

2025 SEAAPM Scientific Meeting January 31 – February 1, 2025

From Research to Reality: Medical Physics and AI Shaping the Future of Cancer Care

Program Director: Anuj J. Kapadia, PhD, SEAAPM President-Elect

Crowne Plaza Knoxville Downtown University, Knoxville, TN

Friday, January 31

1:00 – 1:05 PM

Welcome and Introduction

Anuj J. Kapadia, PhD, Oak Ridge National Laboratory, TN

AAPM President Session

1:05 – 1:10 PM

President Session Speaker Introduction

Anuj J. Kapadia, PhD, Oak Ridge National Laboratory, TN

1:10 – 2:10 PM

AAPM President Address

Title: **Coming Together to Forge Ahead in Medical Physics**
M Mahesh, PhD, AAPM President

MedPhys Slam Session

2:10 – 2:15 PM

MedPhys Slam Introduction

Anuj J. Kapadia, PhD, Oak Ridge National Laboratory, TN

2:15 – 2:20 PM

Title: **A Novel Method for Modeling the RBE of Clinical Proton Beam**

Alexander O'Dell, Georgia Institute of Technology, Atlanta, GA

2:20 – 2:25 PM

Title: **Utilizing the IC Profiler with Optimized Gain Settings for Monthly QA: A Comparative Study Across Varian Linac Models**

Jessica Dominici, Novant Health, Wilmington NC

2:25 – 2:30 PM

Title: **Isocenter Optimization for Linear Accelerator-Based Radiosurgical Treatment Planning for Multiple Brain Metastases**

Justin Napolitano, Wake Forest University, Winston-Salem, NC

2:30 – 2:35 PM

Title: **The Use of a Collision Check Model to Predict and Avert Collisions**

Mena N. Bushra, Piedmont Healthcare, Atlanta, GA

2:35 – 2:50 PM

MedPhys Slam Q&A

Vendor Presentations

2:50 – 2:55 PM

IBA Dosimetry



2:55 – 3:10 PM

Spectrum Dynamics Medical



3:10 – 3:30 PM

Afternoon Break – Visit the Exhibitors

Keynote Session

3:30 – 3:40 PM

Keynote Speaker Introduction

Anuj J. Kapadia, PhD, Oak Ridge National Laboratory, TN

3:40 – 4:30 PM

Title: AI and HPC: Revolutionizing the Future of Healthcare and Cancer Research

Georgia D. Tourassi, PhD, FAAPM

Associate Lab Director, Oak Ridge National Laboratory, TN

4:30 – 4:40 PM

Keynote Q&A

General Session I

4:40 – 4:55 PM

Title: A Proof of Concept for Cherenkov-Based Patient Positioning Verification of Prone Breast Treatments

Paul J. Black, PhD, Wake Forest Baptist Medical Center, Winston-Salem, NC

4:55 – 5:10 PM

Title: Time resolved chemical species track overlap probability calculation for pulsed proton beam irradiation

Zakaria Aboulbanine, Oak Ridge National Lab, Oak Ridge, TN

5:10 – 5:25 PM

Title: Automation of the Dosimetric Comparison of Proton and Photon Treatments of Insurance Approval

Charles Graffin, Emory Healthcare, Atlanta, GA

5:25 – 5:45 PM

General Session I Q&A

6:00 – 8:00 PM

Trainee Poster Session and SEAAPM Social Event

A special thanks to our sponsor of this evening:



Saturday, February 1

7:00 – 8:00 AM **Breakfast – Visit the Exhibitors**

8:00 – 8:05 AM **Welcome and Introduction**
Anuj J. Kapadia, PhD, Oak Ridge National Laboratory, TN

Trainee Presentations

8:05 – 8:15 AM Title: **Development of a computational workflow to estimate off-target organ-at-risk dosimetry for radiopharmaceutical therapy applications**
Jayasai Rajagopal, Oak Ridge National Laboratory, TN

8:15 – 8:25 AM Title: **Inclusion of Underserved Populations in Radiation Science and Emergency Preparedness Studies: A Scoping Review**
Justin Napolitano, Wake Forest University, Winston-Salem, NC

8:25 – 8:35 AM Title: **Development of a cost-effective quality assurance tool for the high-definition motion monitoring system in cobalt-based frameless stereotactic radiosurgery**
Madison McKinnon, Atrium Health Levine Cancer Institute, Charlotte, NC

8:35 – 8:45 AM Title: **Dosimetric Changes due to Magnetic Control Systems in Bowel SBRT**
Wesley Cunningham, Duke University, Durham, NC

8:45 – 8:55 AM Title: **To develop a 3D printed modular CT simulator phantom that allows the assessment of all AAPM TG-66 recommended monthly quality assurance (QA) tests**
Jordan Lunsford, Wake Forest University, Winston-Salem, NC

8:55 – 9:05 AM Title: **Performance Characterization of Clinical Pathologists' Displays Used for Interpretation of Digital Slide Images**
Lauren Neldner, Duke University, Durham, NC

9:05 – 9:15 AM Title: **A Dual Approach for Investigating Small Field Electron Beam Characteristics**
Patrick Sansone, Novant Health, Charlotte, NC

9:15 – 9:25 AM Title: **Exploring the Dosimetric Properties of Copper and Tungsten 3D-Printed Plates: Implications for Medical Applications**
India Wood, Wake Forest University, Winston-Salem, NC

9:25 – 9:30 AM **Trainee Session Closeout**

Professional Session

9:30 – 9:45 AM	Title: AAPM Report 150 – Testing of Digital Radiographic Equipment: What is new, what is old, and what is omitted <i>David Gauntt, University of Alabama at Birmingham, Birmingham, AL</i>
9:45 – 10:00 AM	Title: Addressing Clinical MRI Imaging Challenges: A Critical Role for Medical Physicists <i>Jian-Xiong Wang, University of Alabama at Birmingham, Birmingham, AL</i>
10:00 – 10:15 AM	Title: A Practical Approach to Teaching Radiation Protection and Safety to Graduate Students <i>Robert A. Rogers, Vanderbilt University Medical Center, Nashville, TN</i>
10:15 – 10:30 AM	Title: One Approach to CT Protocol Management <i>David Gauntt, University of Alabama at Birmingham, Birmingham, AL</i>
10:30 – 10:45 AM	Professional Session Q&A

10:45 – 11:00 AM	Morning Break – Visit the Exhibitors
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General Session II

11:00 – 11:15 AM	Title: Monitoring Mechanical Vibrations from Heavy Construction Projects in Close Proximity to a Radiation Therapy Clinic <i>Robert Rogers, Vanderbilt University Medical Center, Nashville, TN</i>
11:15 – 11:30 AM	Title: Implementation of In Room CT Registration and Verification for Intensity Modulated Proton Therapy Treatment <i>Melanie Piantino, Atrium Health, Charlotte, NC</i>
11:30 – 11:45 AM	Title: A novel direction modulated brachytherapy technique for urethra sparing in high-dose-rate brachytherapy of prostate cancer <i>Moeen Meftahi, Emory University School of Medicine, Atlanta, GA</i>
11:45 AM – 12:00 PM	General Session II Q&A

Chapter Awards and Recognition

12:00 – 12:05 PM	Service Appreciation Award
12:05 – 12:10 PM	Jimmy Fenn Award Recipient
12:10 – 12:15 PM	Med Phys Slam Winner Award
12:15 – 12:20 PM	George Sherouse Award
12:20 – 12:25 PM	SEAAPM Best Paper Award

The Chapter Business Meeting will immediately follow the scientific meeting

This meeting has applied to CAMPEP for 7 MPCEC hours.

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