Science Council Initiatives
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Charge: The Science Council examines specific areas of medical physics to determine advancement mechanisms, addresses scientific questions, and collates and assesses data.
Science Council – Committees

- Big Data, Radiomics, and Machine Learning Committee
- Imaging Physics Committee
- Research Committee
- Science Council Mentorship Program
- Technology Assessment Committee
- Therapy Physics Committee

Science Council – TG and Working Groups

- TG 278 – Combined Residency and Research Training in Medical Physics
- Unite No. 34 – PENTEC
- Working Group on...
  - DICOM Coordination
  - IEC Coordination
  - IHE: RO
- Task Group Review Streamlining
  - Development of a formal management system to improve efficiency
  - Improve review process
Big Data Radiomics, and Machine Learning Committee
Chairs: Joe Deasy, Maryellen Giger

Initiatives

• Newly developed group
• Recruitment and structuring of the working groups
• Vision – to provide clinical decision support, enabling extraction of knowledge, not just data, from clinical information, images, HER/EMR in a routine manner. Decision support can be for QA, device behavior, and clinical decisions including response prediction, disease classification, and prognosis.

Imaging Physics Committee, Chair: Eric Gingold

• Computed Tomography SC
• Computer Aided Detection in Diagnostic Imaging SC
• Imaging Informatics SC
• Magnetic Resonance SC
• Mammography SC
• Pediatric Imaging SC
• Radiation Protection SC
• Radiography and Fluoroscopy SC
• TG 246 – Patient Dose from Diagnostic Radiation
• Tomosynthesis SC
• Ultrasound SC

Imaging Physics Initiatives

• 6 new TGs formed
• 7 TGs are under review up the chain to IPC
• Improve coordination in join IPC/TPC initiatives
Research Committee, Chair: Paul Kinahan

- Joint WG for Research Seed Funding Initiatives
- TG 161 – Research Software for CBCT Reconstruction
- TG 169 – Measurements of the 3D Image Noise-Power Spectrum in CT
- TG 170 – Measurements of the spatiotemporal Image Noise-Power Spectrum in Fluoroscopy
- WG on Research Funding
- WG on Electronic Content
- WG on Future Research and Academic Medical Physics (FUTURE)
- WG on Student and Trainee Research

Research Committee Initiatives

- Promoting science through research spotlights in the newsletter
- Development of the Research webpage
- Manage the 9 TGs under Research Committee
- Continue with the Research webinars
- Increase collaborations with sister organizations, including APS and GMED
- Development and dissemination of Provocative Questions

Research Mentorship Program
Chairs: Robert Jeraj, Kristy Brock

Initiatives
- Continue to solicit applications for the program
- Develop and track metrics of success of the program
- Work with other councils to develop similar programs
Technology Assessment Committee
Chairs: John Hazle, Jatinder Palta

- Alliance for Quality Computed Tomography WG
- WG on Grand Challenges
- WG on Model Quality Assurance Programs in Radiation Oncology and Radiology
- WG on Optimization of Medical Imaging Systems and Techniques
- WG on the Assessment of Technologies for Image-Guided Interventions

Technology Assessment Committee Initiatives

- Investigating the possible development of a Technology Assessment Institute
- Work with the AAPM corporate advisory board to strengthen relationship with industry partners
- Strengthen the role of AAPM in hosting ‘Grand Challenges’ at the Annual Meeting

Therapy Physics Committee, Chair: Jean Moran

- Biological Effects SC
- Brachytherapy SC
- Calibration Laboratory Accreditation SC
- Quality Assurance and Outcome Improvement SC
- Radiation Dosimetry and Treatment Planning SC
- Therapy Imaging SC
- Treatment Delivery SC
- Unit No. 24 - IAEA/AAPM Shared Document
Therapy Physics Committee Initiatives

- NCI Workshop on Dosimetry of Systemic Radiopharmaceutical Therapy
- Investigating setting up an Ion Chamber Registry for Reference Dosimetry
- Develop and support membership surveys
- Support of ROILS
- Clarifying AAPM reports: white papers, blue papers, TG reports, MPPGs

Working Group on IHE-RO

Chairs: Bruce Curran, Bridget Koontz

- Unit No. 27 – IHE-RO Technical Committee
- Unit No. 28 – IHE-RO Planning Committee
- Unit No. 30 – IHE-RO Discrete Patient Positioning and Delivery Workflow
- Unit No. 32 – IHE-RO Planning Committee Co-Chairs
- Unit No. 33 – IHE-RO Steering Committee