

Categories for 2022 AAPM 64th Annual Meeting

- Educational
 - Arthur Boyer Award for Innovation in Medical Physics Education
- Professional
 - Professional Practice/Leadership
 - Clinical Practice
 - Administration/Regulatory/Quality Management
- Scientific
 - Imaging Physics
 - Radiography/Fluoroscopy
 - Dual-Energy, Multi-Energy, or Spectral Imaging
 - Acquisition Imaging Physics and Novel Systems
 - Image Quality - Measurement & Modeling
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Dosimetry and Safety
 - Calibration and QA/QC
 - Quantitative Imaging
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
 - Photon-counting Imaging
 - Multi-detector CT
 - Dual-Energy, Multi-Energy, or Spectral Imaging
 - Acquisition Imaging Physics and Novel Systems
 - Reconstruction
 - Image Quality - Measurement, Modeling, and Artifacts corrections
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Dosimetry
 - Radiation dose reduction
 - Protocol Management/Optimization
 - Calibration and QA/QC
 - Quantitative Imaging
 - Dynamic imaging (Time-resolved/4D imaging)
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
 - Photon-counting Imaging
 - Cone-beam CT
 - Dual-Energy, Multi-Energy, or Spectral Imaging
 - Acquisition Imaging Physics and Novel Systems
 - Reconstruction
 - Image Quality - Measurement, Modeling, and Artifacts corrections
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Dental Imaging
 - Breast Imaging
 - Dosimetry
 - Calibration and QA/QC
 - Quantitative Imaging
 - Dynamic imaging (Time-resolved/4D imaging)
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
 - Protocol Management/Optimization
 - Photon-counting Imaging
 - Mammography/Tomosynthesis
 - Dual-Energy, Multi-Energy, or Spectral Imaging
 - Acquisition Imaging Physics and Novel Systems

- Reconstruction
- Image Quality - Measurement & Modeling & Artifacts correction
- Virtual Tools and Phantoms
- Image Processing/Analysis/Segmentation/Registration/CAD
- Clinical Applications
- Dosimetry
- Calibration and QA/QC
- Quantitative Imaging
- Time-resolved mammography/breast tomosynthesis
- Radiomics / Imaging Genomics
- Photon-counting Imaging
- Nuclear Medicine, PET and PET/MR
 - Acquisition Imaging Physics and Novel Systems
 - Attenuation Correction and Reconstruction
 - Image Quality - Measurement & Modeling & Artifacts correction
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Dosimetry
 - Calibration and QA/QC
 - Quantitative Imaging
 - Dynamic Imaging (Time-resolved/4D PET/SPECT/PET-MR)
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
 - Theranostics
- MRI
 - Acquisition Imaging Physics and Novel Systems
 - Reconstruction
 - Image Quality - Measurement & Modeling & Artifacts corrections
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Safety
 - Calibration and QA/QC
 - Quantitative Imaging
 - Dynamic imaging (Time-resolved/4D imaging)
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
- Ultrasound Imaging
 - Acquisition Image Physics and Novel Systems
 - Image Quality - Measurement & Modeling
 - Image processing/analysis/segmentation/registration/CAD
 - Photo-Acoustic Ultrasound
 - Calibration, QA/QC, and Safety
 - Image Registration for Diagnostic Radiology
 - Emerging Ultrasound Imaging Technology
 - Preclinical/Small Animal
 - Contrast Agents
 - Ultrasound Imaging of Therapy Response
 - Molecular Imaging
 - Quantitative Imaging
 - Ultrasound Elastography
 - Clinical Applications
- Pre-Clinical (Small Animal) Imaging Systems
 - Small-Animal Therapy-related Systems (Please submit under Therapy Track)
 - CT
 - MRI
 - CBCT
 - Nuclear Medicine, PET and PET/MR
 - Multi-modality
 - New and Emerging Modalities
 - Optical
 - Virtual Tools and Phantoms
- Optical
 - Acquisition Imaging Physics and Novel Systems
 - Reconstruction
 - Image Quality - Measurement & Modeling & Artifacts correction
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Calibration and QA/QC
 - Quantitative Imaging
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics

- New and Emerging Technology
 - X-Ray Phase-Contrast Imaging
 - X-Ray Fluorescence Imaging
 - X-ray imaging with distributed sources
 - Clinical Applications
 - Quantitative Imaging
 - Virtual tools and phantoms
 - Novel Contrast Agents and Nanoparticles for Imaging
 - Radiomics / Imaging Genomics
- Multi-Modality Imaging
 - Acquisition Image Physics and Novel Systems
 - Reconstruction
 - Dosimetry
 - Image Quality - Measurement & Modeling & Artifacts correction
 - Image Processing/Analysis/Segmentation/Registration/CAD
 - Clinical Applications
 - Calibration and QA/QC
 - Quantitative Imaging
 - Virtual Tools and Phantoms
 - Radiomics / Imaging Genomics
- Other Imaging Related Topics
 - Novel Applications
 - Low Resource/Global Technologies
- Multi-Disciplinary
 - Imaging in Treatment Planning, Image Guidance, and Adaptive Radiation Therapy
 - CT or Cone-Beam CT
 - Novel Imaging Modalities
 - Image Registration: Single-Modality
 - Image Registration: Multi-Modality
 - Segmentation: Novel Methods
 - Applications in Therapy Guidance
 - Molecular Imaging in Treatment Planning
 - Functional Imaging in Treatment Planning
 - Deformable Image Registration
 - Real-time Imaging and Tracking
 - Adaptive Radiation Therapy
 - Online Replanning
 - 4D Imaging
 - Surface Guided Imaging
 - MRI in Radiation Therapy
 - MRI for Treatment Planning and Target Definition
 - In-Room MRI for Therapy Guidance
 - Real-time Imaging and Tracking
 - Pre-treatment Motion Assessment/Management
 - MRI Calibration and QA
 - MRSI, DCE and Other Novel Techniques for Planning
 - MRI for Assessment of Therapy Response
 - MRI QA for Therapy: MR-SIM and MR-IGRT
 - MRI for Adaptive Therapy
 - Treatment Response Assessment
 - kV/MV Fluoroscopy / Projection Imaging
 - kV/MV CT or Cone-Beam CT
 - Nuclear Medicine, PET, and PET/MR
 - MRI
 - Novel Modality
 - Multi-Modality Imaging
 - Radiomics / Imaging Genomics (Please submit under Imaging Track)
 - Imaging for Particle Therapy
 - kV/MV Fluoroscopy / Projection Imaging
 - kV/MV CT or Cone-Beam CT
 - Proton Radiography / Proton CT
 - Nuclear Medicine (PET, Prompt Gamma etc)
 - Novel Modality
 - MRI
 - Motion Management for Particle Therapy
 - Residual Range Detection
 - Image Guidance for Surgical and Other Interventions (not Radiation Therapy)
 - Surgical Planning
 - Interventional Imaging (All Modalities)
 - Tracking and Navigation
 - Robotics
 - Image-Guided Ablative Therapy (RF, Cryo, Thermal, etc.)

- OR Safety
- Quality Assurance and Imaging Dose
- Radiobiology and Small Animal Systems (Please submit under Therapy Track)
- Other Multi-Disciplinary Related Topics
 - Novel Applications
 - Novel Image Guidance Modalities
 - Low Resource/Global Technologies
 - Radiomics / Imaging Genomics (Please submit under Imaging Track)
 - 3D Printing
- Science Council Session (Topic: Advancing Science to Expand Access to State-of-the-Art Applications in Medical Physics)
 - Advancing Science to Expand Access to State-of-the-Art Applications in Medical Physics
- Data Science/Radiomics/Computing
 - Quantitative Image Analysis (CAD, Computerized Assessment of Prognosis, etc.)
 - Autosegmentation
 - Autoplanning
 - Treatment Response
 - Robustness and Variability
 - Association with Genomics
 - Clinical Translation
 - Data Mining
 - Deep Learning
 - Feature Extraction
 - Data Harmonization
 - Statistical Models and Methods
 - Computational Models
 - Imaging Metrology and Standards
 - Machine Learning
 - Cyber Security
- Quantitative Imaging
 - QI Phantoms - Physical or Synthetic (Digital Reference Object)
 - QI Data Acquisition Strategies
 - QI Phantoms
 - QI Data Analysis Strategies
 - QI Applications: Pre-Clinical and Clinical Trials
 - Metrology - Assessment of Bias and Variance in Data Acquisition or Analysis
 - Harmonization of Data Acquisition and Data Analysis Across Vendors and Centers
 - Applications of QI: Pre-Clinical and Clinical Trials
 - Applications of QI: Treatment Guidance
 - Applications of QI: Treatment Assessment
- Therapy Physics
 - Imaging for Planning (Please submit under Multi-Disciplinary Track)
 - Photon Therapy - SBRT/SRS
 - Image Guidance (Please submit under Multi-Disciplinary Track)
 - Imaging for Verification (Please submit under Multi-Disciplinary Track)
 - 4D Treatment Planning
 - Inverse Planning and Optimization Techniques
 - Planning and Dose Calculation Methods
 - Plan Evaluation Including Statistics and Robustness Analysis
 - Treatment Delivery Techniques and Novel Applications
 - Dose Measurement Tools and Equipment QA
 - Biological Modeling
 - Photon External Beam Therapy
 - Image Guidance (Please submit under Multi-Disciplinary Track)
 - Imaging for Verification (Please submit under Multi-Disciplinary Track)
 - Adaptive Radiation Therapy (Please submit under Multi-Disciplinary Track)
 - 4D Treatment Planning
 - Inverse Planning and Optimization Techniques
 - Planning and Dose Calculation Methods
 - Monte Carlo Dose Calculation
 - Biological Modeling
 - Plan Evaluation-Statistics and Robustness Analysis
 - Plan Evaluation-Comparison Studies
 - Treatment Delivery Techniques and Novel Applications
 - IMRT or VMAT Patient-specific QA: Film, EPID, Array
 - IMRT or VMAT Patient-specific QA: Novel Methods
 - EPID-based Portal Dosimetry Patient-specific QA
 - In vivo Dosimetry (non EPID-based)
 - QA of Linear Accelerators and Ancillary Systems
 - Novel Dosimeters (gel, chemical, etc)
 - Secondary Dose Calculation/Verification
 - FLASH Techniques

- Immobilization Technology
 - External Immobilization Methods
 - Internal Immobilization Methods (balloon etc.)
 - Motion Management (Please submit under Multi-Disciplinary Track)
- Electron Beam Therapy
 - Treatment Delivery Techniques and Novel Applications
 - Dose Calibration and Verification
 - Planning and Dose Calculation
 - FLASH Techniques
- Brachytherapy and Radiopharmaceuticals
 - HDR Techniques
 - LDR Techniques
 - Planning and Dose Calculation
 - Biological Modeling
 - Brachytherapy QA
- Particle Therapy (Protons and Heavy Ions)
 - Image Guidance (Please submit under Multi-Disciplinary Track)
 - Imaging for Range Verification (Please submit under Multi-Disciplinary Track)
 - 4D Treatment Planning
 - Proton Beam Delivery Techniques
 - Heavy Ion Beam Delivery Techniques
 - Planning and Optimization Techniques (including robustness analysis)
 - Plan Evaluation-Comparison Studies
 - Dose Measurement Tools and Equipment QA
 - Dose Calculation and Calculation Tools
 - Biological Effect and Modeling
 - Uncertainties and Range Verification
 - Motion Management in Particle Therapy
 - FLASH Techniques
- Outcome Modeling and Assessment
 - Imaging for Therapy Assessment (Please submit under Multi-Disciplinary Track)
 - Late Effects
 - Early Effects
- Patient Safety and Quality Improvement
 - Incident Learning
 - Risk Analysis
 - Statistical Process Control
 - Novel QA Systems and Approaches (for IMRT QA submit under Photon External Beam Therapy)
- Radiobiology and Small Animal Systems
 - Pre-Clinical Radiobiology and Imaging Studies
 - Novel Systems for Small Animal Experiments
 - Radiobiological Modeling
 - Clinical Studies
 - Nanoparticles in Imaging and/or Therapy
- Radiation Protection and Shielding
 - Brachytherapy
 - Photon Therapy
 - Particle Therapy
- Targeted Radionuclide Therapies
 - Novel Radionuclide Therapies
 - Image Guidance (Please submit under Multi-Disciplinary Track)
- Ultrasound in Radiation Therapy
 - Quality Assurance
 - Robotic US Guidance
 - US guidance in Brachytherapy
 - Monitoring of Therapy
 - Motion Tracking
 - Image Registration with US for Patient Positioning
 - Ultrasound Imaging of Therapy Response
 - Ultrasound Treatment Planning
- Therapeutic Ultrasound
 - High-Intensity Therapeutic Ultrasound Devices
 - Ultrasound Hyperthermia/Thermal Ablation
 - Low Intensity Pulsed Ultrasound
 - Advanced and Novel Delivery Systems
 - Small Animal Systems
 - Image Guidance and Assessment (US, MRI,CT)
 - Treatment Planning
 - Therapy Modeling & Control
 - Drug Delivery, Activation, & Enhancement
 - Clinical Therapy
 - Ultrasound Therapy Standards

- HIFU/Ultrasound with Radiation Therapy
- HIFU and Immunotherapy
- Motion Modeling
- Dosimetric Effects
- Delivered Dose
- Other Therapy Related Topics
 - Novel Applications
 - Low Resource/Global Technologies
- Specialty Track: The New Era of Radiopharmaceutical Therapy
 - Specialty Track: The New Era of Radiopharmaceutical Therapy