

Science Council Initiatives 2018



Kristy K. Brock, PhD, DABR, FAAPM
Vice Chair, AAPM Science Council
Professor, Department of Imaging Physics
Professor, Department of Radiation Physics

MD Anderson |

Science Council



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

MD Anderson |

	<p>Kristy K. Brock, PhD, DABR, FAAPM Vice Chair, AAPM Science Council Professor, Department of Imaging Physics Professor, Department of Radiation Physics</p>		<p>Gerald P. Evans, PhD Council Chair Professor, Department of Radiation Physics</p>
	<p>David J. Borner, PhD Professor, Department of Radiation Physics</p>		<p>Kristy K. Brock, PhD, DABR, FAAPM Vice Chair, AAPM Science Council Professor, Department of Imaging Physics Professor, Department of Radiation Physics</p>
	<p>David J. Borner, PhD Professor, Department of Radiation Physics</p>		<p>Kristy K. Brock, PhD, DABR, FAAPM Vice Chair, AAPM Science Council Professor, Department of Imaging Physics Professor, Department of Radiation Physics</p>
	<p>David J. Borner, PhD Professor, Department of Radiation Physics</p>		<p>Kristy K. Brock, PhD, DABR, FAAPM Vice Chair, AAPM Science Council Professor, Department of Imaging Physics Professor, Department of Radiation Physics</p>

3

MD Anderson

 <p>Eric J. Higgins, MD erjhiggins@mdanderson.org 1712074 - 12/15/2018 Chair, Imaging Physics Committee</p>	 <p>John E. Toles, PhD jtoles@mdanderson.org 1712075 - 1/25/2018 Chair, 70000; 70000 Group for 3D Breast Imaging and Breast Planning in Mammography; 70000 1712077 - 12/15/2018 Chair, Technology Assessment Committee on effort</p>
 <p>Robert Long, MD rlong@mdanderson.org 1712078 - 10/15/18 Chair, Senior Counsel Molecular Biophysics Program on effort 1712079 - 12/15/2018 Member</p>	 <p>Paul E. Kinoshita, PhD pkinoshita@mdanderson.org 1712080 - 12/15/2018 Chair, Meeting Group on Post-Drug Sales Oversight at MDACC 1712081 - 12/15/2018 Chair, Strategic Planning on effort</p>
 <p>Paul M. Morse, PhD pmorse@mdanderson.org 1712082 - 12/15/2018 Chair, Meeting Group on Post-Drug Sales Oversight at MDACC 1712083 - 12/15/2018 Chair, Strategic Planning on effort</p>	 <p>Nicholas G. Mehta, PhD nmehta@mdanderson.org 1712084 - 12/15/2018 Chair, Research Committee on effort</p>
 <p>Jonathan A. Patel, PhD jonpatel@mdanderson.org 1712085 - 12/15/2018 Chair, Technology Assessment Committee on effort</p>	 <p>Douglas J. Park, PhD dpark@mdanderson.org 1712086 - 1/22/2018 Chair, Meeting Group on 2018000 Committee on effort</p>

4

MD Anderson

 <p>Katarina Stokrova, PhD kstokrova@mdanderson.org 1712087 - 12/15/2018 Vice-Chair, Imaging Physics on effort</p>	 <p>Christopher F. Searles, PhD csearles@mdanderson.org 1712088 - 12/15/2018 Chair, Meeting Committee on effort</p>
 <p>Jeffrey B. Siskin, PhD jsiskin@mdanderson.org 1712089 - 12/15/2018 Member</p>	 <p>Donald A. Ten Haken, PhD dtenhaken@mdanderson.org 1712090 - 12/15/2018 Member</p>
 <p>Jeffrey F. Williamson, PhD jfwilliam@mdanderson.org 1712091 - 12/15/2018 Member, Medical Physics Editorial Board - Editor</p>	

5

MD Anderson

NON-VOTING Appointments		Meet and Hear Meeting Committee and Goals	
 <p>James J. Anderson, PhD janderson@mdanderson.org 1712092 - 12/15/2018 Chair, Research Committee on effort</p>	 <p>Michael S. Wong, PhD mwong@mdanderson.org 1712093 - 12/15/2018 Research Committee on effort</p>	 <p>Michael S. Wong, PhD mwong@mdanderson.org 1712094 - 12/15/2018 Research Committee on effort</p>	 <p>Stephen H. Srinivasan, PhD ssrinivas@mdanderson.org 1712095 - 12/15/2018 Research Committee on effort</p>
 <p>Stephen H. Srinivasan, PhD ssrinivas@mdanderson.org 1712096 - 12/15/2018 Chair, Research Committee on effort</p>	 <p>George P. Zujewski, PhD gzujewski@mdanderson.org 1712097 - 12/15/2018 Chair, Research Committee on effort</p>		
 <p>David R. Brantley, PhD dbrantley@mdanderson.org 1712098 - 12/15/2018 Member - Research Committee on effort</p>			

6

MD Anderson | **STAFF Appointed to Committee** There are 5 staff.

 <p>Virginia R. Hesser vhesser@mdanderson.org 512.727.2713 - 512.713.0207 Executive Director (in office, no meeting)</p>	 <p>Virginia Hesser, MD vhesser@mdanderson.org 512.727.2713 - 512.713.0207 Science Council (no meeting)</p>
 <p>Lisa Schreiber, MS lschreiber@mdanderson.org 512.727.2713 - 512.713.0207 Executive Office Manager (in office, no meeting)</p>	 <p>Lisa Beale Sullivan lsullivan@mdanderson.org 512.727.2713 - 512.713.0207 Director, Meetings & Programs (in office, no meeting)</p>
 <p>Matthew W. Ingram, MS mwi@mdanderson.org 512.727.2713 - 512.713.0207 Programs Manager (in office, no meeting)</p>	

MD Anderson | **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



MD Anderson | **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

MD Anderson |

10

**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.

MD Anderson |

11

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

MD Anderson |

12

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
- 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
