



Missouri River Valley Chapter of the AAPM

## 2022 Spring Chapter Meeting Agenda (CST/CDT)

Friday 5/13/2022 Night of Public Engagement and MRV Science Fair –Virtual Event

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*The goal of this program is to reach out to the general public (specifically, middle-schoolers through collegegoers and beyond) through an engaging science demonstration, talks and a live panel. We will answer questions the audience has about medical physics.*

- 6:00PM – 6:10PM Welcome and Introduction of Panel by Chapter President  
*Aba Lippuner, Ph.D. DABR, University of Kansas Medical Center*
- Panel Members:*  
*Dave Dunkerley, Ph.D. (President Elect)--University of Iowa*
- Sarah Wisnoskie, MS (Secretary/Treasurer)--University of Nebraska Medical Center*
- Abby Besemer, Ph.D. (AAPM Chapter Representative)--University of Nebraska Medical Center*
- Jeff Snyder, MS (Past President)--University of Iowa*
- Samuel Hendley, Ph.D. (Student/Trainee EXCOM)—University of Nebraska Medical Center*
- 6:10PM – 6:15PM What is Medical Physics?—A Cancer Zappers YouTube Presentation  
*Jessica Fagerstrom, Ph.D. —Northwest Medical Physics Center*
- 6:15PM – 6:30PM A Demonstration of Radioactive Decay  
*Jessica Fagerstrom, Ph.D. —Northwest Medical Physics Center*
- 6:30PM – 6:45PM Interactive Q&A between Audience and Panel Members
- 6:45PM – 6:55PM **\*\*Trivia\*\***  
Get your game on for a chance to win some prizes!
- 6:55PM – 7:00PM Med Phys Slam
- “The Warping of Bladders”*  
*Ellie Bacon, MS--Creighton University*
- Dismissal of Early Learners*
- 7:00PM – 7:45PM Early Career Symposium
- “A Novel Small Animal FLASH Irradiator (SAFI) Based on Distributed kV X-ray Sources”*  
*Yuewen Tan, MS-- Washington University in St. Louis*
- “A Comparison of In-House and Shared Knowledge-Based Planning (KBP) Models for Bilateral Head and Neck Treatment Planning”*  
*Orlando Trejo, MS-- University of Kansas Medical Center*
- “Toward Offline Adaptive Therapy for Prostate Patients using Velocity”*  
*Ellie Bacon, MS-- Creighton University*
- “A Qualitative Comparison of an Open-Source Toolkit for MLC Trajectory Log File Analysis with Commercially Available Software”*  
*Sandun Jayarathna, Ph.D.--University of Kansas Medical Center*

7:45PM – 7:50PM Closing remarks  
*Samuel Hendley, Ph.D.—University of Nebraska Medical Center*

## Saturday 5/14/2022 Adaptive Radiation Therapy—Virtual Event

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*The goal of this program is to share novel and up-to-date information about adaptive radiation therapy among our peers in the field of medical physics, through engaging talks and a debate. Target audience: medical physicists and residents, dosimetrists, radiation oncologists and residents.*

9:00AM – 9:15AM Welcome and Opening Remarks  
*Announcement of Winners of Early Career's/Med Phys Slam*  
*Aba Lippuner, Ph.D. —University of Kansas Medical Center (Chapter President)*

9:15AM – 9:45AM “An Overview of Adaptive Radiotherapy” (SAM)  
*Jeffrey Snyder, MS—University of Iowa (Past President)*

9:45AM – 10:15 AM “Improving Image Registration for Offline Adaptive Radiotherapy with Velocity” (SAM)  
*Megan Hyun, Ph.D. DABR—University of Nebraska Medical Center*

10:15AM – 10:25AM “RadCalc: Adaptive Radiotherapy in Today’s Clinic”  
*Carlos Bohorquez, M.S., DABR—Lifeline Software, Inc., a part of the LAP Group.*

10:25AM – 10:35AM Q&A

10:35AM – 10:45AM **BREAK**

10:45AM – 11:15AM “Adaptive Radiotherapy with the Varian Ethos in a Multi-Vendor Environment: First Clinical Experience” (SAM)  
*Jennifer Pursley, Ph.D. —Massachusetts General Hospital and Harvard Medical School*

11:15AM – 11:45AM “The Role of Oxygen in FLASH RT: A Brief Overview of the Latest Developments” (SAM)  
*Guillem Pratx, Ph.D.—Stanford University*

11:45AM – 11:55AM Q&A

11:55AM – 12:05 PM **BREAK**

12:05PM – 12:35PM “Evolution of the 1.5 T MRI Linac in UMC Utrecht: from prototype to real-time adaptive MRI guided radiotherapy” (SAM)  
*Bas Raaymakers, Ph.D.—University Medical Center Utrecht*

12:35PM – 1:05PM “Quality Assurance for Adaptive Radiotherapy” (SAM)  
*Jinzhong Yang, Ph.D.—University of Texas MD Anderson Cancer Center*

1:05PM – 1:15PM “Elekta Unity – Designed for today and the future”  
*A presentation by Elekta*

1:15PM – 1:25PM Q&A

1:25PM – 1:55PM **CHAT WITH VENDORS OVER LUNCH!**  
*Please take this time to have lunch and visit vendor booths in the Zoom breakout rooms*

1:55PM – 2:25PM “Proton Therapy: Strategies for Adaptive Therapy” (MPCEC)  
*Yuting Lin, Ph.D.—University of Kansas Medical Center*

2:25PM – 2:45PM	“Overview of the Algorithm and Clinical Applications of Biology-Guided Radiation Therapy (BGRT)” (MPCEC) <i>Wu Liu, Ph.D.—Stanford University</i>
2:45 PM – 2:55 PM	Q&A
2:55 PM – 3:25 PM	<b>**Debate**</b> “Making the Jump to Fully Online Adaptive Radiation Therapy—We are Ready!”  <i>All conference attendees are invited to participate in this educational exchange. Attendees are to join one of two groups—for, or against the proposed argument. Attendees will later come together to present points in favor of or against the argument.</i>
3:25 PM – 3:30 PM	Closing Remarks <i>Aba Lippuner, Ph.D.—University of Kansas Medical Center</i>
3:30 PM – 3:40 PM	<b>BREAK</b>
3:40PM –4:40PM	Business Meeting  All attendees are welcome to attend.

*This meeting has applied to CAMPEP for approval of 3 SAMs, 0.75 MPCEC, and 3 MDCB credits*

### **Registration information:**

**To register, visit link below and select ticket for appropriate category.**

<https://www.eventbrite.com/e/mrv-aapm-2022-spring-meeting-with-a-night-of-public-engagement-tickets-261916418057>

### **Links to Zoom Meetings**

#### **Spring Meeting:**

Topic: MRV-AAPM Spring Meeting 2022

Time: May 14, 2022 9:00 AM Central Time (US and Canada)

Zoom Link: <https://us06web.zoom.us/j/83388248577?pwd=RDF3OGxrYWNTZnBndmxBTDFZcmJBdz09>

Meeting ID: 833 8824 8577

Passcode: 609246

#### **Night of Public Engagement:**

Topic: MRV-AAPM Public Engagement & Slam/Symposium

Time: May 13, 2022 06:00 PM Central Time (US and Canada)

Zoom Link: <https://us06web.zoom.us/j/82031475428?pwd=aFd2WUFqNVR0RUhGSDI3QVn5L0lIQz09>

Meeting ID: 820 3147 5428

Passcode: 863258