

## PLENARY AGENDA - CIRMS MEETING 2016

### Monday, April 18

- 8:30 am Continental Breakfast/Registration
- 9:00 am **President's Welcome**  
Dr. Walter E. Voit, President, CIRMS
- 9:15 am **Welcome to NIST**  
Dr. Lisa R. Karam, Chief  
Radiation Physics Division, Physical Measurement Laboratory  
National Institute of Standards and Technology, MD
- 9:30 am **Intro to NEEDS REPORT**  
Dr. Walter E. Voit, CIRMS President  
University of Texas at Dallas
- 9:45 am **Keynote Address**  
Dr. Mark S. Driscoll, State University of New York at Syracuse  
*"Curing Carbon Fiber Reinforces Composites for Automotive Application"*
- 10:15 am **Discussion**
- 10:30 am Coffee Break
- 10:45 am **Plenary Session I**  
Dr. Audrey MacLeod, National Research Council, Canada  
*"Modular Survey Spectrometer and Compton Imager"*
- 11:15 am **Student Travel Grant Awards Presentations:**
- CIRMS Student Travel Grant – sponsored by NIST  
Manik Aima, University of Wisconsin - Madison  
*"Primary Air-kerma Strength Measurements of a New Directional Pd-103  
Low-dose Rate Brachytherapy Source"*
- CIRMS Student Travel Grant – sponsored by NIST  
Khalid Gameil, National Research Council of Canada, Carleton University  
*"Digitization of the National Research Council of Canada Ionizing  
Radiation Standard's Triple to Double Coincidence Counter"*
- CIRMS Student Travel Grant – sponsored by Bruker BioSpin  
Yvonne Roed, UT MD Anderson Cancer Center  
*"Investigation of Gel Dosimetry for Quality Assurance of Magnetic  
Resonance-Guided Radiotherapy"*
- CIRMS Student Travel Grant – sponsored by Landauer  
Blake Smith, University of Wisconsin – Madison  
*"Determining the Air-kerma Strength for the BEBIG Model Ir2.A85-2 Ir-192 Source"*
- CIRMS Student Travel Grant – sponsored by Hopewell Design Inc.  
Kejia Yang, University of Texas at Dallas  
*"Shape Memory Polymers Enabled by Radiation Crosslinking"*
- 12:05 am **Poster Summaries**
- 12:15 pm **Poster Viewing**
- 12:45 pm Lunch
- 1:45 pm **Concurrent Working Group Sessions: IAME, Medical Applications**  
**Working Group Session I**
- 3:30 pm Coffee Break
- 3:45 pm **Working Group Session II**
- 5:30 pm Adjourn

## PLENARY AGENDA - CIRMS MEETING 2016

### Tuesday, April 19

- 8:30 am Continental Breakfast
- 9:15 am **President's Welcome**  
Dr. Walter E. Voit, President, CIRMS
- 9:30 am **Plenary Session II**  
Dr. John E. Bayouth, University of Wisconsin  
*"Measurement Considerations in an MR-guided Radiation Therapy Environment"*
- 10:00 am **Randall S. Caswell Award for Distinguished Achievement in the Field of Ionizing Radiation Measurements and Standards presented to:**  
  
**Dr. James A. Deye, National Cancer Institute, RRP**  
*"Precision Medicine and Radiation Standards"*
- 10:30 am Coffee Break
- 10:45 am **Plenary Session III**  
Dr. Brad Lundahl, Johnson & Johnson  
*"Dosimetric Techniques for Low Energy E-beams"*
- 11:15 am **Poster Summaries**
- 11:30 am **Poster Viewing**
- 12:45 pm Lunch
- 1:45 pm **Concurrent Working Group Sessions (continued): IAME, MA, RP/HS Working Group Session III**
- 3:30 pm Coffee Break
- 3:45 pm **Working Group Sessions IV**
- 5:30 pm Adjourn Day 2
- 6:15 pm Bus from Hilton Hotel to Buca di Beppo Italian Restaurant
- 6:30 pm Dinner at Buca di Beppo

## PLENARY AGENDA - CIRMS MEETING 2016

### Wednesday, April 20

- 8:30 am Continental Breakfast
- 9:15 am **Welcome Back**  
Dr. Walter E. Voit, President, CIRMS
- 9:30 am **Plenary Session IV**  
Dr. Christopher H. Sommers, USDA-ARS-NEA-Eastern Regional Research Center  
*"The Role of Extraintestinal Foodborne Pathogens in Human Illness"*
- 10:00 am **Plenary Session V**  
Dr. Zhichao Lin, FDA  
*"FDA Compliance and Emergency Response Programs for Safeguarding Nation's Food Supply from Radioactive Contamination"*
- 10:30 am Coffee Break
- 10:45 am **Report on Needs in Ionizing Radiation**  
Dr. Walter E. Voit, University of Texas at Dallas
- 12:00 pm **Closing Address/ New Officers**  
Dr. Mark S. Driscoll, State University of New York at Syracuse
- 12:30 pm Lunch
- 1:00 pm **ExComm Meeting**
- 2:30 pm Adjourn

## **Medical Applications Agenda: Monday April 18, 2016 (afternoon)**

Chairs: Regina Fulkerson, Wes Culberson and Ronnie Minniti

<b>Breakout Session I</b>			
<b>Theme: Proton Therapy</b>			
<b>Time</b>	<b>Topic / Title</b>	<b>Speaker</b>	<b>Affiliation</b>
1:45-2:15	The Physics of Proton Therapy	Wayne Newhauser, PhD	Louisiana State University
2:15-2:45	Needs for Treatment Planning and Quality Assurance in Proton Spot Scanning Therapy	Chris Beltran, PhD	Mayo Clinic
2:45-3:15	Functional and Safety Aspects of an Efficient Proton Therapy Facility Design	Vahagn Nazaryan, PhD	Hampton University Proton Therapy Institute
3:15-3:30	Questions for speakers and discussion on "current needs"	Interactive discussion with audience	

3:30 - 3:45

Break

<b>Breakout Session II</b>			
<b>Theme: Standards in Nuclear Medicine and Quantitative Imaging</b>			
<b>Time</b>	<b>Topic</b>	<b>Speaker</b>	<b>Affiliation</b>
3:45-4:15	Standards for PET	Brian Zimmerman, PhD	NIST
4:15-4:45	Concepts, applications, and requirements for Quantitative SPECT/CT	Eric Frey, PhD	Johns Hopkins University
4:45-5:15	CT Phantoms	Marios Gavrielides, PhD	FDA
5:15-5:30	Questions for speakers and discussion on "current needs"	Interactive discussion with audience	

5:30

Adjourn

Note: For the MORNING plenary speakers and poster sessions please see FULL CONFERENCE AGENDA at [http://cirms.org/conference\\_agenda.html](http://cirms.org/conference_agenda.html)

## **Medical Applications Agenda: Tuesday April 19, 2016 (afternoon)**

Chairs: Regina Fulkerson, Wes Culberson and Ronnie Minniti

### **Breakout Session III**

#### **Theme: Quantitative Medical Imaging and Radiation Therapy**

<b><u>Time</u></b>	<b><u>Topic</u></b>	<b><u>Speaker</u></b>	<b><u>Affiliation</u></b>
1:45-2:15	Quantitative Imaging Optimization; Dosimetry of CT Imaging in the Thoracic	Jim Mulshine, MD	Rush University
2:15-2:45	Developing Standards for Quantitative Magnetic Resonance Imaging	Michael Boss, PhD	NIST
2:45-3:15	Reference Dosimetry in the Presence of Magnetic Fields	Geoff Ibbott, PhD	UT MD Anderson Cancer Center
3:15-3:30	Questions for speakers and discussion on "current needs"	Interactive discussion with audience	

3:30 - 3:45

Break

### **Breakout Session IV**

#### **Theme: Topics in Radiation Dosimetry**

<b><u>Time</u></b>	<b><u>Topic</u></b>	<b><u>Speaker</u></b>	<b><u>Affiliation</u></b>
3:45-4:15	New ICRU Recommendations on Key Data for Ionizing Radiation Dosimetry	Stephen Seltzer, PhD	NIST
4:15-4:45	Transport under Magnetic Fields with the EGSnrc Simulation Toolkit	Ernesto Mainegra-Hing, PhD	NRCC - Canada
4:45-5:15	Calibration of dosimeters for small fields at ARPANSA	Ramanathan Ganesan, PhD	Australian Radiation Protection and Nuclear Safety Agency
5:15-5:30	Questions for speakers and discussion on "current needs"	Interactive discussion with audience	

5:30

Adjourn

Note: For the MORNING plenary speakers and poster sessions please see FULL CONFERENCE AGENDA at [http://cirms.org/conference\\_agenda.html](http://cirms.org/conference_agenda.html)

RADIATION PROTECTION/HOMELAND SECURITY SUBCOMMITTEE

**RP Agenda: Tuesday April 19, 2016 (afternoon)**

Chairs: Chip Starns (ScanTech) and Michael Unterweger (NIST)

**Breakout Sessions I and II**

**Radiochemistry of Food and Potable Water**

1:45-5:15 pm

- 1:45-2:05      Zhichao Lin, WEAC, FDA  
*Isotopic Analysis of Plutonium (Pu) in Foods by Inductively-Coupled Plasma Mass Spectrometry*
- 2:05-2:25      Abdur-Rafay Shareef, WEAC, FDA  
*Rapid Detection of Processed Uranium in Foods by ICP-MS*
- 2:25-2:45      Clarence Rolle, WEAC, FDA  
*Method Development of Food Density Corrections for the Detection of Radioactive Contamination in Food Products*
- 2:45-3:00      **Break**
- 3:00-3:20      Stephanie Healey, WEAC, FDA  
*An Intercomparison Study on Gamma Spectrometry Methods Used by FDA Food Emergency Response Radiological Laboratory Network*
- 3:20-3:40      William Cunningham, Center for Food Safety and Applied Nutrition, FDA  
*Samples - Terminology and Processing*
- 3:40-4:00      Evgeny Taskaev, Eckert & Ziegler  
*Whole Reference Sample Concept as an Alternative to Reference Material*
- 4:00-5:15      **Wrap-up Discussion**
- 5:15 Adjourn

**IAME - INDUSTRIAL APPLICATIONS AND MATERIALS EFFECTS SUBCOMMITTEE**

**IAME Agenda: Monday April 18, 2016 (afternoon)**

Chairs: Roberto Uribe (Kent State University) and Kim M. Morehouse (FDA)

**Breakout Session I**

1:45-3:30 pm

1:45-2:05 Mike Fletcher, PCT Engineering and COMET  
***Low Energy Electron Accelerator Principles and Applications***

Round Table Discussion

3:30-3:45 Break

**Breakout Session II**

3:45-5:15 pm

3:45-4:05 Brad Lundahl, J&J, ASTM E61  
***Dosimetry Issues Associated with Low Energy Electrons***

4:05-4:25 Marc Desrosiers, NIST  
***The Electron Gray***

Round Table Discussion

**IAME Agenda: Tuesday April 19, 2016 (afternoon)**

Chair: Walter E. Voit (University of Texas at Dallas)

**Breakout Session III**

1:45-2:30 pm

1:45-2:05 Spencer Mickum, Hopewell Designs, Inc.  
***Development of a Co-60 Gamma Irradiator for Research Application***

Round Table Discussion

**Breakout Session IV: Discussion on Industry-wide Low Alpha Standard**

2:30-5:15 pm

2:30-2:50 Michael Gordon, IBM, TJ Watson Research Lab  
***The Need for a Large-area Low Emissivity Alpha Particle Standard***

2:50-5:15 Panel Discussion

Moderator: Michael Gordon, IBM

Michael Gordon, IBM  
Norbert Seifert, Intel  
Peng Su, Juniper  
Jeff Wilkinson, Medtronic  
Helmut Puchner, Cypress