

# Arizona Chapter of the AAPM (AzAAPM): From Past to Present

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**March, 2000: First recorded meeting – AzAAPM is born!**

**July, 2012: Formal recognition of AzAAPM as an official chapter**

**March 7, 2020: Eighth annual meeting of the AzAAPM**



2012: Patient Dose Reduction Efforts with Diagnostic Imaging at Mayo Clinic Arizona  
AAPM Initiatives: 2012 and Beyond  
Status of the Arizona Radiation Regulatory Agency  
Airport Security Scanners: An Update  
Proton Therapy Project at Mayo Clinic Arizona

2013: MR Guided Radiotherapy  
90Y Therapies in Development  
Gating with the Catalyst System  
Reducing Patient Dose with CT  
Dose Impact for Sub-Millimeter Collimator Size Difference  
National Error Reporting System  
Agility 160 Leaf MLC: Design to Dosimetry  
Minimally Invasive Brachytherapy for Macular Degeneration  
Safety in Radiotherapy: What is Working?  
Composite Shielding Barriers for Space Limited Rooms

2014: Implement of CT dose reporting in the University of California System  
CT Dose Reduction at the Mayo Clinic Scottsdale  
MR Implementation in Radiation Therapy  
Implementation of FFF on Varian and Elekta Linear Accelerators  
Commissioning TomoTherapy with ArcCheck following the TG-119 rotocol  
A Shell model for Calculating BED as a Function of Tumor Volume  
Evaluation and comparison the doses differences between TG-43 Line Source and Point Source methods for COMS plaque brachytherapy  
Using Statistical Process Control for QA  
IMRT QA, what are the options beyond gamma analysis?  
IMPT Proton Planning  
QA for a Proton Scanning Pencil Beam  
Robust Optimization for Proton Planning  
QA Tools for Linear Accelerators  
HDR Brachytherapy Current and Future Developments

2015: MR Linac  
IG and Treatment Planning in Era of Digital Linacs  
TG-109 Code of Ethics  
ASTRO/ACR Radiation Oncology Accreditation  
Optical Surface Scanning System  
4D MRI for Motion Management  
Advanced IQ Scrips in Mosaic for Clinical Workflow

2015: Fall Meeting at Davis Montham Air Force Base  
Air Force Industrial Radiation Safety Program Management  
Gamma Pod: Dedicated System for Early Stage Breast Cancer Therapy

2016: MR-Guided Linac at MD Anderson Cancer Center  
Novel Developments to Expedite Quality Treatment Care with TomoTherapy  
Report Card on Roils  
Pediatric CT  
CT Lung Cancer Screening: Why and How from Radiologists Perspective  
Radiation Dose Estimates with CT: Screening for Lung Cancer  
Insight into Treatment Dose Delivery Using In-vivo Dosimetry and Adaptive Dose Recalculation

2016: Resident Session  
The Use of Protons for HA-WBRT Evaluation of Impact of an External Breast Shield in Electronic Brachytherapy for Breast IORT: A Phantom Study  
Clinical Evaluation of FFF Mode Delivery  
A Retrospective analysis of isocenter coincidence between Exactrac and MV delivery on a Varian 21iX  
SRS and V12: What do we know before we plan?  
Physics Consideration for First Extremely High Dose I-131 Clinical Trial  
Analysis of Sensitivity of Error Detection in the Initial Physics Chart Check  
A Clinically Relevant IMRT QA Workflow: Design and Validation

2017: Developments in MRgRT - *Sasa Mutic, Washington University*  
The First Year with ViewRay: Commissioning and Initial Clinical Experience - *Kyle Padget, U of Miami*  
Digital Security in Hospital Computer Systems - *Robert Rost, Banner Health*  
Using the Dose Deviation Index to Drive Quality Improvement in Radiography: Musing form the Co-Chair pf AAPM TG-232 - *A. Kyle Jones, MD Anderson*  
Dynamic Non-coplanar Treatments for Intracranial Radiosurgery - *Lisa Hampton, Varian Medical Systems*  
Dosimetry and Response Assessment Following 90Y Microsphere Therapy - *Cheenu Kapadath, MD Anderson*  
Proton Beam Therapy at Mayo Clinic Arizona - A Physics Perspective - *Martin Bues, Mayo Scottsdale*  
AAPM Governance Assessment Project - *Laura Cervino, UC San Diego*  
Advanced Radiation Techniques: The Veterinary Perspective - *Eric Boshoven, MD*

2018: Ethics and the Residency match - *Kristi Hendrickson, Ph.D., U.W. Seattle*  
New approaches to teaching medical physics: What have you done for your students lately? - *George Starkschall, Ph.D., U.T. - M.D. Anderson*  
Education in Medical Physics - A Learners point of view - *Titania Juang, Ph.D. Stanford*  
Governance - What does the AAPM Clinical Practice Committee do for you? - *Jessica Clements, M.S., Kaiser Perminente L.A.*  
Determining gamma criteria for IMRT QA by analyzing LINAC and dosimetry system uncertainty - *Justin Gagneur, M.A., Mayo Clinic Arizona*  
Identifying and Correlating Error Trends through Physics Chart Checking - *Evan Silverstein, Ph.D. Mayo PGY1 Resident*  
A New Automated Platform for Independent Dose Check and Pretreatment QA - *Amir Sadeghi, Ph.D. Banner Health*  
MRI for Radiation Oncology: From spatial integrity to MR only simulation and beyond. - *Lizette Warner, Ph.D., Philips*  
RO-ILS – What we've Learned. - *Gary Ezzell, Ph.D. Mayo Clinic Arizona*

2019: Estimation of Notched COMS Eye Plaques' Heterogeneity Correction Coefficients via MCNP6 Simulations - *Joshua Salazar, University of Arizona*  
Evaluation of OARtrac Real-Time In vivo Dosimetry for HDR Prostate Brachytherapy - *Mary Ester Braswell, M.S., Banner Health*  
Prone vs. Supine patient positioning for the treatment of Anal Cancer - *Jarrod Lentz, M.S., Mayo Clinic Arizona*  
Evaluation of Independent RapidPlan Models Based on Laterality of Secondary Nodal Disease for H&N cancer - *Lisa Taylor, M.S., Mayo Clinic Arizona*  
Commissioning for Radiosurgery of Multiple Metastasis with a Single Isocenter - *Jonathan Thropay, University of Arizona*  
Working towards an Expert System for Radiation Oncology, or where do DVH constraints come from anyway? - *Mirek Fatyga, Ph.D., Mayo Clinic Arizona*  
TG-327 project: Crowd-sourced solutions to the problem of wrong shift - *Gary Ezzell, Ph.D., Mayo Clinic Arizona*  
MRI Only Simulation - *Neelam Tyagi, Ph.D., Memorial Sloan Kettering Cancer Center*  
Integration and Automation of Patient and Machine QA - *Matt West, Ph.D., Vincere Cancer Center*  
Proton Arc Therapy - *Xuanfeng Ding, Ph.D., Beaumont Hospital*  
Can IMRT QA Failures be predicted? How complexity metrics can guide the decision for replanning before IMRT QA has been measured. - *Evan Silverstein, Ph.D., Mayo Clinic Arizona*  
3D printed HDR Cylinders - *Aaron Steindler, University of Arizona*  
Improvements to IOERT at The Mayo Clinic - *Daniel Craft, Ph.D., Mayo Clinic*  
Zap Commissioning and Clinical Implementation - *Stephen Sorensen, Ph.D., Dignity Health – St. Joseph's*  
Evaluation of WL Test with Need for Repositioning at Different Table Angles During Radiosurgery Using the BrainLab ExacTrac - *Alexis Webb, University of Arizona*  
Scripting Safely: Practical Guidance on Clinical Scripting - *Rex Cardan, Ph.D., University of Alabama at Birmingham*

2020: Immersive Patient Education through Virtual Reality - *M.E. Braswell, Banner Resident*  
Implementation of Varian's triggered imaging feature via auto beam hold for prostate irradiation - *M. Hermansen, Banner Resident*  
Revisions to the AAPM Code of Ethics - *G. Sherouse, Ph.D., Sherouse Medical Physics*  
3D Scanning Technology in Electron Radiation Therapy - *D. Craft, Mayo Resident*  
Assessing the Performance of a Surface Guidance System for Continuous Patient Monitoring during SRS - *J. Lentz, Mayo Resident*  
Hybrid 3D Analytical Linear Energy Transfer Calculation Algorithm based on Pre-calculated Data from Monte Carlo Simulations - *W. Deng, Mayo Resident*  
The Radiation Oncology Alternative Payment Model (RO-APM) - *G. Sherouse, Ph.D., Sherouse Medical Physics*  
Intraoperative Magnetic Resonance Imaging: Challenge and Opportunity - *Y. Zhou, Ph.D., Mayo Clinic Arizona*  
Medical Physics 3.0 - *T. Pawlicki, Ph.D., U.C.S.D.*  
What a Statistician wants Physicists to know about Statistics - *T. DeWees, Ph.D., Mayo Clinic Arizona*  
A Comparison of Two Immobilization Systems for Prostate Radiotherapy - *F. Mostafaei, U of Arizona Resident*  
kV CBCT Dose and Image Quality of Ipsilateral Breast, w/ & w/o Breast Shield on Contralateral Breast - *Z. Gu, U of Arizona Resident*  
Accreditation of Imaging Modalities - *T. Mian, Ph.D., Medical Radiation Physics*  
Implementing Sun Nuclear Patient QA: a Paradigm Change - *S. Sapareto, Ph.D., Banner University & S. Sutlief, Ph.D.; Banner MD Anderson*