AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

IMPROVING HEALTH
THROUGH MEDICAL PHYSICS

AAPM NEWSLETTER

January/February 2023 | Volume 48, No. 1

IN THIS ISSUE:

AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

AAPM's Working Group on Grand Challenges (WGGC) is pleased to announce

Two AAPM Grand Challenges to be Conducted in 2023!

The following AAPM-member led Challenges will occur now through the late Spring, with the results to be presented during the AAPM Grand Challenges Symposium at AAPM's Annual Meeting (July 23 – 27, 2023, Houston, TX):

- **The Understanding Time-Activity Curve and Time-Integrated Activity Variations in Radiopharmaceutical Therapy (TACTIC) Challenge** is a data-driven Challenge organized by a multi-national team. This Challenge will evaluate the degree of variation in the time-activity curve and time-integrated activity estimation within radiopharmaceutical therapy dosimetry as well as analyze and compare various commonly used methods.

- **The Deep Generative Modeling for Learning Medical Image Statistics (DGM-Image) Challenge** will evaluate whether DGMs can faithfully reproduce statistics relevant to medical imaging by comparing deep-learning generated images to model-generated images using a similarity score that summarizes morphological and intensity-derived statistical measures as well as breast-density features.

Registration links and detailed information for both Challenges can be found on AAPM's website here: https://www.aapm.org/GrandChallenge/default.asp

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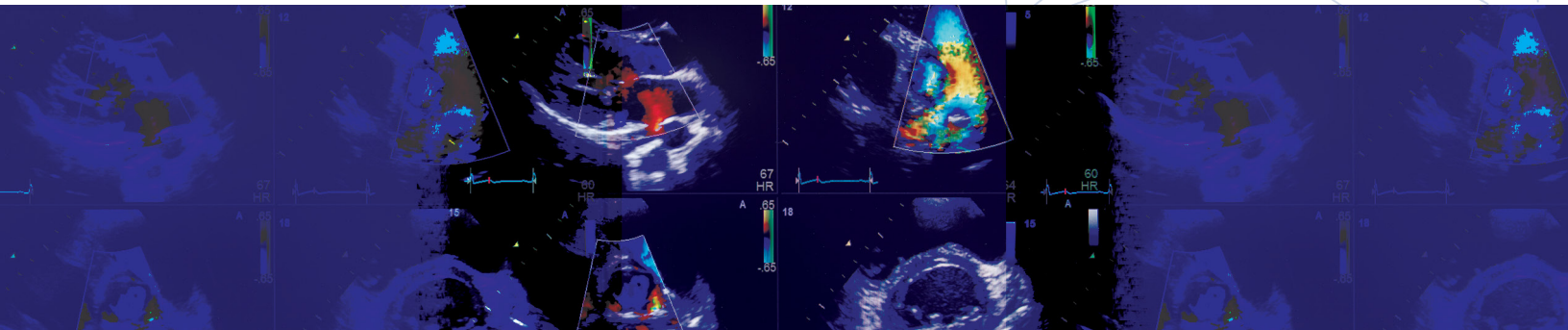
For questions, please reach out to any member of the Working Group on Grand Challenges (WGGC) or AAPM staff member Emily Townley.



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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: March/April 2023
Submission Deadline: February 3, 2022
Posted Online: Week of February 27, 2023

CORPORATE AFFILIATE ADVERTISING

Advertising Rates & Deadlines

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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.

AAPM SPRING CLINICAL MEETING 2023

APRIL 1–4 ORLANDO, FL

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AAPM 2023

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The ART OF SCIENCE
The SCIENCE OF CARE

REGISTRATION OPENS: MARCH 22!

#AAPM2023

aapm.me/annual

A BUSY NEW YEAR AHEAD

NEWSLETTER EDITOR'S REPORT

Happy new year to all, and welcome to the first edition of the 2023 *AAPM Newsletter*. I hope everyone had a safe and happy holiday season and special thanks to those who worked over the holidays to ensure patients received high-quality care. Although the year has barely started, the calendar is already packed with great events and opportunities to connect with colleagues and learn something new. The program committee for the 2023 Annual Meeting is hard at work finalizing sessions and speaker lists. But first, AAPM HQ staff are busy preparing for the Spring Clinical Meeting and this year's AAPM Summer School on Radiopharmaceutical Therapy & Dosimetry. See the Meetings Page or the announcements in this issue of the Newsletter for more details and to register.

In this issue, you will find reports from incoming President **Ehsan Samei**, AAPM Executive Director **Angela Keyser**, and more. Other features include an update on the new oral exam categories for diagnostic medical physics from the ABR Medical Physics Trustees, a report from the Students and Trainees Subcommittee on the 2022 Virtual Residency Fair (residency interviews will also be in full swing soon!), and an announcement of the journal of *Medical Physics* celebrating its 50th anniversary. If you attend the Annual Meeting this year, be prepared to bring home a special issue of the journal.

We hope every AAPM member finds something of interest in this 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

MENTORSHIP PROGRAM

AAPM LAUNCHES NEW MENTORSHIP PROGRAM: VOLUNTEERS NEEDED!

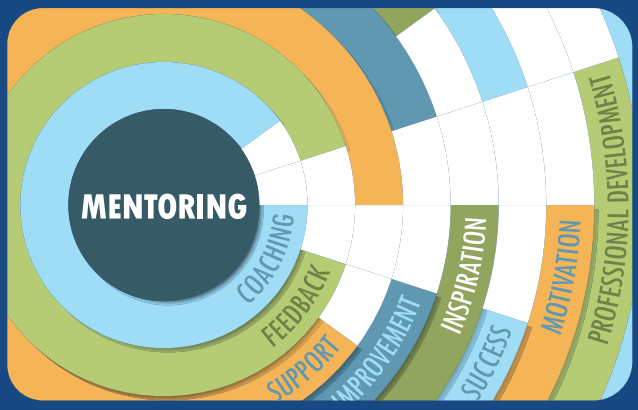
Call for Mentors to participate in the launch of the AAPM Mentorship Program! The AAPM Mentorship Program is actively recruiting volunteers from all disciplines, work environments and education levels to serve as mentors to other AAPM members. Participation is open to any AAPM member. More details including an FAQ and sign up can be found here.

What is Mentorship?

Mentorship is 1 on 1, virtual or in person. The AAPM Mentorship Program is not just for professional mentorship, it can be used to support any form of personal or career development, including navigating an early career post-residency, being more productive in research and grant writing, how to climb the academic ladder, becoming a better educator, strategizing career changes and moves, management and leadership skills, or even retirement! The individual aims of the mentoring relationship are up to the participants.

What Mentorship is Not:

This is not a clinical training program. Mentorship offers a personalized opportunity to work on your individual career development goals, develop new skills and expertise and access objective evaluation of your performance from an experienced member of AAPM. Mentorship can increase your networking opportunities, help to clarify your career direction, and provide support and motivation in meeting the challenges of work and home life.



AAPM IN 2023

PRESIDENT'S REPORT

Ehsan Samei, PhD
Duke University

There is always something magical when we turn the page from an old year to a new one. While we may associate such transitions as mere cliché — leaving the past behind, making resolutions (that often remained unfulfilled), hollow holiday cheer — the change still carries with it a refreshing wind of hope and the suggestion of new possibilities ahead. In that spirit, as your incoming president, I wish to emphasize a few priorities in our path ahead. These are not inclusive of all the great things afoot at AAPM, but are a few that are high on my mind. I encourage you to step up if you feel energized by any of the trajectories that I articulate below.

1. Spring Clinical and Summer Annual Meetings

Planning for the AAPM 2023 meetings is in full swing, thanks to the remarkable work of our meeting director, **Mariana Gallo**, with the MCC led by **Robin Stern**, the AMSC led by **Ingrid Reiser**, and the SCMSC led by **Jeffrey Moirano**. As before, both meetings promise to be exemplary expositions of the scholarship and practice perpetually evolving in our field. And there is more: For the first time, the 2023 Spring Clinical Meeting will have a Presidential Symposium entitled **Our Place in the Oncoverse**, with distinguished speakers **Jeff Ryckman** and **Chandra Kota** bringing a broad understanding regarding "our place" in the business and practice of oncology. As before, the meeting will have a strong clinical focus.

The Annual Meeting will likewise feature many firsts: The defining theme of the conference is **The Art of Science, the Science of Care**. The **Presidential Symposium** will bring together leading thought leaders. A key topic is how art speaks to the foundational quest of humanity for purpose, meaning, and understanding, with innovation as its key methodological asset (illustrated by award-winning artist **Enrique Martinez Celaya**). This is followed by a demonstration of how this very same innovative and inquisitive impetus gets embodied in the science of medical physics (by exemplary scientist **Kyle Myers**). And we then learn how Marie Curie, as a defining figure of the discipline, exemplifies the very attributes of art and science in the service of humanity (illuminated by distinguished physician and author **Richard Gunderman**). Echoing the common ground of creativity shared between art and science, the meeting will include expositions of visual, performing, and musical arts, as they can inform and inspire creativity in medical physics. A second **Presidential Forum: Medical Physics NOW** will feature a series of luminary talks, styled after TED-talks, highlighting the leading trajectories of our discipline in science, education, and practice.

2. AAPM Culture and Community

We all recognize that medical physics is a discipline that goes/extends far beyond what any of us individually bring to it. I have written on this in the

prior issues of the *Newsletter*[1,2], which I encourage you to consider looking at if you have not already. Our discipline is formed in community. Thus if we cherish what we have, we must cherish the community that has brought it forth. How can we better foster this community? You might say we are already there, yet each of us can recall incidents that suggest otherwise — elitism, cliquishness, divisiveness, even bullying — when we may sacrifice love for right, a person for the ideal, the other for the self. Instead, we can foster and uphold a collegial space of welcome, safety, and kindness. Why welcome? Because each of us matters — we need the effectual contribution of all towards our collective call to advance human welfare; excellence needs diverse perspectives, a foundational principle that informs everything from genetics to democracy. Medical physics is no exception. Why safety? Because we each need to be safe to bring our unique perspectives to the table. And why kindness? Because we are human; not all of us can be perfect all the time! We must find enough capacity in ourselves to extend grace to one another when we encounter fallibility. I wish to see an AAPM in 2023 that has a renewed focus on collegiality, camaraderie, mutual respect, and mutual support. Not only our discipline and our professional standing depend on it, but also our personal flourishing!

3. Administrative Proficiency

A primary topic of my last writing in this Newsletter[3], I believe there is a significant opportunity for us to refine the machinery of how we do work within AAPM. This matter was also one of the key strategic priorities identified by the Board in its Summer 2022 deliberations. Along these lines, I am happy to announce that on January 1, 2023 we are forming a new Ad Hoc committee on Administrative Proficiency (AHAP), chaired by **Emilie Soisson**. The charge of this committee is to contemplate and then advise concrete actions to the AAPM Board of Director as to how the AAPM structure and HQ support can be refined to better serve the AAPM mission, and to advise the Board how the AAPM administration can evolve for better success.

4. Defining and Qualifying Subspecializing of the Discipline

As our profession (any profession in fact) has advanced and is advancing, it is natural that we become specialized in particular areas. I am not talking about broad areas of specialization such as imaging or therapy, but more focused sub-specializations, e.g., an imaging physicist specialized in radiography would not necessarily be the one doing the testing on an MR scanner, and vice versa. Same for brachytherapy and IMRT. We all know this and consciously practice in our domain of expertise, yet there has not been any formal mechanism to acknowledge or affirm this pervasive reality of our practice. The closest is perhaps ACR's stated qualification of physicists supporting their accreditation application (which incidentally is not informed by any formal input from AAPM as the primary caretaker of the discipline). The new areas of specialization such as AI and Theragnostics further add urgency to this need. I am happy to announce that a new Ad Hoc committee is just being formed to address this significant need in our profession. The charge of the committee will be to define cross-disciplinary processes and methods to define and affirm sub-specialization in the field of medical physics.

5. Advancing our Value in Medicine

What are the big challenges in medicine, and to which of them does medical physics offer a notable contribution? How many articles do you know of in the leading journals of medicine — e.g., *JAMA, Lancet, New England Journal of Medicine* — authored by medical physicists? Our answer to these questions (or, I assume our pervasive inability to answer them) speaks to the untapped potential that is before us. I by no means am claiming that we are doing tangential work in medicine; rather I want to suggest that our posture and position in medicine can be significantly advanced, and we can make new and additional contributions to human welfare, if we can identify the big challenges that medicine is facing and articulate new priorities for practice and scholarship in our discipline accordingly. Towards that goal, we should visit the outcome of the **Ad Hoc Committee on the Future of Science**, formed by **James Dobbins** and led by **John Hazle**, and extend the effort with a broader set of thought leaders and stakeholders in medicine at large, to discern where medicine is heading and how medical physics should contribute to its future. Among the topics under consideration could be a creative space for all medical physicists and AAPM associates to dream possibilities, and putting in place a grant mechanism to seed the most promising opportunities.

6. Articulating our Value in Medicine

In step with the scientific work of "advancing our value in medicine" we also need to take on the professional task of articulating that value. Let's do a thought experiment: What would happen if all medical physicists (clinical, research, regulatory, industrial, etc.) got fired from their jobs. Would medicine suffer? What would be the financial cost of such a loss? We might not know this number and might have a hard time estimating it, but I bet it would not be small. And that is only financial cost; what about the cost in terms of patient care, to patients benefiting from our clinical work now, and to future patients benefiting from our research and educational work today. We need to estimate these figures and articulate that to ourselves, to the public, and to the healthcare community at large. The **Ad Hoc committee to Develop Advocacy Materials for Administrators on the Business Case for Medical Physics in Clinical Departments**, led by **Jennifer Johnson**, has been advancing this intelligence and I personally cannot wait to see the outcome of their worthwhile effort.

Thank you for reading. I appreciate your giving your attention to this column in the midst of your busyness. And thank you for what you do or might be motivated to do for the good of our profession and our community. ■

References:

1. Should diversity matter? *AAPM Newsletter* 47(2):7-9, March 2022. https://issuu.com/aapmdocs/docs/4702?mode=embed&viewMode=doublePage&backgroundColor=eeeeee&pageNumber=7
2. Is our diversity our undoing? *Supplement to AAPM Newsletter* 47(5):7-9, September 2022. https://www.aapm.org/pubs/newsletter/references/4705PresidentElectSupplemental.pdf
3. What matters should matter? *AAPM Newsletter* 47(5):7-9, September 2022. https://issuu.com/aapmdocs/docs/4705?mode=embed&viewMode=doublePage&backgroundColor=eeeeee&pageNumber=7

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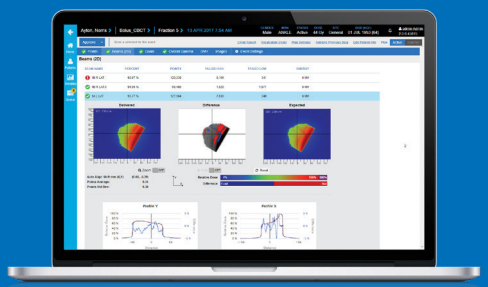

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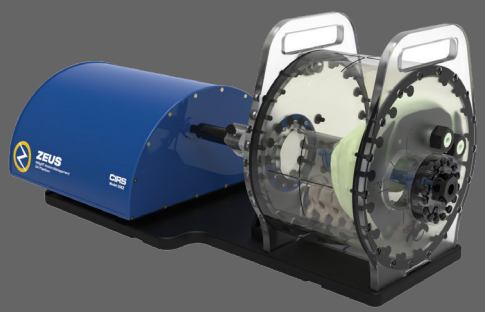

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INFORMATION FROM HQ

EXECUTIVE DIRECTOR'S REPORT

President Dan Bourland signing the PA

AAPM Joins in IAEA Practical Arrangement

I have just returned from a meeting at the International Atomic Energy Agency (IAEA) HQ in Vienna, Austria, where AAPM President **Dan Bourland**, International Council Chair Jatinder Palta and I represented AAPM at the signing of the Practical Arrangements on Technical Professional Society Partnerships in Cancer Care between 11 professional organizations and the IAEA. This was a fabulous trip that I will always remember, both personally and professionally. I have not traveled much internationally and certainly found Vienna delightful, especially during this time of the year, with the festive Christmas markets. But, most of all, I was reminded of the stellar reputation of this organization and that AAPM's impact is far-reaching. The other groups included the African Organisation for Research and Training in Cancer (AORTIC), American Society for Radiation Oncology (ASTRO), Arab Medical Association Against Cancer (AMAAC), Canadian Association of Radiation Oncology (CARO), European Society for Radiotherapy and Oncology (ESTRO), Federation of Asian Organizations for Radiation Oncology (FARO), Ibero Latin American Radiation Oncology Association (ALATRO), International Cancer Expert Corps (ICEC), Royal Australian and New Zealand College of Radiologists (RANZCR), Royal College of Radiologists (RCR). *Did you notice something?* AAPM is the

Angela R. Keyser
AAPM

AAPM's HQ Team…At Your Service!

Who does what on the AAPM HQ Team? See a list with contact information and brief descriptions of responsibilities online. An Organization Chart is also provided. We are now providing information about the diversity of our team as well.

Dan Bourland, Angela Keyser and Jatinder Palta at IAEA HQ on December 6 signing of the Practical Arrangement (PA)

only medical physicists' group involved in this significant partnership to improve access to radiotherapy services and reduce the global inequities in cancer treatment. As noted in the IAEA announcement, "The formal signing was followed by a round table discussion that focused on the specific needs in countries, including low and middle-income countries (LMICs), and how partnerships can forge concrete changes to support cancer care worldwide. Currently, over 70% of cancer deaths occur in LMICs, yet only 5% of spending on cancer care goes to those countries. In Africa, more than 20 countries have no radiotherapy treatment units." In his email to the AAPM Board, Dan Bourland noted: "This event is extremely notable for the IAEA as it brings together resources across continents in partnership to improve cancer care globally. The AAPM International Council (IC) is grateful to the Board and EXCOM for their support of AAPM's international activities, and I commend the IC, with the leadership of **Jatinder Palta**, for their vision and strategic efforts that have made this agreement possible. As well, I thank all of our AAPM volunteers and staff who have contributed their time, expertise and resources over decades to provide for AAPM's international reach."

New AAPM Reports:

- Report No. 374: Guidance for TG-51 reference dosimetry.
- Report No. 365: Academic program recommendations for graduate degrees in medical physics (Revision of Report No. 197).
- Report No. 373: The content, structure, and value of the Professional Doctorate in Medical Physics (DMP).
- Report No. 298: Recommendations on certificate program/alternative pathway candidate education and training.

2023 DREAM — Diversity Recruitment through Education and Mentoring Program

(Application Deadline: February 2, 2023)

The AAPM Diversity Recruitment through Education and Mentoring Program "DREAM" is a 10-week summer program designed to increase the number of women and racially underrepresented groups in medical physics by offering research opportunities, outreach and strategic mentorship geared towards recruiting a more robust and diverse group of skilled undergraduate students in the field of medical physics. View additional information and access the online application here.

2023 Summer Undergraduate Fellowship Program

(Application Deadline: February 2, 2023)

The AAPM Summer Undergraduate Fellowship Program is a 10-week summer program designed to provide opportunities for undergraduate university students to gain experience in medical physics by performing research in a medical physics laboratory or assisting with clinical service at a clinical facility. View additional information and access the online application here.

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

(Application Deadline: February 15, 2023)

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. **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 here.

Research Seed Funding Grant

(Application Deadline: April 12, 2023)

$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. Research results will be submitted for presentation at future AAPM meetings. **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 here.

AAPM / RSNA Doctoral and Masters Graduate Fellowships

(Application Deadline: April 27, 2023)

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 here.

AAPM / RSNA Imaging Physics Residency Grant

(Application Deadline: May 10, 2023)

This grant provides 50% support of a resident's salary for two imaging physics residency programs. The awardee institution(s) will provide the other 50% support. View additional information and access the online application here.

2023 Dues Renewal

2023 dues renewal notices were distributed in October. You may pay your dues online or easily print out an invoice and mail in your payment. I am pleased to report that all twenty-one AAPM Chapters have elected to have HQ collect chapter dues. We hope you will appreciate the convenience of paying your national and chapter dues with one transaction!

As the administrative staff of AAPM, we must consistently enforce the rules of the organization. The AAPM Rules are very specific regarding the cancellation of membership if dues are not paid by the deadline and the fees required for reinstatement. It would be very difficult to make exceptions for some members and enforce such fees on others. If you need assistance or have questions about the dues process, please contact Janelle Priestly.

Headquarters Happenings

Linda Minor joined the AAPM HQ team as a Meetings Manager in mid-December. She will serve as the point person for Annual Meeting and Summer School logistics as well as specialty meetings as assigned. Linda has 15+ years of experience in positions with a variety of meeting responsibilities. A real "jack of all (meeting) trades"!

Aaron Helmbrecht will begin 2023 as AAPM's Communications Manager, a new position on the team. He has a strong history of increasing responsibilities in "communications" utilizing his Master's in Strategic Public Relations from George Washington University. He will be working closely with the newly formed AAPM Communication Coordination Committee (CCC) under the Administrative Council (AC). Of course, we have much to navigate as this new position develops! Stay tuned for exciting developments in this area!

AAPM's Director of Meetings and Programs, **Mariana Gallo,** is one of three finalists for the Professional Convention Management Association (PCMA) "Community Advocate of the Year." As a recognized leader and a strong advocate for the meetings and event industry, Mariana is such a "value add" to the AAPM team. I am sure that you will join me in congratulating Mariana. The recipient will be announced on March 9 during the PCMA Business Events Industry Week. For more information, see the PCMA press release. ■

2022 YEAR IN REVIEW

TREASURER'S REPORT

Samuel G. Armato III, PhD
The University of Chicago

Happy New Year to all of you! My first year as Treasurer has been both educational and rewarding: educational because I have learned much about non-profit finances from **Robert McKoy** and the AAPM Financial Team and rewarding because I have a unique perspective on the magnitude of AAPM as an organization with its members, staff, and mission. Despite taking office at the beginning of a recession, I cannot think of a better opportunity to help steer this great organization through turbulent times. I wish to thank the members of FINCOM and EXCOM for their support and the headquarters staff for their hard work throughout the course of this year.

Financial Position and Estimates for 2022

The finance team recently analyzed year-to-date revenue and expenses versus their respective budgeted amounts. The 2022 budget (approved in 2021) estimated revenue at $10.95M and expenses at $12.45M, for a budget deficit of $1.50M. Now that 2022 is ending, we estimate an actual revenue of $11.07M and actual expenses of $11.57M, for an estimated actual deficit of $0.50M.

2023 Budget

I would like to thank the Council and Committee Chairs along with their liaisons, who worked extremely hard together to develop their draft budgets for presentation to the Finance Committee. For the first time in several years, the Finance Committee met face-to-face at AAPM Headquarters to review the 2023 draft budget. The Committee reviewed the initial draft and, after making a number of substantive changes, approved a draft of the 2023 budget. A couple weeks later, the Committee reviewed several appeals and approved a final budget to submit to AAPM's Board of Directors, which approved the 2023 budget during its virtual meeting on November 18, 2022. The budget is much more than a spreadsheet of dollar amounts—it provides a holistic overview of the activities that are being planned across the Councils to fulfill the mission of AAPM. Each line item in the budget represents real members spending time engaged in real work to impact our profession around the world, and it is a truly impressive perspective on the commitment and dedication of our members.

Revenue and expense projections from the approved 2023 budget are provided on the following pages. The statistical model indicated a target budgeted deficit of $964,495, although the deficit approved by the Board is greater than this target. The 2023 budget was greatly impacted by several factors that created a downturn in budgeted revenue. As a result of holding the 2023 Annual Meeting and Spring Clinical Meeting in Texas and Florida, respectively, it is anticipated that registration and sponsorship revenue will be down. Additionally, the membership dues increase proposal was defeated, and thus the 2023 budget does not include any increased revenue from membership dues (a factor that in past years had helped offset increased

TREASURER'S REPORT, Cont.

costs). As a result of these downward revenue trends, the Finance Committee, with the help of Council chairs, was forced to remove from the initial budget nearly $0.8M in planned programmatic costs to bring the budgeted deficit more in line with the statistical model.

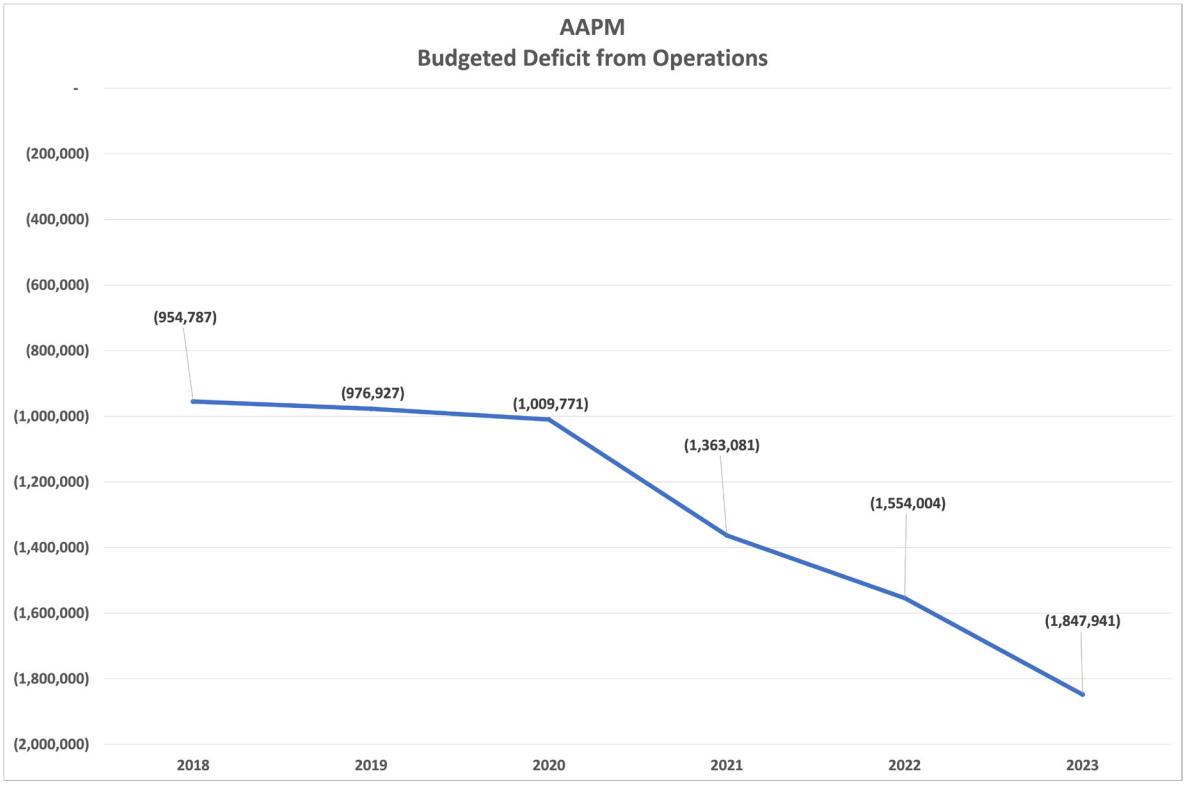
The final budget deficit still outpaces the statistical model by nearly $0.9M. The chart showing the budgeted deficits from operations demonstrates that these deficits have grown by 83% over the past three years, a trend driven by the impact of the global pandemic, the lack of membership dues increases in 2022 and 2023, and the impact of inflation on expenses in 2023. This trend cannot continue into 2024. To that end, AAPM President Dan Bourland convened the Ad Hoc Committee on Future Revenue Sources (AHFRS) in 2022 (which I chair) to evaluate current revenue streams and to provide recommendations for future diverse sources of revenue. Additionally, FINCOM will be closely evaluating revenue and expense trends throughout 2023 with the goal of reversing the trend of growing budgeted deficits.

2023 Budget

Total Revenue	$10,613,860
Total Expenses	12,461,801
Deficit from Operations	$1,847,941

In addition to a copy of the approved budget, you will find graphs showing budgeted revenue, budgeted expenses, and budgeted deficits from operations over the past five years.

In closing, AAPM's leadership has successfully navigated the Association's finances through several tumultuous years. As we emerge into this post-pandemic world, however, challenges remain. Volunteer leadership and headquarters staff are prepared to navigate these future challenges. I would like to thank Robert McKoy for his extraordinary assistance throughout the budget process, and I look forward to his continued proficient guidance in the upcoming years. Please feel free to reach out to me (s-armato@uchicago.edu) if you have any questions concerning this report. I'm looking forward to a rewarding and fulfilling 2023!

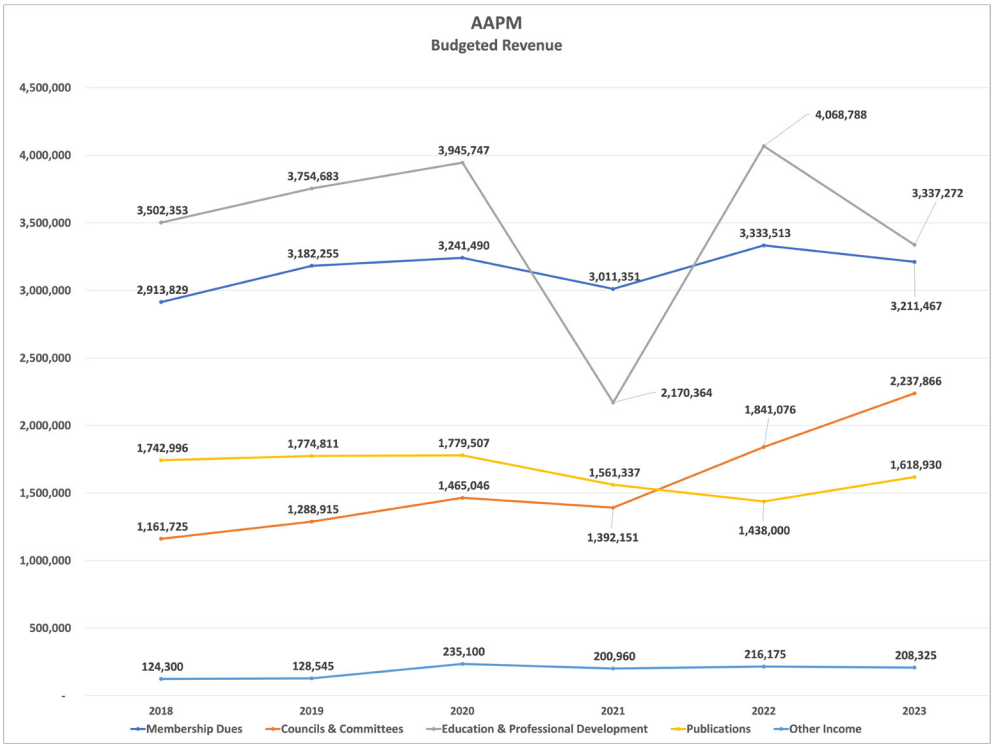


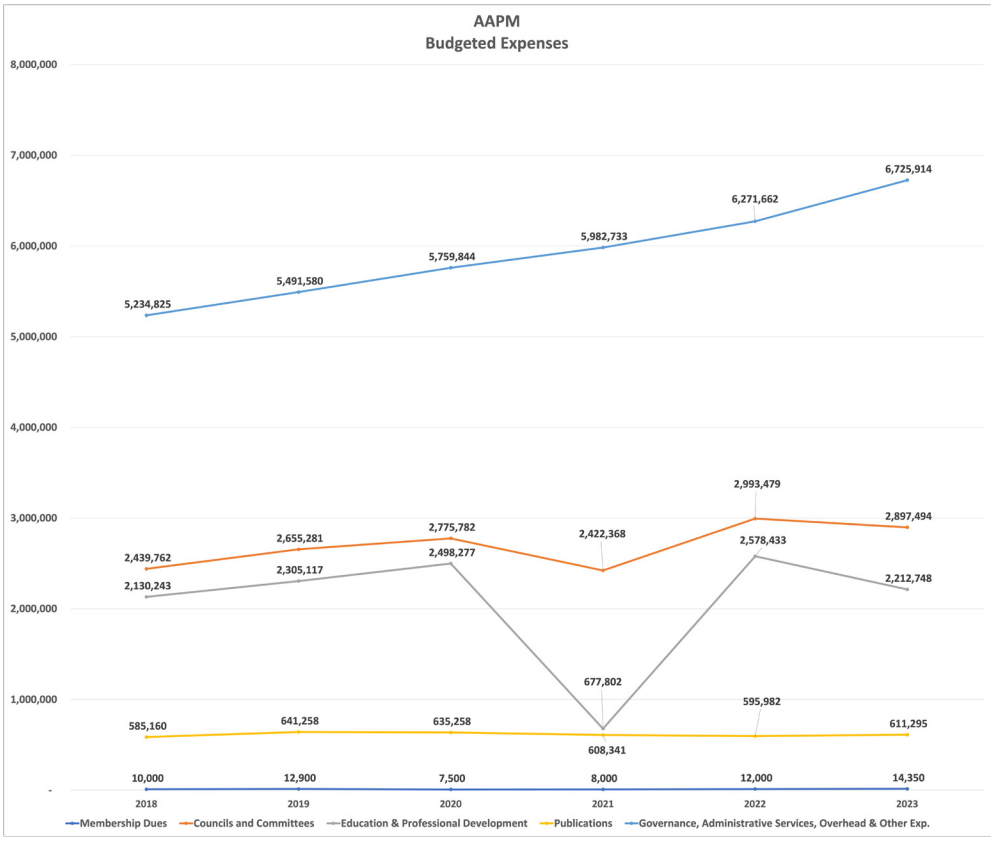
TREASURER'S REPORT, Cont.

2023 Final Budget Approved by Board

	Revenue	Expenses			Net
Final Budget Approved by Board 11.18.22		Direct	Overhead	Total	
Membership Dues					
Dues	3,188,467	14,350	97,500	111,850	3,076,617
Reinstatement Fees	5,000	0	0	0	5,000
Applications Fees	18,000		0	0	18,000
Subtotal	$3,211,467	$14,350	$97,500	$111,850	$3,099,617
Membership Services					
Member Inquiries/Services	0	0	204,000	204,000	(204,000)
Membership Directory	0	0	750	750	(750)
AAPM Web Site	0	0	300,000	300,000	(300,000)
Subtotal	$0	$0	$504,750	$504,750	($504,750)
Organizational					
Governance	0	168,975	371,000	539,975	(539,975)
Governance - Contingency	0	0	0	0	0
Subtotal	$0	$168,975	$371,000	$539,975	($539,975)
Councils and Committees					
Administrative Council	23,900	656,461	682,000	1,338,461	(1,314,561)
Education Council	718,100	361,010	155,000	516,010	202,090
International Council	37,500	323,300	100,000	423,300	(385,800)
Professional Council	960,400	470,733	225,000	695,733	264,667
Science Council	497,966	1,012,584	315,000	1,327,584	(829,618)
Committees Reporting to the Board	0	73,406	200,000	273,406	(273,406)
Subtotal	$2,237,866	$2,897,494	$1,677,000	$4,574,494	($2,336,628)
Education & Professional Development					
Annual Meeting	2,781,815	1,771,553	725,000	2,496,553	285,262
Summer School	217,731	148,051	60,000	208,051	9,680
Spring Clinical Meeting	292,711	188,502	180,000	368,502	(75,791)
RSNA	6,000	74,874	35,000	109,874	(103,874)
Review Courses	39,015	29,768	9,000	38,768	247
Specialty Meetings	0	0	81,000	81,000	(81,000)
Subtotal	$3,337,272	$2,212,748	$1,090,000	$3,302,748	$34,524
Publications					
Journals	1,618,930	611,295	186,750	798,045	820,885
Subtotal	$1,618,930	$611,295	$186,750	$798,045	$820,885
Administrative Services					
Administration/Prof Services/AIP	0	286,804	175,000	461,804	(461,804)
General Operations /Prince Street	0	182,630	1,778,631	1,961,261	(1,961,261)
Subtotal	$0	$469,434	$1,953,631	$2,423,065	($2,423,065)
Other Income & Expense					
AAPM Mailing Lists	30,000	0	6,000	6,000	24,000
Membership Certificates	25	0	0	0	25
Royalties - ARP	44,000	0	0	0	44,000
Investment Earnings & Fees	2,500	0	0	0	2,500
CAMPEP	113,000	0	88,000	88,000	25,000
RSEA	0	0	0	0	0
SDAMPP	16,000	0	16,000	16,000	0
MPWB	0	0	1,000	1,000	(1,000)
Web Hosting	800	0	0	0	800
Meeting Evaluation	2,000	0	0	0	2,000
Contributions and Donations	0	8,000	0	8,000	(8,000)
Dues and other payments/AIP		87,874	0	87,874	(87,874)
Miscellaneous	0	0	0	0	0
Subtotal	$208,325	$95,874	$111,000	$206,874	$1,451
TOTAL FROM OPERATIONS	**$10,613,860**	**$6,470,170**	**$5,991,631**	**$12,461,801**	**($1,847,941)**
AAPM Education & Research Fund	560,600	445,055	2,500	447,555	113,045
Investment Income	170,000	44,100	0	44,100	125,900
Grand Total	**$11,344,460**	**$6,959,325**	**$5,994,131**	**$12,953,456**	**($1,608,996)**
				2023 Model to Break-Even	($947,212)
				2023 Model Debt Service	($964,495)
				2023 Debt Service Loss	($68,874)

TREASURER'S REPORT, Cont.





CMS ISSUES MEDICARE 2023 FINAL RULES

HEALTH POLICY AND ECONOMIC ISSUES REPORT

Medicare Physician Fee Schedule

The Centers for Medicare and Medicaid Services (CMS) recently released the 2023 Medicare Physician Fee Schedule (MPFS) final rule. The final rule policies and payments are effective January 1, 2023. The MPFS specifies payment rates to physicians and other providers, including freestanding cancer centers. It does not apply to hospital-based facilities. Payments to hospital outpatient departments are described in a separate section below.

Payments are based on the relative resources typically used to furnish the service. Relative value units (RVUs) are applied to each service for physician work, practice expenses and malpractice costs. These RVUs become payment rates through the application of a conversion factor, which is updated annually.

The 2023 MPFS policy changes and reduction to the conversion factor results in an estimated overall cut of 4.0 percent to radiation oncology services. The 2023 conversion factor is $33.06, a 4.5 percent decrease from the 2022 conversion factor ($34.61). The reduction to the 2023 conversion factor may only be mitigated by Congressional legislation, which is anticipated by year-end.

The reduction to the 2023 conversion factor, in conjunction with the clinical labor pricing update, medical equipment updates and expansion of evaluation and management services (i.e., office visits) will result in payment reductions to most radiation oncology services in 2023, although medical physics codes have increases slated for 2023:

- 77336 Weekly medical physics consultation 1.4%
- 77370 Special medical physics consultation 2.4%
- 76145 Medical physics dose evaluation radiation exposure 8.4%

Hospital Outpatient Payment System

CMS recently released the 2023 Medicare Hospital Outpatient Prospective Payment System (HOPPS) final rule, which provides facility payments to hospital outpatient departments. The final rule policies and payments are effective January 1, 2023. This rule does not impact payments to physicians or freestanding cancer centers.

CMS is updating the HOPPS payment rates with a 3.8 percent overall increase in 2023, however, the Agency is cutting payment by 3.09 percent for non-drug outpatient services to cover the cost of restoring payment rates for 340B drugs to the level they were before CMS cut pay for them nearly 30 percent. The 340B drug pricing policy change results in a decrease to the final 2023 conversion factor to maintain budget neutrality and yields a reduction to all final 2023 outpatient payment rates compared to the proposed rule rates.

Wendy Smith Fuss, MPH
Health Policy Solutions

For additional information including Medicare rule summaries, 2023 final payments and impacts, visit the AAPM website.

Under the HOPPS, hospital reimbursement is based on Ambulatory Payment Classifications (APCs). CMS assigns CPT and HCPCS codes to an APC based on clinical and resource use similarity. All services in an APC are reimbursed at the same rate.

CMS reassigned CPT 76145 (Medical physics dose evaluation for radiation exposure that exceeds institutional review threshold, including report) from APC 5612 Level 2 Therapeutic Radiation Treatment Preparation with a payment rate of $358.72 to APC 5723 Level 3 Diagnostic Tests and Related Services with a payment rate of $483.43, a 39.8 percent increase over the 2022 payment of $345.85.

Payment for medical physics consultation codes 77336 and 77370 have a 2.9 percent payment increase in 2023 (see table below). ■

Summary of 2023 Radiation Oncology HOPPS Payments

APC	Description	CPT Codes	2022 Payment	2023 Payment	Payment Change 2022-2023	Percentage Change 2022-2023
5611	Level 1 Therapeutic Radiation Treatment Preparation	77280, 77299, 77300, 77331, 77332, 77333, 77336, 77370, 77399	$129.59	$133.38	$3.79	2.9%
5612	Level 2 Therapeutic Radiation Treatment Preparation	77285, 77290, 77306, 77307, 77316, 77317, 77318, 77321, 77334, 77338	$345.85	$358.72	$12.87	3.7%
5613	Level 3 Therapeutic Radiation Treatment Preparation	32553, 49411, 55876, 77295, 77301, C9728	$1,289.67	$1,340.67	$51.00	4.0%
5621	Level 1 Radiation Therapy	77401, 77402, 77789, 77799	$122.34	$122.39	$0.05	0%
5622	Level 2 Radiation Therapy	77407,77412, 77600, 77750, 77767, 77768, 0394T	$246.87	$262.93	$16.06	6.5%
5623	Level 3 Radiation Therapy	77385, 77386, 77423, 77470, 77520, 77610, 77615, 77620, 77761, 77762	$554.12	$572.47	$18.35	3.3%
5624	Level 4 Radiation Therapy	77605, 77763, 77770, 77771, 77772, 77778, 0395T	$724.50	$721.72	($2.78)	-0.4%
5625	Level 5 Radiation Therapy	77522, 77523, 77525	$1,321.12	$1,323.22	$2.10	0.2%
5626	Level 6 Radiation Therapy	77373	$1,771.28	$1,767.45	($3.83)	-0.2%
5627*	Level 7 Radiation Therapy	77371, 77372, 77424, 77425	$7,942.98	$7,690.57	($252.41)	-3.2%

*Comprehensive APC

GOVERNMENT AND REGULATORY AFFAIRS COMMITTEE (GRAC) BUILDING A SUCCESSFUL ROADMAP

LEGISLATIVE AND REGULATORY AFFAIRS REPORT

Roadmaps, also known as business plans are often confused with strategic plans, but they're not the same thing. Every organization should have both types of plans, and it's important to know the differences between them so your organization benefits from both. A business plan or roadmap describes the foundations of an organization, its owners, its capabilities, the industry and how it operates. A strategic plan assesses the current environment of an organization, both internally and externally. It establishes future goals and targets and describes the strategies it will implement to reach them.

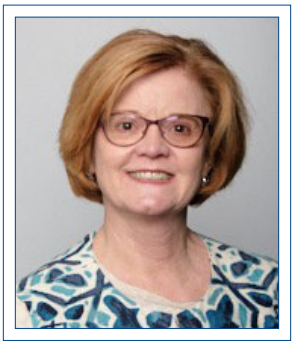
Why is GRAC embarking on this activity? They believe that they can improve effectiveness, efficiency, communication and transparency for all AAPM members. This is envisioned to be an "action oriented" document, where AAPM responds to the impact federal and state regulations may have on patient safety, quality of healthcare and the medical physics profession.

The plan will include the review of the committee's current activities and gaps in activities that need to be addressed and set up a **roadmap** for the next three to five years. It is a living document that will be flexible enough to address changes in the circumstances that impact the committee. AAPM is a complex organization where communication is challenging and this roadmap should improve member's understanding of GRAC activities.

Some of the issues to be discussed and addressed are:

1. Developing GRAC goals and milestones.
2. Defining the beneficiaries, partners, and other stakeholders that impact the success of these goals within AAPM and outside of the association.
3. Assessing the feasibility of established goals and how they may be financed.
4. Developing improved messaging for members and external stakeholders on the importance of medical physicists and the support GRAC provides to AAPM members.

Once implemented, the roadmap will continue to be evaluated, adapted and adjusted as needed. Over the next few months GRAC will be addressing these issues to improve the visibility and accountability of this committee. Stay tuned, more to come in 2023. ■



Debbie B. Gilley, MPA
Government Relations Specialist, AAPM

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 science within AAPM. SCAMP uses the process of shadowing to integrate the Associates into the 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, or Technology Assessment Committee. The Associate will participate in selected meetings of their assigned Mentor's Committee 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.

OPEN FOR APPLICATIONS:

January 9, 2023

DEADLINE:

April 12, 2023

ELIGIBILITY CRITERIA:

- Early career Medical Physicists within five years of earning a doctoral degree. Priority will be given to Medical Physicists who have completed their PhD and are either currently in residency or beginning their career.
- 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 Mentorship Program recipients are ineligible

DIRECT INQUIRIES: scamp@aapm.org

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

The 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 2022 Annual Meeting in DC and the 2023 Annual Meeting in Houston. Announcement details, along with Associate's picture and short biosketch, will be posted on the AAPM website by early June.

APPLICATION REQUIREMENTS:

- Cover letter outlining current contributions to Medical Physics research, describing future career plans, and reasons for interest in the SCAMP program.
- 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 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

ACR ACCREDITATION & MORE: INFO FOR MEDICAL PHYSICISTS

UPDATES FROM ACR HQ

DIR Fluoroscopy Data Shows Decline in Patient Radiation Doses in IR Procedures

A recent study published in the Journal of Vascular and Interventional Radiology (open access) compared radiation dose index distributions for fluoroscopically guided interventions (FGI) in interventional radiology (IR) from the Radiation Doses in Interventional Radiology (RAD-IR) study conducted in the 1990s to those gathered in the 2018 pilot of ACR® Dose Index Registry (DIR) Fluoroscopy (Fluoro) module.

The goal of the research was to better understand changes in radiation doses used in these procedures over the past two decades. The RAD-IR study published 20 years ago was, until now, the most complete multisite dataset of dose indices for FGI in IR in the United States.

According to **A. Kyle Jones, PhD**, first author of the paper, "As no large multisite datasets from the US have been available since RAD-IR, DIR Fluoro provides a major service to the medical imaging community by now offering practices the ability to compare their site to peer sites. Of course, we expect that this will eventually normalize the wide range of practice that has evolved since RAD-IR. In the absence of normative datasets, how in the world is a site supposed to know if they are using reasonable radiation doses or not?"

Analyzing dose index data from the DIR Fluoro pilot, the authors found that the median dose indices have decreased significantly since the RAD-IR study. Dose indices were collected for more than 20 times as many clinical procedures compared to the RAD-IR study. And median cumulative air kerma (Ka,r) decreased by more than 50% since RAD-IR for most of the procedure types compared.

"It is interesting that we observed large reductions in median dose indices since RAD-IR, even in the absence of a living normative dataset like DIR-Fluoro," says Jones. "We do not know the 'spread' in practice, but we can certainly study this with DIR-Fluoro to determine what impact the existence of the registry has on practice. Will we see further reductions in median dose indices, a reduction in practice variability or both? It will be exciting to see."

This study also lays the foundation for the development of diagnostic reference level values for FGI, which should follow in the next few years.

Participating in the DIR Fluoroscopy Module is Free for Facilities Already in DIR CT Module

The JVIR study is an example of the importance of the ACR DIR in helping to raise the bar for quality imaging and patient safety. The DIR Fluoro module, which is now open for broad participation, enables facilities to submit fluoroscopy dose indices data and compare their performance to that of peers nationwide.

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

In each issue of this newsletter, I will present information of particular importance or relevance for medical physicists. You may also check out the ACR's accreditation web site portal for more accreditation information and QC forms. A big THANK YOU to all the other staff that keep ACR programs running and assist with creating the content in this column.

November was Lung Cancer Awareness Month. Image Wisely released two on-demand videos to promote awareness and inform the community about two important initiatives. The first video (23 mins) covered ACR's Lung Cancer 2.0 initiative, and the second (15 mins) discussed ACR's Lung Cancer Screening Registry. I encourage everyone to have a look at the videos during a couple lunch breaks and imagine how you can add value to the practices you support. Configuration of LDCT protocols is one likely area, and the AAPM-convened Alliance for Quality CT published safe and reasonable protocols in 2019 to help. Remember to renew your annual Pledge to Image Wisely!

The increasing scope and number of fluoroscopically guided procedures performed annually over the past decade makes participation in the fluoroscopy module a critical step for practices to enhance the safety and quality of patient care. Learn more about the features and capabilities of the DIR Fluoro module.

New Accreditation Platform *Now Live*

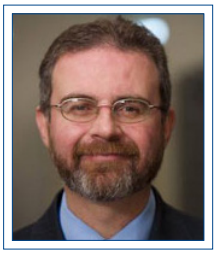
Many of you have undoubtedly noticed that ACRedit Plus has been rolled out. As I've written in a few AAPM Newsletters over the past year or so, ACR has moved to multifactor authentication (MFA). I'm sure you all can appreciate that such a large database that handles PHI needs a secure SSO. I need to say upfront that I am *not* an expert on ACRedit Plus; your primary source of getting questions answered should be the ACR Accreditation Support Home page, where you can enter keywords into the search bar, submit a ticket for help, get to the ACRedit Plus login page, see featured articles, etc.

Each modality ID can only have one online user, so you'll need to work with the clinics you support to optimize your workflow with the updated SSO/MFA requirements. We understand that collaboration for accreditation when using MFA is a bit more challenging; this is a necessary security enhancement for a system handling PHI. The online user for the facility has the ability to change the login for their account within the system, when necessary. The information on how to initiate that process is available here: Change Online User Login in ACRedit Plus (Revised 11-9-2022) : Accreditation Support. We appreciate your patience while we work through the inevitable challenges of launching a new online platform and implementing important data security features. Please do not hesitate to submit a ticket for help if you cannot find answers from the new and improved online Accreditation Support. ■

ABR ORAL EXAMS — NEW CATEGORIES FOR DIAGNOSTIC MEDICAL PHYSICS

ABR UPDATE

Kalpana Kanal, PhD
ABR Trustees
University of Washington



Matthew Podgorsak, PhD
ABR Trustees
Roswell Park Cancer Institute

Robert Pooley, PhD
ABR Trustees
Mayo Clinic

Geoffrey Ibbott, PhD
ABR Associate Executive Director
American Board of Radiology

The American Board of Radiology (ABR) Medical Physics oral exams in the three medical physics specialties are administered in five categories. Passing the exam requires candidates to pass all five categories while passing four of the five leads to a conditioned status. Periodically, the categories are adjusted to make the exam better fit current practice patterns or to make the category distribution more balanced.

Starting with the April 2023 administration, candidates taking the Diagnostic Medical Physics (DMP) oral exam will be tested using questions derived from the new categories shown below, also found on the ABR website. Neither the exam content nor how a candidate might prepare for the exam have changed but the categories, category descriptions and distribution of content among the various categories have all been updated. These changes were made to balance the distribution of content among the categories and to define the subcategories more clearly. **Candidates who conditioned on a previous exam will continue to be tested using the category structure in place at the time they conditioned.**

The major categories are now divided into 3 ionizing and 2 non-ionizing radiation modalities. The category descriptions are more standardized, and each category is divided into 5 subcategories corresponding to the following general topics for each major modality category:

- Equipment Design and Clinical use
- Image quality
- Dosimetric Quantities and Informatics
- Equipment Performance Evaluation
- Safety and Regulations.

The category descriptions for each modality in the table below are based on these general subcategory topics. Professionalism and Ethics are included under the Ultrasound category.

The **NEW** and **OLD** DMP Categories are shown in Tables 1 and 2, respectively.

Table 1. New categories, effective 2023, for the ABR Diagnostic Medical Physics Part 3 oral certifying exam.

The ABR oral exam categories have been adjusted to make the exam better fit current practice patterns and to make the category distribution more balanced.

Table 1. New categories, effective 2023, for the ABR Diagnostic Medical Physics Part 3 oral certifying exam.

DMP - NEW CATEGORIES	CATEGORY DESCRIPTION
1. Radiography & Mammography (includes dental and DEXA)	A. X-ray Production, Imaging Chain, Imaging Protocols B. Image Processing, Artifacts, Image Quality Evaluation & optimization C. Dose-Related Metrics, Typical/Reference Dose Levels, Image transfer, storage, & display D. Equipment Testing, Accreditation Standards, Technologist QC E. Radiation Protection, Shielding and Siting, Regulations, Radiation Biology
2. Fluoroscopy and Interventional Imaging	A. X-ray Production, Imaging Chain, Imaging Protocols B. Image Processing, Artifacts, Image Quality Evaluation & optimization C. Dose-Related Metrics, Typical/Reference Dose Levels, Image transfer, storage, & display D. Equipment Testing, Accreditation Standards, Technologist QC E. Radiation Protection, Shielding and Siting, Regulations, Radiation Biology
3. Computed Tomography	A. X-ray Production, Imaging Chain, Imaging Protocols B. Image Processing, Artifacts, Image Quality Evaluation & optimization C. Dose-Related Metrics, Typical/Reference Dose Levels, Image transfer, storage, & display D. Equipment Testing, Accreditation Standards, Technologist QC E. Radiation Protection, Shielding and Siting, Regulations, Radiation Biology
4. MRI	A. MR Design, Imaging Chain, Imaging Techniques B. Image Processing, Artifacts, Image Quality Evaluation & optimization C. Patient MR Bioeffects, Image transfer, storage, & display D. Equipment Testing, Accreditation Standards, Technologist QC E. MR Safety, Shielding, Siting and Regulations
5. Ultrasound	A. US Design, Imaging Chain, Imaging Protocols B. Image Processing, Artifacts, Image Quality Evaluation & optimization C. US Bioeffects, US Intensity measures and safety , Image transfer, storage, & display D. Equipment Testing, Accreditation Standards, Technologist QC **E. Professionalism and Ethics**

Table 2. DMP oral exam categories in use through 2022.

DMP - OLD CATEGORIES	CATEGORY DESCRIPTION
1. Radiography, mammography, fluoroscopy, and interventional imaging	A. X-ray production, beam characteristics, interactions, & image formation principles B. Types and characteristics of image detectors C. Clinical protocols for common imaging exams D. Fluoroscopy and interventional procedures, including acquisition parameters & dose-reduction strategies E. Image noise assessment and dose metrics for all projection imaging modalities F. Common artifacts, quality assurance, quality control, mammography accreditation, & MQSA standards
2. Computed tomography	A. CT system design and principles of operation; image-acquisition protocols, including helical acquisition & tube current modulation techniques
	B. Cone beam geometry C. Post-processing protocols, multi-planar and volumetric reconstruction D. Quantitative CT E. Image noise assessment, statistics, dose metrics (CTDI, DLP, SSDE), & effective dose estimation
3. MRI and ultrasound	A. MR equipment, principles of magnetization, resonance, & excitation B. MR pulse sequences, localization, acquisition, & processing C. Ultrasound (US) principles, beam properties, acquisition methods, signal processing, & image display D. Doppler US and color flow imaging principles & operation E. Common artifacts for MRI and US, siting requirements for MRI, quality assurance, & accreditation for MRI & US
4. Informatics, image display, image fundamentals, professionalism and ethics	A. Informatics infrastructure, standards, & patient security B. PACS-modality connectivity, workflow, display, & archive functions C. Image display requirements, characteristics, & calibration procedures D. Image processing techniques & qualitative data extraction E. Image fundamentals, sampling theory, & ROC analysis **F. Professionalism & ethics in clinical medical physics practice**
5. Radiation biology, dosimetry, protection, and safety	A. Radiation biology, radiation effects, & age/gender-specific risks B. Radiation protection principles, guidelines, and regulations; radiation dosimetry, detectors, standards, & units C. Radiation shielding design factors, barrier requirements, surveys, & reports D. Patient safety and error-prevention issues, including dose reduction, sentinel events, & MR- & US-specific safety issues

STUDENTS AND TRAINEES SUBCOMMITTEE COMMITS TO ADVANCING ACCESSIBILITY WITH IN-PERSON AND VIRTUAL RESIDENCY FAIRS

EDUCATION COUNCIL REPORT

Written on behalf of the Student and Trainee Subcommittee

The COVID-19 pandemic abruptly shifted the AAPM Annual Meeting and special events from in-person to virtual settings in 2020 and 2021. While this change resulted in unprecedented challenges for AAPM and its members in quickly adapting to virtual platforms, it provided opportunities to increase accessibility of events to the broader community, including those who might not have had the opportunity to attend in-person events. Adapting to accessible virtual settings shows potential to increase equity and inclusion for AAPM student and trainee members, as it eliminates the financial burden to travel, as well as other accessibility constraints to attend in-person events.

With the return to an in-person AAPM 2022 Annual Meeting in Washington, DC, the Students and Trainees Subcommittee (STSC) was excited to resume hosting an on-site **Medical Physics Residency Fair** event. This return came after a close collaboration with AAPM and its staff to organize and coordinate the STSC Virtual Residency Fair Fridays, in place of the on-site event, which took place over the past two years. With a priority to maximize accessibility of this event, which provides invaluable opportunities for prospective candidates to connect with participating programs, the STSC and its members took the initiative to independently organize and coordinate a Virtual Residency Fair, in addition to the in-person event. Our goal was to provide an accessible and open virtual platform for prospective candidates and programs to connect online, provide opportunities to disseminate information about residency programs in an alternative format and enable broader participation for those unable to attend the in-person event.

The 2022 STSC Virtual Residency Fair took place over the course of this past September, with participating programs hosting up to two 50-minute sessions for interested students, trainees, and other prospective candidates to attend. This year, we recommended a standard format with a short informative presentation to showcase the program, followed by open discussion with program directors, faculty, and residents to answer any questions, which was well received by our attendees. While most programs closely followed this format, this virtual platform provided the opportunity for some programs to demonstrate creativity while organizing sessions using their own formats, such as with interactive breakout rooms.

The 2022 STSC Residency Fair Team — **Huiming Dong, Aly Khalifa, Kai Huang, Yushi Cheng, Eric Morris, Celeste Winters**, and **Daniela Branco**, led by **Claire Park** and **Phillip Wall** — independently coordinated the organization and logistics of the event, including the registration and scheduling process for programs and attendees. This process involved conceptualizing a virtual program that was feasible to organize and coordinate independently,

Phillip Wall, PhD
Washington University School of Medicine

Claire Park, BMSc
Western University, Robarts Research Institute

generating virtual meeting rooms, and scheduling over 160 session timeslots with an interactive timetable. Additionally, our team collected and organized program information and resources that are openly available online and accessible at any time to prospective candidates.

We are proud to share that the STSC successfully hosted over 90 registered programs and over 350 registered attendees for the virtual event. While the STSC is currently collecting quantitative feedback from both participating programs and attendees to improve the organization events going forward, initial feedback for both the in-person and virtual events has been overwhelmingly positive. Given the record number of attendee registrants for the virtual event, the STSC is delighted to have increased accessibility and engagement between programs and students and trainees with the 2022 STSC Residency Fairs. We are excited to continue adapting and evolving to advance the needs of our student and trainee members. ■

WHAT'S NEXT IN CODEX

ASTRO REPORT

Four years ago, the American Society for Radiation Oncology (ASTRO) realized it was time to tackle the issue of access and availability of radiation oncology clinical data. The 2018 publication of the Minimum Data Elements for Radiation Oncology (MDE) was ASTRO's first step in a herculean effort toward easing the daily burden of practices. In 2021, Christodouleas et al, provided background in an ASTRO Blog, explaining how the MDE paper was leading to real-world outcomes through a strong collaboration with the American Association of Physicists in Medicine (AAPM). While ASTRO and AAPM's original goal was to develop a way to automatically generate end-of-treatment summaries, the potential has proven so much greater.

How Has ASTRO Found a Path Forward?

During the development of MDE, ASTRO took a calculated leap of faith and joined the Common Oncology Data Elements eXtension (CodeX) initiative during its early days. ASTRO is a founding member of CodeX and sits on the minimum Common Oncology Data Elements (mCODE) Executive Council. AAPM joined CodeX in 2020 and the collaboration has made a huge impact. For years, siloed data projects have been happening within radiation oncology, but there hasn't been an opportunity to move the development in a single direction. CodeX, under the leadership of the MITRE Corporation, has provided that partnership and a forum for many disparate oncology data projects to come together and move toward the same goal. MITRE has provided the technical informatics knowledge that specialty societies, like ASTRO and AAPM, and radiation oncology practices may lack. This technical support has allowed ASTRO and AAPM members to translate complex clinical scenarios into machine readable and transferable information and will soon ease some daily burdens in radiation oncology practices.

The Work

In the 2018 ASTRO Membership Survey, 20% of respondents stated that using electronic health records was a key concern in daily practice. This information was echoed in the Integrating the Healthcare Enterprise – Radiation Oncology (IHE-RO) biannual survey, referenced in the July/August 2022 AAPM Newsletter IHE-RO update from **Rishabh Kapoor, MS**. Siloed and non-transferable data is an issue throughout health care, and it isn't any different in radiation therapy. As members of CodeX, ASTRO and AAPM have led the charge to change the status quo of radiation therapy data and have created solutions to help daily practice. The collaboration between ASTRO and AAPM has been highlighted numerous times as the success story from CodeX and the model to follow for future work. This recognition can be seen in the recent appointment of CodeX Steering Committee representatives from ASTRO (Adam Dicker, MD, PhD, FASTRO, FASCO) and AAPM (**Charles Mayo, PhD**, FASTRO, FAAPM). These

Randi Kudner
Assistant Director for Quality Improvement, ASTRO

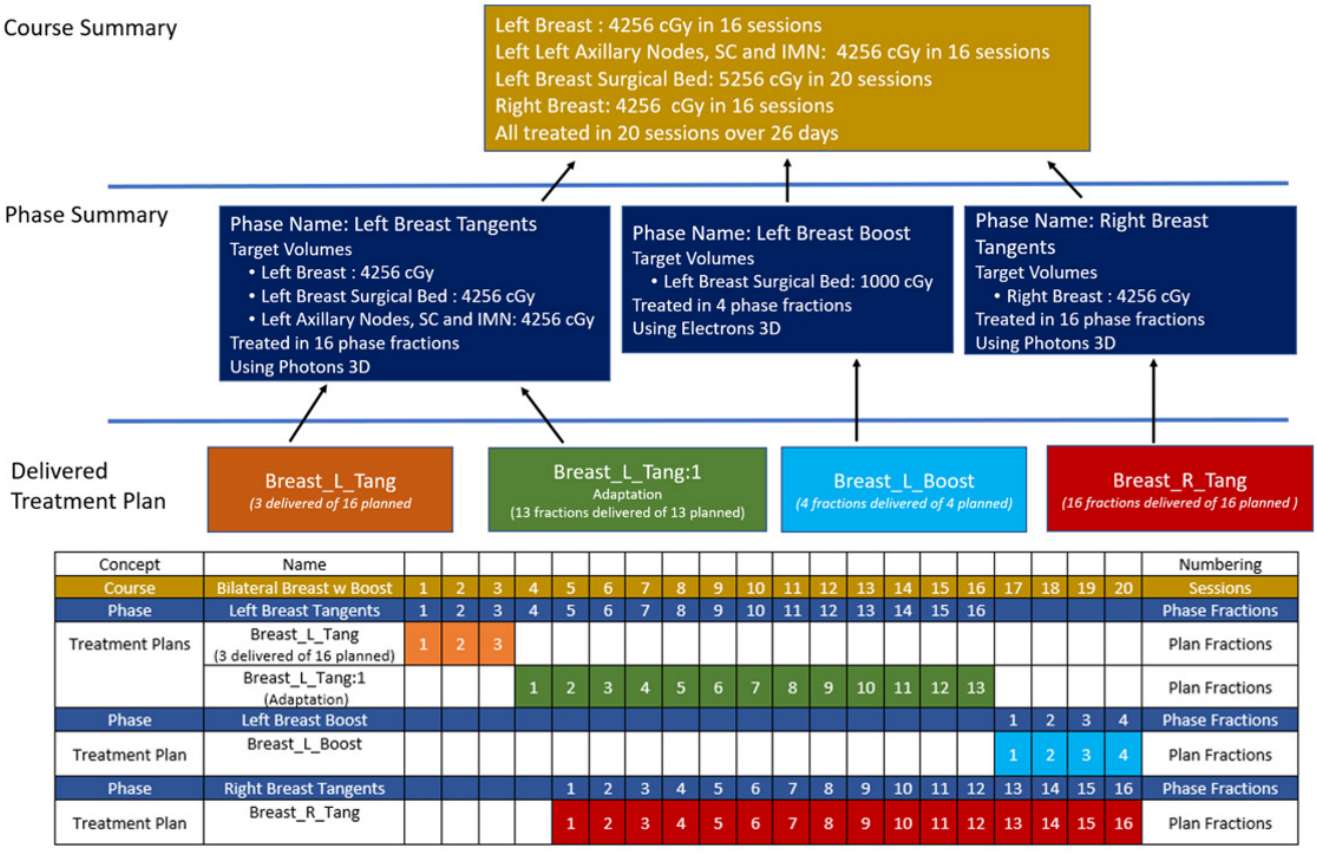
radiation oncology delegates will shape the future of the initiative and oncology data.

Treatment Summary Automation

Care coordination is central to the experience of patients and caregivers, particularly with cancer care, as they navigate multiple treatment modalities, clinicians and health care settings. To date, the creation of end-of-treatment summaries — a key part of care coordination — has remained a painfully manual process. The work that ASTRO and AAPM have done through CodeX has been primarily focused on correcting this issue. Through this multi-year endeavor, radiation oncology-specific vendor systems have automatically aggregated treatment summary data and transferred it successfully to enterprise EHRs. This is a huge step forward from the current manual creation of these documents that transmit as an unusable pdf to other systems. Varian, Epic and RaySearch have all successfully tested this functionality and are currently developing implementation plans for their commercial offerings, meaning it should be in your practice soon!

The creation of an end-of-treatment summary was the goal, but the implications of this development mean so much more. Through the creation of schematics like the one below (Figure 1), indicating the relationships between fractions, treatment volumes, courses and phases, the development of machine computable standards was created. Additionally, this graphic representation of treatment delivery allows a roadmap for vendors to map the framework needed to achieve the comprehensive course summary, including cumulative doses to specific volumes, the outcome of which will have effects on re-irradiation planning, research, accreditation, state reporting requirements, etc.

Figure 1: Graphic representation of treatment delivery



Concept	Name																					Numbering
Course	Bilateral Breast w Boost	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Sessions
Phase	Left Breast Tangents	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					Phase Fractions
Treatment Plans	Breast_L_Tang (3 delivered of 16 planned)	1	2	3																		Plan Fractions
	Breast_L_Tang:1 (Adaptation)				1	2	3	4	5	6	7	8	9	10	11	12	13					Plan Fractions
Phase	Left Breast Boost																	1	2	3	4	Phase Fractions
Treatment Plan	Breast_L_Boost																	1	2	3	4	Plan Fractions
Phase	Right Breast Tangents					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Phase Fractions
Treatment Plan	Breast_R_Tang					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Plan Fractions

Figure courtesy of Charles S. Mayo, PhD, FASTRO, FAAPM

Meaningful Quality Measures

Members of the radiation oncology team, like all health care professionals, are driven by their desire to improve patient outcomes. Measurement is a key component of any sort of improvement, but quality measures have been burdensome, and the aggregated data is normally meaningless. ASTRO's CodeX work, in parallel with Telligen, a federal contractor, and ASCO, is changing the ability for practices to collect data that are so integral to understanding meaningful quality and safety gaps, while also providing insight into treating the whole individual. The CodeX quality measures team is currently updating common measures to assess care provided to different populations, stratifying by gender, race and ethnicity. Once finalized, ASTRO will use the framework to create new quality measures for radiation oncology practices. These modern measures will be critical to measuring and improving the quality of care and essential to promoting equitable health outcomes.

Streamlined prior authorization

Prior authorization has long been a thorn in the side of radiation oncology practices.[1,2] While informatics does not resolve the obtrusiveness of prior authorization, it can go a long way to ease burdensome data collection and reporting. Clinical data are essential to ensuring accurate clinical representation for the decision support needed to ensure the right treatments for the right patients.

ASTRO is engaged in another CodeX project to reduce clinician burden by developing an informatics solution using the approaches referenced in the Centers for Medicare & Medicaid Services' (CMS) interoperability rules. Starting with prostate and breast radiation therapy, ASTRO is working with Varian, US Oncology and EverNorth to define an automated prior authorization process using health care data standards to extract and exchange the necessary information to expedite the prior authorization process. Using the mCODE goal of collecting data once to use for multiple purposes, this solution aims to remove the tedious nature of time-consuming and error-prone double data entry and streamline communication with payers.

Figure 2:

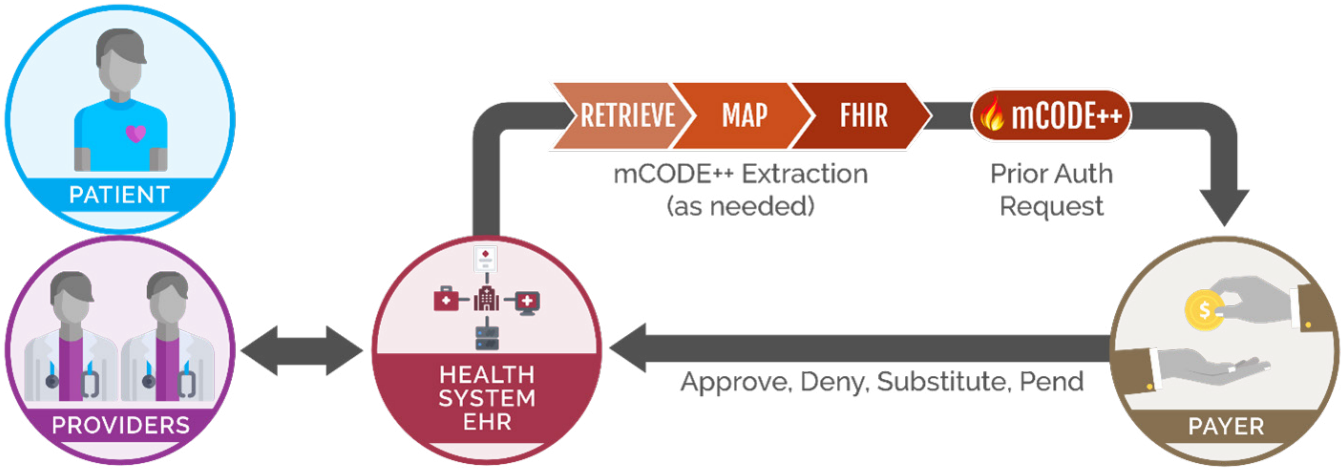


Figure courtesy of CodeX

What's next?

Vendor systems have several compliance requirements to meet by the end of 2022, which help provide additional incentive to support the standards created by ASTRO and AAPM to break down the barriers of health care data. Vendors, oncology practices and multidisciplinary oncology groups are engaged with ASTRO and CodeX to make an impact in the future of cancer data. ASTRO and AAPM have led the way and will continue working to help ease the daily burden related to health care data. Through our respective involvement in CodeX, ASTRO and AAPM have brought in additional partners from The Canadian Organization of Medical Physicists (COMP), the Society for Imaging Informatics in Medicine (SIIM) and NRG Oncology. These groups can now leverage the standards for their own priorities, further aligning the fragmented arms of oncology. We are also seeing an uptake of the radiation oncology standards in state registries and hope to see this continue.

The standards' development and implementation have been initiated through a strong collaboration among ASTRO, AAPM and other organizations. The success of it will be based on you. Radiation oncology practices need to get involved and request the incorporation of the radiation oncology standards as soon as possible. ■

References:

1. Bingham B, Chennupati S, Osmundson EC. Estimating the Practice-Level and National Cost Burden of Treatment-Related Prior Authorization for Academic Radiation Oncology Practices. *JCO Oncol Pract.* 2022;18(6):e974-e987.
2. Utilization Management Barriers to Care and Burdens on Small Medical Practice. In: U.S. Committee on Small Business; 2019.

50TH ANNIVERSARY OF THE *MEDICAL PHYSICS JOURNAL*

MEDICAL PHYSICS JOURNAL NEWS


WILEY 3 | 2023 Media Guide AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE

50th Anniversary Special Issue

50 YEARS ANNIVERSARY

***Medical Physics* journal will be celebrating its 50th Anniversary in 2023!**

This special anniversary issue will include historical overviews on the changing technologies and methods of the medical physics field from luminary authors. Influential AAPM presidents will also discuss changes and challenges within the medical physics community over most recent decades.

The Special Supplement will be distributed to AAPM Meeting attendees at Houston, Texas July 23-27, 2023.

Your ad will be prominently displayed.
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In 2023, *Medical Physics* marks its 50th volume year. With its early roots as the *Quarterly Bulletin* for the society, in the early 1970s, AAPM members saw a need for its own independent journal and launched *Medical Physics* in 1974. The early days of the Journal consisted of 6 bi-monthly issues each year, dedicated to the American perspective on medical physics and AAPM's societal announcements with **Gail Adams** as founding editor.

Forty-nine years later, *Medical Physics* has grown to become the official journal not just of AAPM but also of the Canadian Organization of Medical Physics and the International Organization of Medical Physics. Publishing over 700 articles per year from authors around the globe, the Journal is dedicated to the research of experimental, theoretical, and clinical research applications of radiation medicine and medical imaging; *Medical Physics* has become one of the premier journals for research scholarship in our field.

To celebrate the Journal's 50th anniversary, we are pleased to announce a special edition of the Journal, which will be distributed to AAPM attendees at the 2023 AAPM Annual Meeting in Houston. This special issue will include historical overviews of some of the exciting areas of research in medical physics over the past 50 years, in many cases written by research scientists who were there in the midst of the excitement. This 50th-anniversary supplemental issue also will contain short vignettes from the past 25 AAPM Presidents, who describe the issues that were being addressed by the AAPM executive leadership during their years in leadership. We also have essays from all living editors of *Medical Physics*, describing their activities with the Journal and the changes and challenges they experienced with the editorial operations as the Journal matured.

We look forward to celebrating 50 golden years with you in person in Houston as we look ahead to the next 50 years of documenting research advances in medical imaging and radiation oncology.

John M. Boone, Editor-in-Chief
Stanley H. Benedict, Editor for Therapy

John M. Boone, PhD
UC Davis

Stanley H. Benedict, PhD
UC Davis Cancer Center

Industry Scientists or Regulatory Physicists:

WE WANT YOU!

As an Industry Scientist or Regulatory Physicist, **YOU CAN JOIN AAPM.**

Individuals eligible to be an AAPM Full member possess an earned graduate degree in the Physical or Biological Sciences, Computer Sciences, Mathematical Sciences, or Engineering from a college, university or program accredited by one of the organizations recognized by the Council on Higher Education Accreditation (or its successors), or an equivalent foreign degree Applicants should also be engaged in clinical care, professional, research, or academic activity related to applications of physics in medicine and biology as well.

As an Industry Scientist or Regulatory Physicist, **YOU CAN VOLUNTEER.**

AAPM Full Members and Emeritus Members in good standing are eligible for voting appointments on Committees, Subcommittees, Working Groups, and Task Groups. Many AAPM groups could benefit greatly from the unique perspective an industry scientist or regulatory physicist offers. Explore current volunteer opportunities at w3.aapm.org/ads/committee_classifieds/classifieds.php (member login required).

As an Industry Scientist or Regulatory Physicist, **YOU HAVE OPTIONS.**

If the Full member category doesn't apply, consider Associate, Professional Affiliate, International Affiliate, Junior, Resident or Student member options.

Visit aapm.org/memb for more details.

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

membership@aapm.org

ASTRO GOLD MEDAL RECIPIENT: WENDELL LUTZ, PHD

PERSON IN THE NEWS

In October 2022, Dr. Wendell Lutz was awarded the ASTRO Gold Medal, the highest honor that the society confers. It recognizes a lifetime of achievement and contributions to the profession and to patient care. It is hard to imagine a medical physicist more deserving of this honor.

I had the good fortune of having Wendell as a mentor early in my career. In early 2000, Wendell was a visiting scholar at Memorial Sloan-Kettering in New York. I was there as a first-year postdoc in training. While Wendell's main charge was to help develop the embryonic SBRT program, he also took the time to teach us junior trainees. He spent countless hours, late nights, and weekends teaching us the intricacies of linear accelerator calibration and advanced concepts in medical physics. Wendell was an incredibly patient and caring educator, and there have been few things in my professional life more rewarding than having him as an early mentor. My experience was not unique. Throughout his career, Wendell has mentored scores of students and trainees, which is just one way he has made a significant impact on the field.

Many medical physicists in therapy may recognize Wendell's name in association with the "Winston-Lutz" test, an alignment test that ensures the accuracy of SRS and SBRT treatments. While this one test is emblematic of his practical approach and focuses on precision and quality, his contributions extend well beyond this. He was an early pioneer of the precision techniques for stereotactic radiosurgery (SRS) in the 1980s, working with the neurosurgeon Ken Winston at the Harvard Joint Center for Radiotherapy, where he also pioneered TBI techniques. Wendell later went on to help develop the technical and planning techniques that allow for stereotactic body radiotherapy (SBRT), including an early incarnation of IGRT with a diagnostic CT in the treatment vault at Memorial Sloan-Kettering.

Importantly, Wendell was not content to develop an advanced technique and then "move on." He wanted to share his knowledge. In the early days of SRS, after joining the faculty at the University of Arizona, Wendell traveled widely across the country, directly helping many centers implement the precision techniques that he and his team had developed. Today we might take for granted the precision and accuracy of SRS and SBRT treatments, but in these early days, the underlying techniques still had to be developed and the clinical success of these new approaches hinged on getting this right. Wendell got it right, and he helped the rest of us get it right too. ■

Eric Ford, PhD
UW Medicine

"Wendell is a giant, a brave innovator, a dedicated mentor, and a tireless tinkerer. I learned so much from him, not only about the technical aspects of medical physics but also about what it means to take time and care about trainees and patients. There are few people I can imagine who are more deserving of recognition with the ASTRO Gold Medal."

2023 RESEARCH SEED FUNDING GRANT

$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 1 of the award year. Research results will be submitted for presentation at future AAPM meetings. The award is not intended to provide salary support for the applicant, however any other research-related expenses, including travel to scientific meetings, will be supported. Travel expenses should be included in the submitted budget. At the end of the 12-month period a report must be forwarded to AAPM, along with itemized expenses. The award will not support indirect costs. Any unspent funds should be returned to AAPM.

Sponsored by the AAPM Science Council through the AAPM Education and Research Fund.

A list of Award Recipients can be found here.

Eligibility:

- 10 years or less since receipt of a terminal research degree or medical physics residency, whichever is later. (Excludes those who have reached Associate Professor level.)
- Eligibility extension is possible and will be reviewed on a case-by-case basis, following similar NIH guidelines.
- Must be a member of the AAPM at the time of application (any membership category). Pending membership status not eligible.
- No previous grants >$50,000 as principle investigator (including institutional startup funding, industrial awards, other external grants).
- Previously funded projects are ineligible.
- Prior Seed Grant recipients are ineligible.

Application Requirements:

Five-page description of research project (including figures and tables), separated as follows:

a. Specific aims
b. Background and significance
c. Preliminary results
d. Research plan
e. Literature cited
f. Budget
g. Letter of support from division/ department chair demonstrating support for the project and authorization of time and resources to complete the proposed research
h. CV (no more than 4 pages)

Note that sections (e), (f), (g), and (h) do not count towards the five-page limit.

Review Criteria

- 50% Scientific merit of proposal (significance, innovation, environment, and soundness of approach)
- 25% Potential for project to develop into a major project fundable by NIH, DOE, DOD, etc.
- 25% Background of investigator

Application Deadline: April 12, 2023

(All supporting documents are due by the application deadline.)

March 1: Deadline to provide three key words indicating the intent of your proposed topic (see application).

You must log onto the AAPM website to view the apply button.

Award duration:

August 31, 2023 – August 31, 2024

Recipients notified by:

May 30, 2023

FOR MORE DETAILS, VISIT:

https://gaf.aapm.org/index.php/#SEED

GEOFFREY IBBOTT, PHD, WINS IDMP AWARD

PERSON IN THE NEWS

Each year the International Organization of Medical Physics (IOMP) offers recognition of exceptional service and achievement in the profession through the International Day of Medical Physics Award. This award recognizes excellence in Medical Physics with a particular view of promoting medical physics to a larger audience and highlighting the contributions medical physicists make to patient care. The IDMP Award is linked to the International Day of Medical Physics (IDMP), from which it takes its name. The 2022 IDMP theme is "Medical Physics for Sustainable Health Care," and the IOMP solicited nominations from its constituent organizations for candidates whose work exemplified this theme. AAPM was pleased to offer **Dr. Geoffrey Ibbott** as our nominee for the award this year, and the IOMP selected him for the International Day of Medical Physics 2022 Award, an essential part of the International Day of Medical Physics Activities.

Dr. Ibbott has taken an active role in promoting medical physics both nationally and internationally. The complete scope of his distinguished career as a researcher and educator in some of the most prestigious academic and medical physics training institutions in the United States. His career can't be reviewed in a brief article such as this, but some highlights should be recognized. He has been active in service and leadership positions in The American College of Radiology and the American Society for Radiation Oncology, in addition to his influential and untiring service to AAPM. He has advanced the science associated with the calibration of instruments used to measure ionizing radiation as Director of the Accredited Dosimetry Calibration Laboratory at the University of Texas MD Anderson Cancer Center and currently serves as Associate Executive Director of the American Board of Radiology.

Internationally, he has provided extensive service within the IOMP, including as Chair of the Science Committee, Membership in the UNSCEAR Expert Group on Medical Exposures, and also as Chair of subcommittee/working groups of the International Electrotechnical Committee. He was the recipient of the 1997 Farrington Daniels Award and also the 2016 IEC Thomas A. Edison Award.

Readers of this note will likely be interested in the recent AAPM History interview with Dr. Ibbott, where these characteristics are on full display. ■

Gerald A. White Jr., MS
Medical Physics Services

"His impressive credentials should be viewed in the context of his kind and generous demeanor in his role as a mentor, colleague, and friend to many in AAPM."

DIVERSITY RECRUITMENT through EDUCATION AND MENTORING

DREAM

THE DREAM PROGRAM is a 10-week summer program designed to increase the number of women and racially underrepresented groups in medical physics by offering research opportunities, outreach and strategic mentorship geared towards recruiting a more robust and diverse group of skilled undergraduate students in the field of medical physics. DREAM students will be placed into summer research and mentorship groups that are consistent with their research and career interests. DREAM fellows are selected on a competitive basis. Selected fellows will be awarded a $6,000 stipend with the expectation of a 40- hour per week effort for 10 weeks.

ELIGIBILITY

- Undergraduate sophomores, juniors, and seniors majoring in physics, engineering, or other science
- US Citizens, Canadian Citizens, or Permanent Citizens of the US

HOW TO APPLY

- Go to https://gaf.aapm.org/index.php#DREAM
- Send official transcripts to karen@aapm.org
- Two letters of recommendation to karen@aapm.org
- Be sure to address diversity and/or the impact this fellowship would have on you in your self-statement.

APPLICATION DEADLINE:

February 2, 2023

FOR MORE DETAILS, VISIT: https://gaf.aapm.org/index.php#DREAM

PROGRAM CONTACT: Karen MacFarland, karen@aapm.org or (571) 298-1282

Sponsored by the AAPM Professional Council through the AAPM Education and Research Fund.
Additional funding provided by the Southeast Chapter of AAPM.

BRUCE TROMBERG AWARDED 2022 ACADEMY GOLD MEDAL

PERSON IN THE NEWS

The Academy for Radiology & Biomedical Imaging Research awarded its 2022 Gold Medal to **Bruce Tromberg, PhD**, at a special ceremony during the RSNA Annual Meeting on Tuesday, November 29, 2022, in Chicago, IL. Established in 2014, the Academy Gold Medal recognizes extraordinary contributions to advancing the cause of radiology and imaging research. Dr. Tromberg is the eighth recipient of the Gold Medal, joining previous awardees such as the Academy's founding Presidents and other highly decorated imaging scholars. Dr. Tromberg was awarded Honorary Membership into AAPM at the 2022 Annual Meeting to recognize his service to other societies that support medical physics.

Dr. Tromberg is the Director of the National Institute of Biomedical Imaging and Bioengineering (NIBIB), and in this role oversees a number of research programs focused on engineering, physical science, and computational technologies in biology and medicine. Prior to joining NIH in 2019, he joined the faculty at the University of California, Irvine, in 1990 where he was a professor of biomedical engineering and surgery specializing in the development of optics and photonics technologies for biomedical imaging and therapy. Among his many notable achievements, he served as director of the Beckman Laser Institute and Medical Clinic (2003-2018) and has recently been honored with the Britton Chance Award from the International Society for Optical Engineering, the Michael S. Feld Award from Optica, and the Horace Furumoto Innovator Award from the American Society for Laser Medicine and Surgery. Dr. Tromberg is a fellow of the National Academy of Inventors and the American Institute for Medical and Biological Engineers and in 2022 was also elected to the National Academy of Medicine. ■

Jennifer Pursley, PhD
Massachusetts General Hospital

"AAPM congratulates Dr. Tromberg on this well-deserved honor for his work to advance imaging technology and clinical medicine."

OUR CONDOLENCES

Milo Solomito, PhD

Our deepest sympathies go out to the family. 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 e-mail to: 2023.aapm@aapm.org
(Please include supporting information so that we can take appropriate steps.)

2023 AAPM/RSNA DOCTORAL AND MASTERS GRADUATE FELLOWSHIPS

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 (see details below).

Doctoral Graduate Fellowships:
Four Doctoral awards of $10,000 each
Two awards will be for first year Doctoral Students.

Two awards will be for second year or higher Doctoral Students.

- Paid to institution which in turn transfers it to student. Money can be used for tuition, professional and research development.

MS Graduate Fellowships:
Three MS awards of $10,000 each
All first and second year MS students are eligible to apply.

- Paid to institution which in turn transfers it to student. Money can be used for tuition, professional and research development.

Sponsored by the AAPM Education and Research Fund.

A list of Award Recipients can be found here.

Each applicant must be a graduate of an undergraduate program in physics or equivalent majors (e.g., engineering-physics, math-physics, or nuclear engineering or applied physics) from an accredited university or college in North America. The undergraduate grade point average must be greater than 3.5 (based on a 4.0). Each applicant must have submitted an application for graduate study to one of the accredited programs with subsequent acceptance. Applicants must be a member of AAPM at the time of application (any membership category). Pending membership status not eligible.

Required Supporting Documentation:

- All post-secondary study transcripts (official transcripts only)
- Copy of Graduate Record Exam results (If applicable)
- TWO Recommendation Forms and TWO Reference letters
- A (<300 word) statement of how funds are to be used, and how the funds will benefit your graduate study or career should you receive the award
- Acceptance letter from intended CAMPEP Accredited Program
- CV including GPAs and publications (use CV Template)

The application includes a check box for under-represented applicants. *EDIC defines "underrepresented and/or marginalized" as those who self-identify as a member of a racial, ethnic, sexual or gender minority group, the disabled population, the neurodivergent population or any other underrepresented group.*

Merge all files into one PDF and upload the complete application (PDF).

Send supporting documentation to:

ATTN: Karen MacFarland
karen@aapm.org

Application Deadline: April 27, 2023

(All supporting documents are due by the application deadline.)

Recipient Notified on: May 31, 2023

FOR MORE DETAILS, VISIT: gaf.aapm.org/#FELLOW

AMERICAN ASSOCIATION *of* PHYSICISTS IN MEDICINE

INTERESTED IN APPLYING YOUR PHYSICS OR ENGINEERING KNOWLEDGE IN MEDICINE? WANT TO MAKE A CLINICAL IMPACT THIS SUMMER?

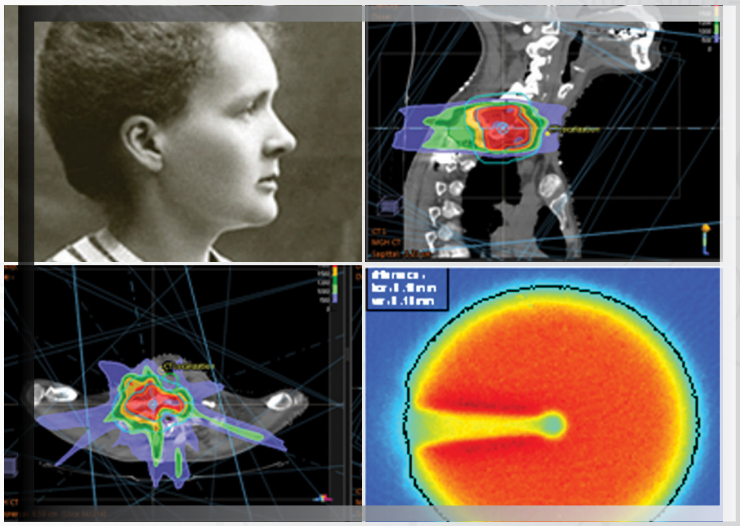
THEN THE SUMMER UNDERGRADUATE FELLOWSHIP PROGRAM IS FOR YOU!

We provide opportunities for excellent undergraduates to gain experience in medical physics at leading clinical and research institutions. A large menu of mentor-defined projects is available and Fellows select their mentor according to their mutual interests.

$6,000 stipends will be awarded to selected students on a competitive basis. The stipend is based upon an expectation of 40-hours per week for 10 weeks during the summer (May through September).

Application Deadline:
February 2, 2023

For more details, visit:
https://gaf.aapm.org/index.php#SUFP



Sponsored by the AAPM Educational Council through the AAPM Education and Research Fund

PROGRAM CONTACT: Karen MacFarland, karen@aapm.org or 571-298-1282

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