

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

MedPhys Slam

1:05 – 1:10 PM

MedPhys Slam Introduction

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

1:10 – 1:15 PM

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

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

1:15 – 1:20 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

1:20 – 1:25 PM

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

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

1:25 – 1:30 PM

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

Mena N. Bushra, Piedmont Healthcare, Atlanta, GA

1:30 – 1:35 PM

Title: **Frequency Analysis of Non-Invasive Photoacoustic Thermometry for Monitoring tissue Temperature**

Kathrin Dowdy, Augusta University, Augusta, GA

1:35 – 1:45 PM

MedPhys Slam Q&A

Keynote Session

1:45 – 1:50 PM

Keynote Speaker Introduction

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

1:50 – 2:40 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

2:40 – 2:50 PM

Keynote Q&A

Vendor Presentations (TBD)

2:50 – 2:55 PM

Siemens

2:55 – 3:00 PM

IBA

3:00 – 3:05 PM

TBD

3:05 – 3:10 PM

TBD

3:10 – 3:20 PM

Spectrum Dynamics (Long Talk)

3:25 – 3:45 PM

Afternoon Break – Visit the Exhibitors

AAPM President Session

3:45 – 3:50 PM

President Session Speaker Introduction

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

3:50 – 4:50 PM

AAPM President Address

Title: **Coming Together to Forge Ahead in Medical Physics**

M Mahesh, PhD, AAPM President

General Session I

4:50 – 5:05 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

5:05 – 5:20 PM

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

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

5:20 – 5:35 PM

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

Charles Graffin, Emory Healthcare, Atlanta, GA

5:35 – 5:50 PM

Title: **Feasibility study of single-gantry-angle proton minibeam lattice radiotherapy**

Rayyan Mahmood, Georgia Tech Institute, Atlanta, GA

5:50 – 6:10 PM

General Session I Q&A

6:10 – 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: A Practical Approach to Teaching Radiation Protection and Safety to Graduate Students <i>Robert A. Rogers, Vanderbilt University Medical Center, Nashville, TN</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: 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>
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 **Morning Break** – Visit the Exhibitors

General Session II

10:45 – 11:00 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>
11:00 – 11:15 AM	Title: Implementation of In Room CT Registration and Verification for Intensity Modulated Proton Therapy Treatment <i>Melanie Piantino, Atrium Health, Charlotte, NC</i>
11:15 – 11:30 AM	Title: SGRT in Error Detection in Radiation Oncology <i>Stephanie Parker, Wake Forest University, Winston-Salem, NC</i>
11:30 – 11:45 AM	General Session II Q&A

Chapter Awards and Recognition

11:45 – 11:50 AM	Service Appreciation Award
11:50 – 11:55 AM	Jimmy Fenn Award Recipient
11:55 – 12:00 PM	Med Phys Slam Winner Presentation
12:00 – 12:05 PM	George Sherouse Award
12:05 – 12:30 PM	SEAAPM Best Paper Award and Presentation

12:30 PM **Scientific Meeting Conclusion and Wrap up (Passing the Baton)**

The Chapter Business Meeting will immediately follow the scientific meeting

This meeting has applied to CAMPEP for 7 MPCEC hours.

**The Southeast Chapter of AAPM would like to acknowledge the support of our sponsors:
(TBD)**