical physics graduate program can apply for STEM OPT extensions (a total length of 36 months: 12 months of OPT plus the 24-month extension). OPT is a work authorization that can be used anywhere in the US as long as the employment is in the graduate's field of study.

To apply for OPT, the prospective resident works with the school granting their graduate degree to submit the application to the US Citizenship and Immigration Services (USCIS). To apply for the STEM OPT extension, individuals currently on regular OPT must work with their employer to prepare a Form I-983 Training Plan. Individuals on OPT submit Form I-983 to the designated school official (DSO) at their degree granting school who will then need to provide a new Form I-20 for the STEM OPT extension application. Form I-765, Form I-20, and the required fee and any other documentation must be submitted to USCIS for review and approval. Note that individuals may continue to work while their STEM OPT extension is pending if their application is submitted in a timely manner. An updated Form I-983 is required whenever there are any material changes to their employment. The Form I-983 Training Plan is retained by the DSO and would provide it to the Student Exchange Visitor Program (SEVP) only if asked. See the DHS Study in the States STEM OPT Hub for additional information.

Form I-983 requires specific information about the organization, the agreed-upon practical training schedule, compensation, and the detailed residency



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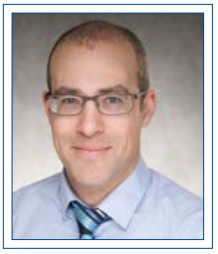


Joel St-Aubin, PhD
University of Iowa

training plan. The training plan must also include employer attestations that sufficient resources and trained personnel are available to provide appropriate mentoring and training. The employer must confirm (1) that the terms and conditions of the F-1 visa holder's STEM OPT employment, including duties, hours, and compensation, are equivalent to those of similarly situated US workers, and (2) that no US worker will be terminated, laid off, or furloughed as a result of a STEM OPT opportunity. Residents must submit a self-evaluation within 12 months of the OPT STEM start date and a second final assessment that recaps the training and knowledge acquired during the training period. Employers must review the resident's annual self-evaluation and attest to its accuracy. Employers must follow specific reporting requirements if the resident is terminated or departs employment for any reason before the end of the authorized extension period. When using OPT during residency, it's important to note that the individual remains in F-1 student status and must continue to report employment and address changes to a DSO at the degree-granting school. Additionally, travel outside the US requires a travel signature from the degree-granting school DSO, and F-2 dependents and spouses are not eligible for work authorization. There is a 60-day grace period at the end of OPT before the person must depart the country.

The J-1 visa category is used for exchange visitors, and the J-1 Research Scholar category may potentially be an option for Medical Physics residents in some instances. "Research Scholar" is an individual primarily conducting research, observing, or consulting in connection with a research project at research institutions, corporate research facilities, museums, libraries, post-secondary accredited educational institutions, or similar types of institutions. Each institution should evaluate whether their individual residency program meets this description to determine if the J-1 Research Scholar is appropriate for their program. In particular, two-year residency programs focused on clinical training should consult closely with their institution's international scholar office to determine whether or not the J-1 Research Scholar visa is an option for them. The US State Department is sensitive to patient care and contact by J-1 exchange visitors other than J-1 Physicians, and institutions must determine their own risk tolerance and appropriate risk management measures.

The maximum allowable time for a J-1 Research Scholar is 5 years. J-1 visas do not require employer filing fees and the institution can control the process more because USCIS approval is not required. J-2 dependents and spouses can obtain work authorization. A J-1 or J-2 Exchange Visitor is granted a 30-day grace period following the completion of a J program before they must depart the country. Some considerations for J-1 visa holders include (1) the sponsored individual must pay a student and exchange visitor information system (SEVIS) fee before applying for an initial J-1 visa, (2) the J-1 visa is for temporary visits only which requires that the prospective resident maintain a residence in their home country, (3) the prospective resident must have no intent to immigrate to the US (there is no direct path to permanent residency and naturalization), and (4) a two-year home residency requirement exists for those whose skills are on their home country's skills list or who receive specific types of government funding for their J-1 program. While waivers may be available, changing from a J-1 to another nonimmigrant visa status may present challenges if the exchange visitor is subject to the two-year home residence requirement.

The H-1B visa is for a Temporary Worker in a Specialty Occupation for which Medical Physics is included. USCIS approves this type of visa in increments of up to 3 years and limits H-1B status to 6 years. This type of visa allows for "dual intent," i.e., the intention to be in the US temporarily or permanently. The employer must pay a salary that meets or exceeds the prevailing wage determined by the US Department of Labor. The employer must pay filing fees, including the I-129 Filing Fee, Anti-Fraud Fee (initial petition only), I-539 Filing Fee (if family members are in the US), and Premium Processing Fee (optional). Although optional, premium processing may be needed depending on the time between residency start date and residency position offer date. If employment is terminated before the requested H1B expiration date, an employer must pay the cost of return transportation to the employee's home country. Most H-4 dependents are not able to obtain work authorization.

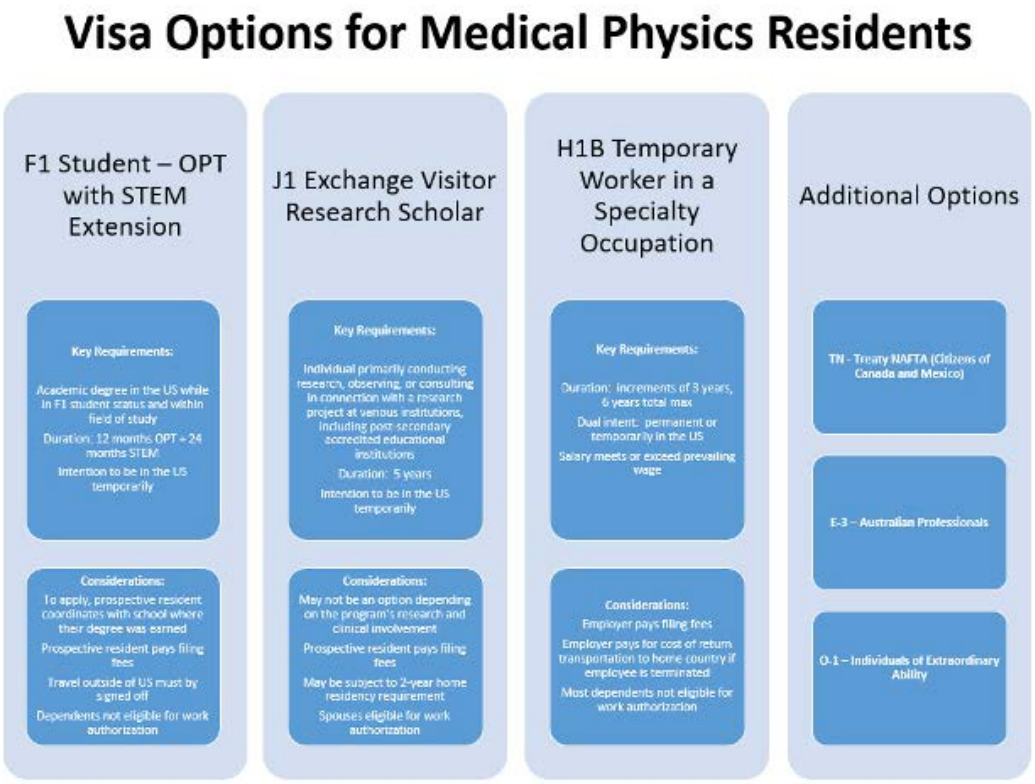
It is beneficial for program directors (PDs) to be aware of visa options for residency applicants. PDs need to find out as early in the interview process as possible an applicant's current visa type and potential visa needs during residency but should be mindful that ALL applicants must be asked the same questions at the same time. It is illegal to ask only

SUMMARY FROM SDAMPP COFFEE BREAK, Cont.

the person, for example, whose resume indicates they earned a bachelor's degree in another country or only the person with an accent about their visa status. Many institutions ask all applicants if they require visa sponsorship in the initial application to facilitate planning. Strategies for PDs include approaching their institution (international office if applicable) to understand what they can support early in the resident recruitment process and sharing this information with prospective residents. Determining if the institution can support the prospective resident at an earlier stage, benefits both the program and the applicant. The institution determines which visa categories they can and will support.

International residency applicants are encouraged to consult with their current institution to determine which visa categories they are eligible for and the timeline of the visa or work authorization application. Strategies for prospective residents include having early communications with residency programs and their institution (international office if applicable) regarding their VISA status and eligibility.

In conclusion, it is important for program directors and residency candidates to understand the different types of visas that the individual programs can support. Further considerations include being aware of the maximum amount of time a resident can hold a particular visa status, whether home residency requirements apply, and whether the desired visa status can be acquired in time for the residency start date. Program directors and residency candidates are encouraged to stay informed, reach out early, and work closely with the immigration experts within the institution. Some further sources of information include institutional international office staff, USCIS.gov, State.gov, aila.org, and trusted immigration attorney(s)/law firms. ■



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Is Board Certification Contributing to Medical Physics Staffing Shortages?

ABR UPDATE

The important role of medical physicists in radiology, nuclear medicine, and radiation therapy is rarely questioned, and most state regulations codify the involvement of a medical physicist in certain activities. In the last few years, however, concerns have been raised about the adequacy of the supply of medical physicists. A recent article in *Physics Today* encapsulated this concern by writing, "As retirements surge, shortages threaten to slow advances in cancer therapy, diagnostics, and improved understanding of the physiological impacts of radiation." [1]

The article described concerns about staffing levels in a variety of radiological fields and drew heavily from an article by Newhauser et al., which described the state of the U.S. medical physics workforce. [2] Newhauser and co-authors pointed out the difficulties in predicting supply and demand but noted that there is presently an inadequate number of residency training positions in medical physics. They also noted that the retirement rate of medical physicists increased between 2010 and 2020 and has increased further recently as many baby boomers have reached retirement age. [3] The U.S. Bureau of Labor Statistics does not identify medical physicists specifically but reports that employment opportunities for "medical scientists" will increase 10% from 2022 to 2032, "much faster than the average for all occupations." [4] Abundant anecdotal evidence also shows that positions often go unfilled for many months, if not years. [5]

The ABR is attentive to the workforce issues in medical physics, as well as in other disciplines. [6] In locations where the practice of medical physics is regulated, ABR certification in the relevant subfield is recognized as sufficient qualification for the awarding of a license, certificate, registration, or permit. It is also recognized by practice accreditation organizations such as the American College of Radiology (ACR). The decision by the ABR in 2012 to require candidates for the medical physics Part 1 qualifying exams to be enrolled in, or to have graduated from, a program accredited by the Commission on Accreditation of Medical Physics Educational Programs (CAMPEP) raised concerns that it would limit the number of candidates, as it was common in those days for candidates from a variety of educational backgrounds to qualify for the exams. Today, however, it appears that enough medical physicists are receiving CAMPEP-accredited graduate training. The subsequent decision by the American Association of Physicists in Medicine (AAPM) to insist that the ABR require clinical training in a CAMPEP-accredited residency program does appear to have had an effect on the supply of qualified candidates because, as of 2015, there were about 140 residents graduating each year, while the estimated demand was on the order of 175. [7] Today, the number of graduating residents has increased, but as indicated above, it appears the number of vacant positions has increased also.

The ABR has reviewed these data and its own practices as part of a larger view to see what opportunities exist to address the disparity between the

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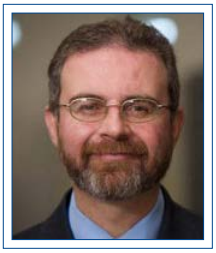

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Geoffrey Ibbott, PhD
ABR Associate Executive Director

The number of vacant positions continues to exceed the number of residency graduates.

Ninety-five percent of candidates for the ABR's oral certifying exam ultimately pass.

supply of and demand for medical physicists. As a starting point, the number of successful candidates on the different medical physics exams has been investigated. The ABR website reports the passing rates for CAMPEP-trained candidates who are taking the exam for the first time. This cohort is felt to best represent ideally prepared candidates, and therefore indicates the performance to be expected of these candidates.

The website does not list the performance of candidates who are repeating the exam. Repeating one or more exams is common; medical physicists are allowed five calendar years from the date of initial registration to pass both Part 1 qualifying exams and six calendar years from the date of becoming board eligible to pass the Part 2 qualifying exam and the oral certifying exam. The computer-based exams are given annually, while the oral exam is now offered twice each year.

2004 - 2023	No. Candidates
Applied for certification	6576
Application abandoned	723
Application inactive	827
Application currently active	1406
Certified	3620

The table above shows data for the 20 years from 2004 to 2023 and indicates that 6,576 candidates applied for certification in one of the medical physics specialties. Abandoned applications are those for which the candidate never attempted an exam before the application expired. Some are currently inactive, meaning that the candidate attempted at least one exam, but their eligibility expired before they continued the sequence. This includes candidates who have passed the Part 1 qualifying exams but are not yet board eligible, meaning that they don't yet qualify for the Part 2 exam. These candidates have options to re-enter eligibility, so they have the potential to continue the path to certification. Active candidates are those who are in the examination process and are current with the required paperwork and fees but have not yet completed certification.

Of candidates who attempted the Part 2 qualifying exams between 2004 and 2023, 93% ultimately passed, even though some required multiple attempts. Of candidates who attempted the oral certifying exam, 95% ultimately passed.

These data also gave us the opportunity to compare the performance of CAMPEP-trained candidates with those who did not complete a CAMPEP-accredited education.

	Passing Rate on 1st Attempt	
Exam	CAMPEP Trained	Not CAMPEP Trained
Part 2 Qualifying Exam	87%	75%
Oral Certifying Exam	72%	57%
All Exams	64%	47%

The table above shows data for 1,610 CAMPEP graduates and 2,688 non-CAMPEP trainees. Both groups ultimately were successful at about the same rate, as described above, but a larger proportion of the CAMPEP group passed each exam on the first attempt.

Like all Member Boards of the American Board of Medical Specialties (ABMS), the ABR works hard to make sure the certification process supports the ABR's mission: "To certify that our diplomates demonstrate the requisite knowledge, skill, and understanding of their disciplines to the benefit of patients." Consequently, the ABR's certification exams are intentionally challenging, but properly prepared candidates can be successful. As criterion-referenced exams demonstrating high measures of reliability, the exams have no predetermined passing rate, and it is possible for all candidates to meet the standard on a given administration. The fact that some candidates require two or more attempts to pass an exam suggests that they use the time following a failed attempt to study and gain additional experience. The data also suggest that candidates who train in educational programs that comply

with a national standard and are subjected to oversight perform somewhat better than candidates who did not attend these programs.

The ABR is fortunate to have a ready supply of medical physicist volunteers to write exam questions and administer the oral certifying exams, and spent considerable effort developing the virtual platforms now used for administering all exams. Consequently, the ABR is positioned to adapt to increased numbers of candidates should the number of residency positions grow to address the increasing demand for well-trained medical physicists. ■

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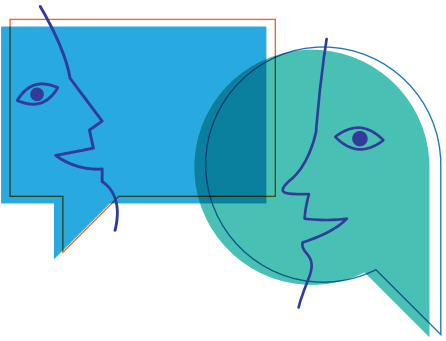
May 10, 2024 | Portland, OR

THE NORTHWEST CHAPTER OF AAPM

is incredibly excited to announce that for our **SPRING MEETING**, we will be offering a **WORKSHOP ON PATIENT COMMUNICATION** with our colleagues from **UCSD**!



Ongoing research has shown that patients who experience professional interactions with trained medical physicists are significantly less anxious and more satisfied overall with their care. The workshop is specialty agnostic, so diagnostic, therapy, and nuclear medicine physicists are all encouraged to attend.

The workshop will take place in person in Portland, OR for a full day of learning on Friday, May 10. There will be an optional virtual half-day session on Saturday, May 11 for simulated patient interactions.

WANT MORE INFORMATION? GO TO WWW.NWAAPM.ORG

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

UPCOMING AAPM WEBINARS

Register for these events at

https://aapm.me/webinars

MAR 7
12:00–1:00 PM | ET

The ABR Continuing Certification Process: Updates from the ABR

MAR 28
12:00–1:00 PM | ET

Identifying Research Opportunities for Early Career and Busy Clinical Physicists Series

Are Medical Physicists Satisfied with their Current Level of Research Opportunities?

APR 4
12:00–1:00 PM | ET

Radiochemistry and Oxygen Sensing in the Era of FLASH RT Series

Webinar #2 Delayed Fluorescence Lifetime Imaging for Intra-Cellular pO2 Measurement

APR 18
12:00–1:00 PM | ET

Innovations in Medical Physics Education

Special presentation by the 2023 Arthur Boyer Innovations in Education Award Winner

Virtual Museum of Medical Physics — Call for Content Contributions

HISTORY COMMITTEE REPORT

The AAPM Virtual Museum of Medical Physics (https://museum.aapm.org/) has been on-line for a little over three years with nearly 3000 views in 2023. The Online Instruments (or Virtual) Museum Working Group (OIMWG) of the History Committee would like to expand the current content and is seeking the assistance of the membership. If you have vintage — or not-so-vintage — devices or instruments that are related to the practice of Medical Physics and that would help tell the story of the profession, it would be appreciated if you could send a photo with a short description of the item. This material would then be added to a gallery on instrumentation in a manner similar to that of current Gallery 16. Submissions can be sent to **Dan Bednarek, PhD** at bednarek@buffalo.edu.

There are also a number of galleries that have not been completed on various topics, including Radiography, MRI, Nuclear Medicine, Health Physics, Brachytherapy, Particle Beam Therapy, and Development of the Field of Medical Physics. If you would like to contribute to these galleries, have an idea for another gallery or would like to discuss other possible additions to the virtual museum, please contact either **Colin Orton, PhD** at ortonc@comcast.net or **Adi Robinson, PhD** at adi.robinson@adventhealth.com.

Whether you decide to contribute to the content or not, we invite you to visit the virtual museum and experience the history of Medical Physics. ■

Daniel Bednarek, PhD
Online Instruments (or Virtual) Museum Working Group Member
University at Buffalo

Colin Orton, PhD
History Committee, Chair
Wayne State University

Adi Robinson, PhD
Online Instruments (or Virtual) Museum Working Group, Chair
AdventHealth Orlando

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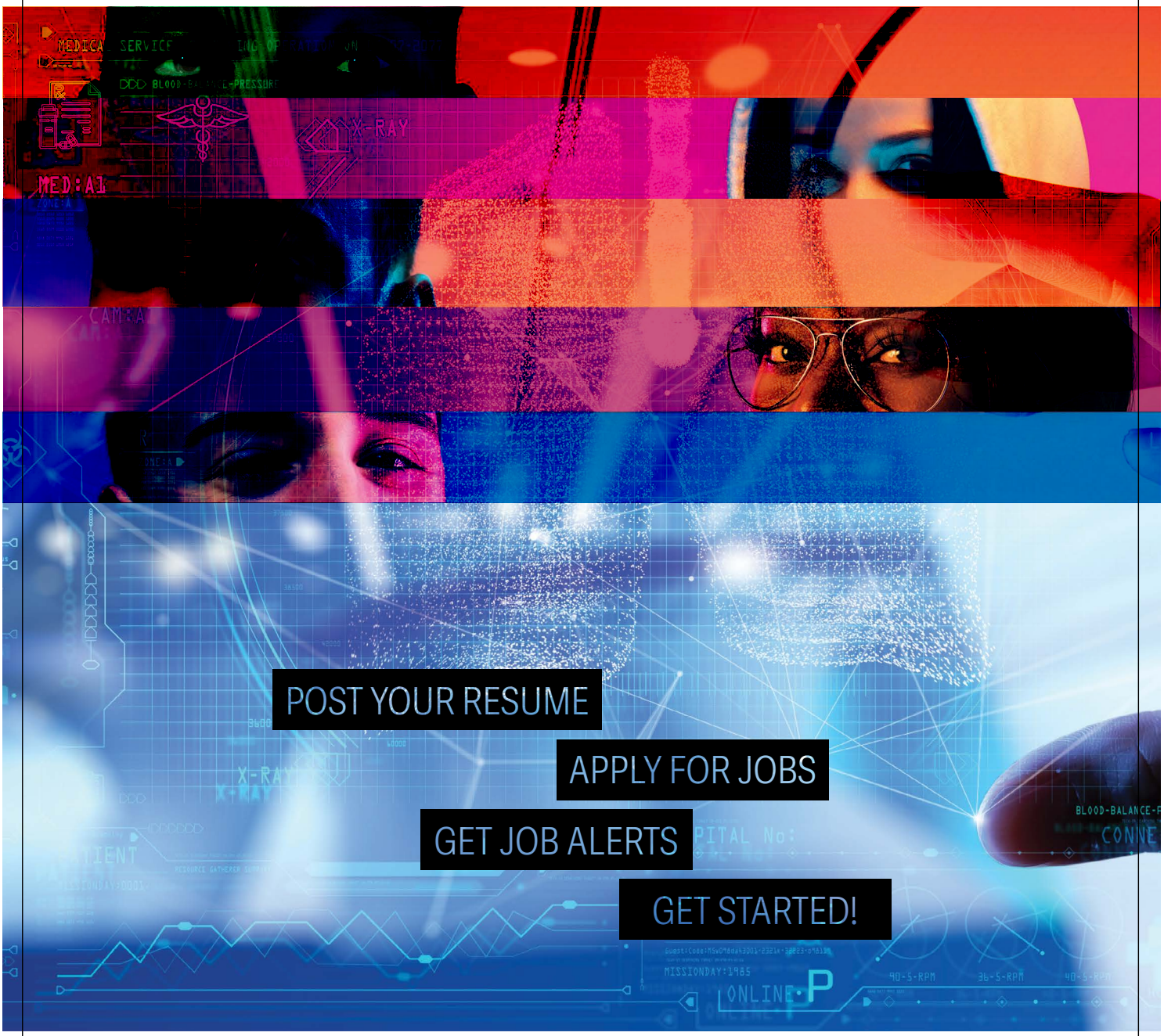
CONNECTING medical physicists with the finest JOBS



Find your future at aapm.org/careers

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

Quality Improvement in Action: What You Need to Know about APEx Updates

ASTRO QUALITY IMPROVEMENT

In 2024, ASTRO's APEx – Accreditation Program for Excellence® will enact the largest update since its inception in 2014. This year, ASTRO will unveil updated standards, a modified process and a new portal. Each of these updates represents ASTRO's own focus on quality and process improvement, assessing years of program data, identifying areas of possible growth, reducing variation and redundancies, and improving the user experience. These developments mark a significant leap forward in assuring APEx remains robust, relevant, and capable of meeting the evolving needs of accreditation in radiation oncology.

When building upon an already robust program — like APEx — assessments and updates are necessary to support growth, innovation and sustainability. APEx has been able to capitalize on existing strengths, like the objective, transparent expectations of the APEx Standards, the powerful feedback from the Self-Assessment, and the in-person facility visit led by quality- and safety-minded APEx Surveyors. The new updates aim to amplify these strengths while addressing areas for improvement.

Standards — Since the program's beginning, the APEx Standards represent essential elements of practice or competency that contribute to high-quality patient-centered care. However, they are not intended to prescribe processes for individual radiation oncology practices. APEx Standards have always been based on white papers and consensus guidance for radiation oncology, including Safety is No Accident and American Association of Physicists in Medicine (AAPM) Task Group (TG) Reports, and Medical Physics Practice Guidelines (MPPG). None of these truths have changed. However, in response to the dynamic landscape, ASTRO revamped the assessment standards to reflect the latest advancements and best practices. The updated standards aim to provide a more comprehensive and precise evaluation of radiation oncology practices seeking accreditation. This includes refined evaluation criteria and enhanced assessment of specific treatment modalities, like radiopharmaceutical therapy. Examples of new or enhanced assessment areas include:

- prior radiation treatment documentation,
- considerations for patients with a cardiac implanted electronic device,
- staffing for practice managers, radiation safety officers, and physicist assistants,
- safe receipt, storage, and other processes for radioactive materials, and
- routine quality assurance (QA) of secondary check programs.

Improved process — ASTRO has used the last nine years of program data to determine ways to strengthen the already effective APEx Self-Assessment and

Randi Kudner
ASTRO – Assistant Director of Quality Improvement

Stop by and see us at the ASTRO-APEx Booth #304 during the AAPM Spring Clinical Meeting!

Find out who is APEx Accredited in your area.

Get involved with APEx now by contacting APExSupport@ASTRO.org or scheduling an individual interest meeting with ASTRO staff.

ASTRO QUALITY IMPROVEMENT, Cont.

Facility Visit with new assessment sections. The updated process will support practices in continuous quality improvement and reinforce the assessment of typically low-performing areas, allowing practices to receive additional feedback prior to the facility visit on areas that may need improvement. Along with other process improvement updates, APEx has specifically focused on physics. As reported in the March/April 2023 AAPM Newsletter, Volume 48, No.2, APEx data shows high variability in QA processes. Aggregate APEx data shows that 54% of all required corrective action plans for APEx applicants are related to linac QA processes, another 11% on physicist chart checks and 6% for brachytherapy QA processes. This data led to the creation of a new section of the Self-Assessment, intended to provide greater support to physicists, increasing the feedback for QA processes so identification and improvement can start sooner.

Portal — Accreditation processes are being streamlined, standards are being updated, and all of this is made more accessible through the introduction of the new portal. Like the current APEx Portal, the new portal serves as a centralized hub for all accreditation-related activities, offering an interface for both facilities and surveyors. The new portal provides enhanced functionality, increased capacity for program updates, and easier access to program resources. Facilities and surveyors can review the content from the updated Standards Guide for quick reminders during the Self-Assessment and Facility Visit. Facility and surveyor physicists also have a new high-level compendium of relevant TG and MPPG guidance for easy access and quick reminders during the assessment process. The new portal also allows for task assignment, which lets facility staff understand what they are responsible for and the associated timelines. APEx data shows that applicant facilities are more successful when they complete the program together and this new function makes that even easier.

Updated processes and standards also require **updated resources**. The new APEx Standards Guide, a shared resource for APEx facilities and surveyors, provides clear expectations, recommendations for continued quality improvement, areas of assessment, sample documents and references for each Evidence Indicator, as shown below. Additionally, new assessment criteria are indicated with an asterisk (*) in the tables to assist APEx practices pursuing reaccreditation. The full Standards Guide is only available to practices that have completed the APEx Application.

Evidence Indicator # – Quick description	Full EI text	
	EI#.x1: Specific assessment criteria* **EI#.x2**: Specific assessment criteria **EI#.x3**: Specific assessment criteria	
REQUIREMENTS	Details on how to demonstrate compliance.	
RECOMMENDATIONS/NOTES	Additional information for compliance and quality improvement purposes.	
ASSESSMENT SECTION	**Self-Assessment** ☒ SA-MRR ☒ DU ☐ PC	**Facility Visit** ☒ FV-MRR ☐ PI ☐ TI ☐ V
EXAMPLE/SAMPLE	Written examples or sample documents for reference.	
REFERENCES	Relevant references for the required criteria.	

Table 1: Evidence Indicator Template. Self-Assessment Medical Record Review (SA-MRR), Document Uploads (DU), Physics Checklist (PC), Facility Visit Medical Record Review (FV-MRR), Physicist Interview (PI), Team Interview (TI), Verification (V).

Don't worry, APEx still provides excellent customer service to answer any of your questions! We still offer the **choice of in-person or virtual facility visits**. Most importantly, APEx is still focused on helping radiation oncology practices build the framework for continuous quality improvement.

ASTRO is already planning additional ways to support facilities pursuing reaccreditation. In addition to the updated APEx Standards Guide, we plan to help practices by:

- hosting town halls in the Spring.
- providing an updated APEx Facility Guide.
- updating templates and sample documents.

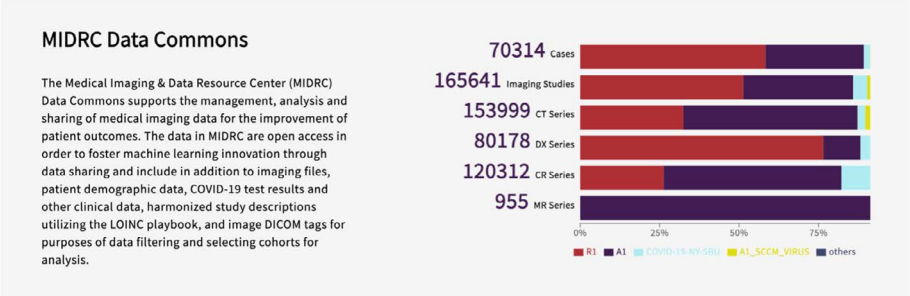
2024 is a big year for APEx, and ASTRO is proud to present these updates on the already strong APEx program. These enhancements pave the way for APEx to be a stronger, more responsive, and more effective accreditation program in the years to come.

Accreditation validates adherence to industry standards, enhances credibility and instills confidence in the people being treated. It fosters continuous improvement, helping practices stay current with best practices and delivering excellent patient care. Get involved with APEx now by contacting APExSupport@ASTRO.org or scheduling an individual interest meeting with ASTRO staff. ■

Report from the Medical Imaging and Data Resource Center (MIDRC)

AAPM-MIDRC SUBCOMMITTEE REPORT

The Medical Imaging and Data Resource Center (MIDRC) has begun its 4th federally funded year, with over $40 million received to date and exciting new appointments and opportunities on the horizon! MIDRC continues to thrive as a collaborative hub, bringing together experts and researchers from AAPM, RSNA, ACR, Gen3, NIH and various government agencies to expand MIDRC's reach and enhance its impact on the medical imaging and artificial intelligence research landscapes (learn more about MIDRC's team and mission here).

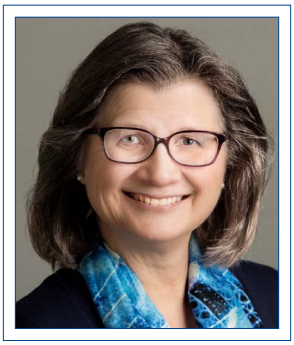


All data publication numbers as of February 2, 2024.

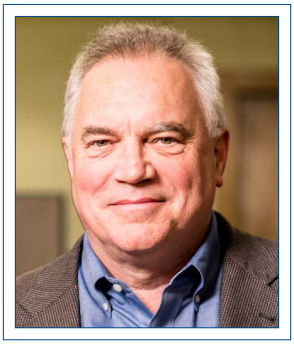
New MIDRC collaborations and expansion of MIDRC

MIDRC is very pleased to share that it has been selected to participate in the recently-announced **National Artificial Intelligence Research Resource (NAIRR) pilot, launched by the U.S. National Science Foundation (NSF)** and co-led by NIH and the U.S. Department of Energy (read the full press release here). The NAIRR pilot will initially support AI research to advance safe, secure, and trustworthy AI, as well as the application of AI to challenges in healthcare and environmental and infrastructure sustainability.

The MIDRC NAIRR appointment comes fast on the heels of MIDRC being named as a key performer in the ambitious **ARPA-H Biomedical Data Fabric (BDF) Toolbox project** (more information on the ARPA-H BDF Toolbox is here), where MIDRC will provide domain expertise and database technology development in the realm of medical imaging. Participation in the ARPA-H BDF Toolbox means that MIDRC will continue to strengthen its privacy-preserving interoperability efforts with other data repositories, such as NIH's NCATS National COVID Cohort Collaborative (N3C) and NHLBI's BioData Catalyst. Part of ARPA-H's mandate for MIDRC is to expand beyond COVID to now include oncological images and metadata. While COVID was the use case with which MIDRC's infrastructure was developed, it is well prepared to pivot to include oncology imaging data and metadata in its data models, cohort building, and other functions.



Maryellen Giger, PhD
University of Chicago



Paul Kinahan, PhD
University of Washington

Please direct inquiries to:
Maryellen Giger, PhD, **FAAPM,**
Paul Kinahan, PhD, **FAAPM, or**
Emily Townley, **AAPM MIDRC Program Manager**

MIDRC
MEDICAL IMAGING AND DATA RESOURCE CENTER.

MIDRC also submitted a project on Sharable Curated, Diverse Medical Images at Scale which received a distinguished achievement award in the 2023 round of the DataWorks! Prize, sponsored by NIH's Office of Data Science Strategy in partnership with the Federation if American Societies for Experimental Biology.

These recent developments and accomplishments underscore the importance of the work being conducted within the MIDRC community and highlight the growing recognition of AAPM's contributions at the federal level. We look forward to leveraging these resources and opportunities to further advance our goal of accelerating machine intelligence research.

Other MIDRC Milestones

Our dedicated team members have made significant strides, including these notable achievements:

- MIDRC has ingested and curated over **300,000 imaging studies to date**, representing a wide range of patient demographics and imaging modalities, like chest radiographs, CTs, MRIs and ultrasounds.
- MIDRC had a standout presence again this year at the SPIE Medical Imaging Conference in February in San Diego, with a very well-attended workshop with interactive demonstrations showing cohort selection in the MIDRC data commons, MIDRC's public GitHub with various algorithms, harmonizing varied incoming imaging study descriptions with the LOINC ontology, MIDRC's processes of sequestration and task-based sampling, MIDRC's multi-omics and interoperability, and resources focused on metrology recommendations and data bias and mitigation strategies.
- MIDRC successfully completed its second scientific Grand Challenge in summer 2023, the mRALE Mastermind Grand Challenge, an AI to predict COVID severity challenge using MIDRC chest radiographs. The Challenge awarded $50,000 in prize monies (generously sponsored by NIBIB) to the top-ranked finishers. Please stay tuned for the announcement of MIDRC's 2024 XAI Grand Challenge!
- MIDRC has continued progress on aspects of bias and diversity of its imaging data, and is now converting its longitudinal methods of assessing and comparing cohort diversity into a diversity calculator tool for ARPA-H.

- Along with the enabled DICOM viewer, multiple types of annotations are now available in the MIDRC data commons, searchable through the data explorer as well as custom Jupyter notebooks.
- MIDRC continues to host free and open-to-all monthly seminars on a wide range of subjects, with MIDRC investigator panelists and moderators. Recent past seminars include Dr. Alan Kwan and Dr. David Ouyang (both, Cedars Sinai Medical Center) discussing deep learning for echocardiography for detection of myocarditis and cardiac injury related to COVID-19 infection and Dr. Chris Meyer (University of Chicago, Gen3) discussing building and using AI-ready datasets from a massive open data commons. Each seminar includes a live Q & A between the panelists and all attendees - you can register for any and all MIDRC Seminars hosted throughout the year here (or watch any of our past presentation recordings at MIDRC's free YouTube channel: https://www.youtube.com/@MIDRC_)
- MIDRC investigators continue to advance knowledge through publication. You can find a list of peer-reviewed publications, grants and presentations here.

Stay Involved and Engaged

In light of MIDRC's upcoming expansion into oncology-specific data collection, you can make an important contribution to MIDRC's efforts by facilitating a data contribution from your academic institution or hospital system (we are especially interested in data from rural or traditionally under-represented communities). Please contact any member of the AAPM-MIDRC Subcommittee or find information about data contributions on MIDRC's website (our team is available to help ease administration

AAPM-MIDRC SUBCOMMITTEE REPORT, Cont.

burden and answer any questions, as well provide some limited funding, if available). Please remember, AAPM-MIDRC Subcommittee meetings are open to all AAPM members who might wish to learn more about current MIDRC efforts.

While we celebrate MIDRC's achievements to date, we also continue to extend our deepest gratitude to AAPM's leadership and the MIDRC community — researchers, collaborators, contributors, and supporters. ■

MIDRC
MEDICAL IMAGING AND DATA RESOURCE CENTER.
&
ARPA-H

AAPM 2024
66TH ANNUAL MEETING & EXHIBITION JULY 21–25 | LOS ANGELES, CA

New Member Professional Symposium

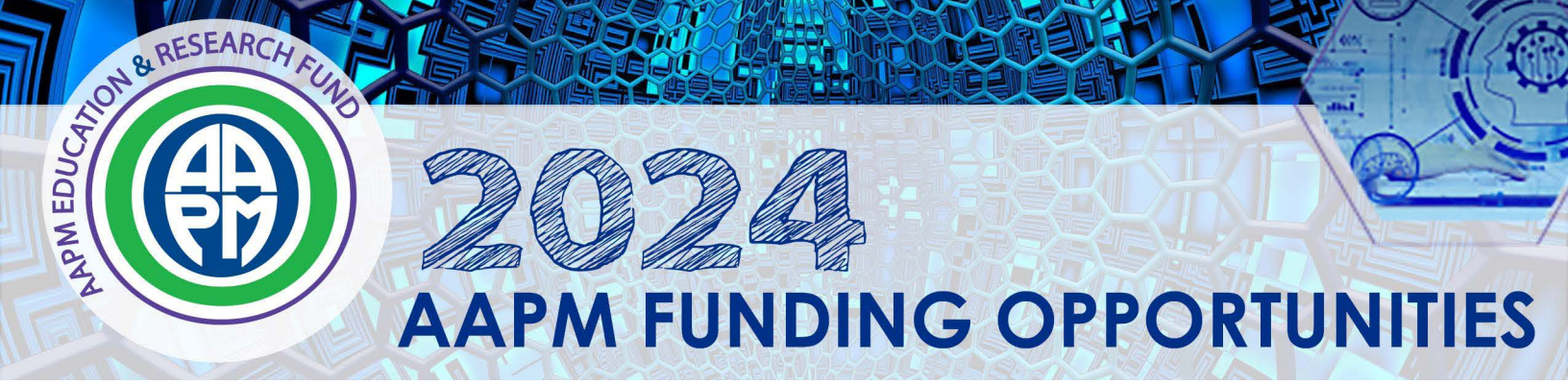
Looking to learn more about what AAPM has to offer? Take advantage of this FREE TICKETED EVENT!

New to AAPM? Come and meet and mingle with AAPM Leadership, including Council Chairs and EXCOM, in a more relaxed and informal environment at the Los Angeles Convention Center. Stop by to socialize and learn more about the organization, member resources, opportunities to get involved, and other topics of particular interest to new professionals!

New Professional Symposium: Tuesday, July 23 | 2:45–3:45 pm
New Professional Symposium Reception (*immediately following the Symposium*): Tuesday, July 23 | 3:45–4:45 pm

More Information > > >

Ticket Includes: One (1) raffle ticket for entry to win a free registration to the AAPM 67th Annual Meeting & Exhibition, plus one drink ticket valid for beer or wine during the reception.



2024 AAPM Expanding Horizons Travel Grant Round 2

Application Deadline: March 15

The Expanding Horizons Travel Grant program is designed to provide students and trainees with an opportunity to broaden the scope of scientific meetings attended in their career. The proposed meeting should introduce new and relevant topics which may ultimately be incorporated into current or future medical physics research and progress the field in new directions. Must be a current graduate student, post-doctoral candidate, or current resident within five years of graduation at time of submission. Must be an AAPM member in good standing at the time of submission.

View additional information and access the online application »

ASTRO–AAPM Physics Resident/Post-Doctoral Fellow Seed Grant

Application Deadline: March 20

The goal of the joint seed grant is to advance the field of radiation oncology in novel ways through the support of early-career scientists involved in radiation oncology physics-related research. Up to two awards ($25,000 maximum / each) are anticipated. Must be a current and active ASTRO and AAPM member as of the due date of the seed grant application. If you are not yet an AAPM member, consider applying now to be eligible for the grant.

View additional information and access the online application »

AAPM Science Council Associates Mentorship Program (SCAMP)

Application Deadline: April 3

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. Applicants must be a member of AAPM at the time of application, (any membership category). Pending membership status not eligible.

View additional information and access the online application »

NEW! AAPM International Council Associates Mentorship Program (ICAMP)

Application Deadline: April 3

This new program established by the International Council recognizes and cultivates outstanding medical physicists at an early stage in their careers. Selected ICAMP Associates will be paired with a mentor in June 2024 and will participate in the program through the end of calendar year 2025. Associates will meet with their mentor regularly and will actively participate in selected meetings of their mentor's AAPM activities. Applicants must be a member of AAPM at the time of application, (any membership category). Pending membership status not eligible..

View additional information and access the online application »

Research Seed Funding Grant

Letters of intent and three key words due: March 18

Application Deadline: April 17

$25,000 grants will be awarded to provide funds to develop exciting investigator-initiated concepts, which will hopefully lead to successful longer term project funding from the NIH or equivalent funding sources. Funding for grant recipients will begin on August 31 of the award year. **If you are not yet an AAPM member, consider applying now to be eligible for the grant.**

View additional information and access the online application »

NEW! Global Health Research Seed Funding Grant

Letters of intent and three key words due: March 18

Application Deadline: April 17

A $25,000 grant will be awarded to provide funds to develop exciting investigator-initiated concepts focused on global health research. Examples of global health research include, but are not limited to telemedicine (e.g., remote planning of radiotherapy, or AI-supported automatic cancer prediction from screening data of cancers common in LMIC), development of low-cost technologies for diagnostics and treatment (e.g., auto-contouring of clinical targets applied to clinical trials in LMIC). Inclusion of existing global health research resources (e.g., AAPM GRSIC open source tools, or international clinical trial data). **If you are not yet an AAPM member, consider applying now to be eligible for the grant.**

View additional information and access the online application »

AAPM/RSNA Doctoral and Masters Graduate Fellowships

Application Deadline: April 24

Four Doctoral awards (PhD or DMP) and three MS awards each of $10,000. Additionally, one of the MS and Doctoral awards will be reserved for under-represented applicants. Applicants must be a member of AAPM at the time of application, (any membership category). Pending membership status not eligible.

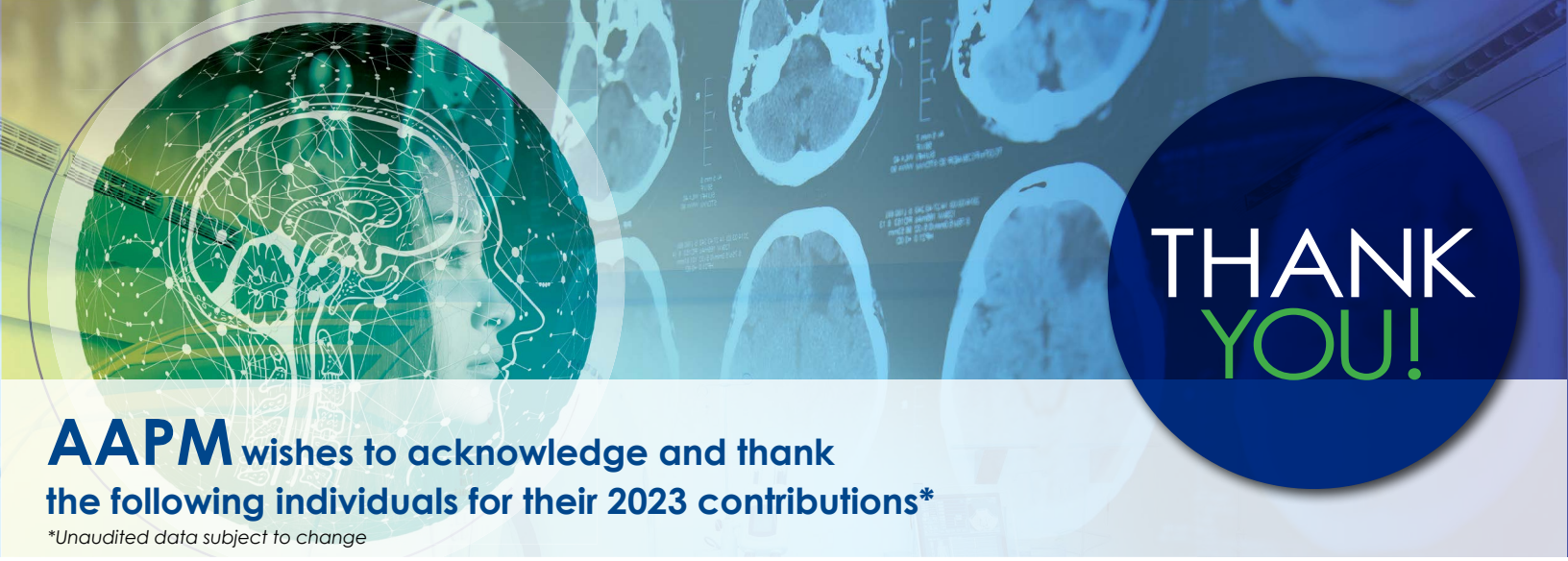
View additional information and access the online application »

AAPM/RSNA Imaging Physics Residency Grant

Application Deadline: May 15

The purpose of the AAPM funding is to provide 50% support of a resident's salary for two imaging physics residency programs for two years. The awardee institution(s) will provide the other 50% support. Applicants must be a member of AAPM at the time of application (any membership category).

View additional information and access the online application »



THANK YOU!

AAPM wishes to acknowledge and thank the following individuals for their 2023 contributions*

**Unaudited data subject to change*

General Fund
[Non-Endowed, 5-Year Pledge]

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Russell Blaine Tarver, MS
Stephen R. Thomas, PhD
Jacob Van Dyk, DSc
Adam S. Wang, PhD
Mark Bennett Williams, PhD

General Fund
[Non-Endowed, Single Year Gift]

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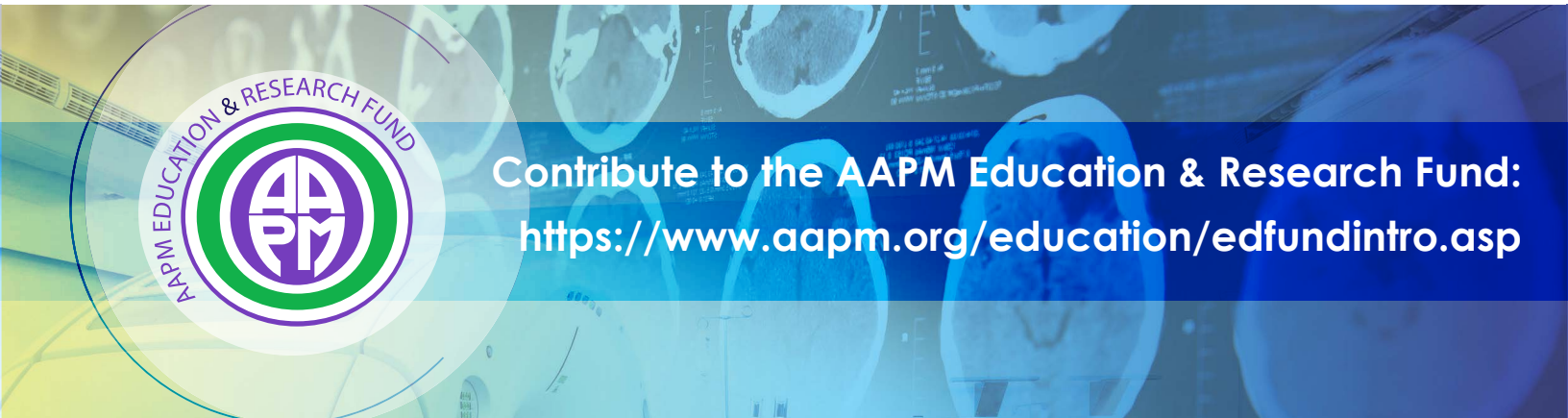

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