

**Radiological and Medical Physics Society of New  
York, Inc.**

Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10065

**2021 RAMPS  
Symposium**

**New Developments in QA and  
Therapy Outcome Analysis**

**Friday September 10<sup>th</sup>, 2021,**

**9:30am – 4:25pm**

**Virtual Meeting via Zoom**

**Continuing Education:**

This meeting has applied to CAMPEP for approval of 4.15 MPEC hours

**Meeting Program:**

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|---------------|---|
| 9:30 - 9:45   | <b>Welcome</b><br>Linda Hong; President, RAMPS<br>Department of Medical Physics,<br>MSKCC   |
|               | <b>Introduction</b><br>Jussi Sillanpaa; President-Elect, RAMPS<br>Department of Medical Physics, MSKCC  |
| 9:45 - 10:35  | <b>Commissioning and QA for innovative brachytherapy sources and applications</b><br>Mark Rivard, PhD<br>Rhode Island Hospital / Brown University |
| 10:35 - 11:25 | <b>HyTec</b><br>Ellen Yorke, PhD and Andrew Jackson, PhD<br>Department of Medical Physics, MSKCC  |
| 11:25 - 12:25 | <b>Showcase with vendors</b>  |
| 12:25 - 1:25  | <b>Lunch/Coffee – Visit the vendors virtually</b>   |

- 1:25 - 2:15      **AI and QA?**  
Peter Klages, PhD  
Department of Medical Physics, MSKCC
- 2:15 - 3:05      **AAPM TG-155 as a foundation for SRS patient safety**  
Jean Moran, PhD  
Department of Medical Physics, MSKCC
- 3:05 - 3:55      **Recent developments in Gammaknife QA**  
Jenghwa Chang, PhD  
Northwell Health
- 3:55 – 4:05      **Closing Remarks**

## Registration

Registration is by PayPal: [http://chapter.aapm.org/ramps/RAMPS/Payment\\_%26\\_Donation.html](http://chapter.aapm.org/ramps/RAMPS/Payment_%26_Donation.html)

RAMPS Members: \$30, Non-Members: \$40  
Student/Resident (with attesting letter or ID): \$5.00

## Learning objectives

Through the lectures from specialists in the fields, this symposium will engage attendees in the review of important updates and new technologies in QA and Therapy Outcome Analysis:

- Commissioning and QA for innovative brachytherapy sources and applications
  - Be familiar with recent developments in brachytherapy sources
  - Understand the commissioning and QA process for these sources
- HyTec
  - Be familiar with earlier collaborative efforts that help modern radiation therapy to avoid excessive complications while delivering sufficient dose to the tumor with conventional fractionation.
  - Understand some of the reasons that planning SBRT dose distributions requires particular care.
  - Understand some of the difficulties HyTEC faces in arriving at their conclusions.
- AI and QA?
  - Understand the different types and hierarchy of AI methods
  - Understand the basics of Distributions, Regularization, Loss Functions
  - Understand/be able to recognize some of the basic Deep Learning models
- AAPM TG-155 as a foundation for SRS patient safety
  - Understand the clinical drivers for patient safety
  - Learn how to select detector for small field dosimetry

- Understand the need to incorporate an end-to-end test to support an SRS program
- Recent developments in Gammaknife QA
  - Be familiar with recent developments in dosimetric and mechanical QA of Gammaknife units
  - Understand remaining uncertainties in Gammaknife QA