

Workshop Agenda

Academy NIST Workshop weblink: <http://www.acadrad.org/nistworkshop/>

Location: National Institute of Standards and Technology Campus
100 Bureau Drive, Gaithersburg, MD 20899
Building: Administration Building 101 Room: Portrait Room

Goal: A need exists to develop interoperable data standards that can permit free flow and optimum utilization of medical diagnostic data. The goal for this workshop is to convene domain experts from government, industry and academia to discuss ways and means to develop and implement these standards. Expected Output, Processes and Guidelines are outlined below.

Day 1 Wednesday May 16, 2018

Of importance to note:

- Please attend the breakout sessions in the order they appear on the back of your nametag.
- Facilitators will utilize a case approach with representatives from imaging/cardiology and oncology.
- Advanced Workshop materials for review can be found here: <http://www.acadrad.org/nistworkshop/>

6:00am Breakfast available for hotel guests in the Hilton, Gaithersburg lobby restaurant
7:15am Shuttles from Hilton to NIST – departure one
7:30am Shuttles from Hilton to NIST – departure two
8:00am Continental Networking Breakfast served at NIST

9:00am **Opening Session – Portrait Room**

Opening remarks:

Renee Cruea, MPA	Executive Director
Mitch Schnall, MD, PhD	Chair, Dept. of Radiology, University of Pennsylvania
Richard Cavanagh, PhD	Director of Special Programs, NIST
Sara Brenner, MD, MPH	Senior Policy Advisor, White House Office of Science and Technology Policy
Bram Stolk, PhD, MBA	VP and GM, Global Research Organization, GE Healthcare

10:00am **Breakout session begins - Rooms A, B, & D**
*attend the sessions in the order/room listed on your nametag
*there is no room C, the 3 sessions are described as A,B,D

11:45am **Networking lunch – Heritage Room and West Square Room**

1:00pm **Breakout sessions begins - Rooms A, B, & D**
*attend the sessions in the order/room listed on your nametag

2:30pm *15 minute break - Heritage Room*

- 2:45pm **Breakout sessions begins - Rooms A, B, & D**
**attend the sessions in the order/room listed on your nametag*
- 4:15pm *15 minute coffee & snack break – Heritage Room*
- 4:30pm **Closing Summary Discussion – Portrait Room**
- 5:00pm Shuttles from NIST to Hilton/Gaithersburg – departure one
- 5:15pm Shuttles from NIST to Hilton/Gaithersburg – departure two
- 5:45pm **Networking Reception Hilton/Gaithersburg: Montgomery Ballroom**
Heavy hors d'oeuvres, beer & wine will be served

Breakout A in Conference room A

Facilitators:

Mitchell Schnall, MD, PhD, FACR, Chairman of Radiology, University of Pennsylvania
Rich Mather, PhD, President, Canon Medical Research USA

Focus: Define the scope of the product. Concisely define the current and future state of diagnostics. Utilizing the IWGMI report, this breakout will focus on two session topics:

- What data do we have? (the state of the current data ecosystem)
- What can we do with what we have now? (identify a case/candidate cases where we have a chance in the immediate future to gather together the data needed to add value through an integrated diagnostic approach)

Breakout B in conference room B

Facilitators:

Jacob (Bram) Stolk, PhD, MBA, VP and Manager Global Research, GE Healthcare
Les R. Folio, DO, MPH, MSc (Rad), MAS, Director, Clinical Image Processing Service, NIH
Mark Bronkalla, MBA, Senior Offering Manager, IBM Watson Health Imaging

Focus: The movement from qualitative to quantitative findings and the need for standardized references. How data should be collected/redistributed & interoperability. Three session topics:

- What data do we want in order to extend our approach to other problems?
- How do we get that data so that its usable? (interoperability/standardization of data acquisition and handling; defining the precompetitive space)
- How do we make certain (test) that the data is usable? (what is the role of standard digital phantoms with additional synthetic data in validation; does this need elucidating or is performance a good enough benchmark to promote adoption?)

Breakout D in conference room D

Facilitators:

Elizabeth A. Krupinski, PhD, FSIIM, FSPIE, FATA, FAIMBE, Professor and Vice Chair of Research, Emory University
Vasken Dilsizian, MD Chief Division Nuclear Medicine, University of Maryland
Eliot Siegel, MD, Associate Vice Chair University of Maryland

Focus: Environmental factors, billing/patient/workflow/diagnostician perspective.

- What environment for community innovation do we wish to build? (data, software, integration, training, testing, interfacing).
- Practical impact, consider the end user, not just the usability of the data.
- Interoperability of data in the care path.

Day 2

Thursday, May 17, 2018

6:00am Breakfast available for hotel guests in the Hilton, Gaithersburg Lobby restaurant, check-out
 7:00am Shuttles from Hilton to NIST – departure one
 7:15am Shuttles from Hilton to NIST – departure two
 7:30am Continental Breakfast served at NIST

8:30am **Welcome & Open – Portrait Room**

10:45am AM Break Heritage Room

Moderator: Elizabeth Krupinski, PhD, FSIIM, FSPIE, FATA, FAIMBE, Prof. & VC of Research, Emory University

Facilitators will present summaries of each breakout session and lead an open plenary discussion forum.

Noon **Closing**

Expected Output

Processes:

- A list of recommendations, ways and means to develop interoperable data standards that can optimize the use of medical diagnostic data from multiple sources. The list of recommendations would outline a path forward in a summary. The recommendations and summary would be disseminated to all stakeholders via publications.
- A commitment from government, industry and academia to continue collaboration in this space.

Guidelines:

- A preliminary list of guidelines for a standardized data management framework will be created, to enable the development of uniform inputs/outputs for diagnostic AI/ML paradigms.
- These guidelines will be crafted through the discussions with experts from areas such as imaging, cardiology, pathology, and oncology.

Noon Shuttles from NIST to Hilton/Gaithersburg – departure one
 12:15pm Shuttles from NIST to Hilton/Gaithersburg – departure two

Program Committee:

Denis Bergeron, PhD	NIST	denis.bergeron@nist.gov
Christian Eusemann, PhD	Siemens	christian.eusemann@siemens-healthineers.com
Mike Garris, MS	NIST	michael.garris@nist.gov
Elizabeth Krupinski, PhD	Emory	ekrupin@emory.edu
Carolyn Meltzer, MD	Emory	cmeltze@emory.edu
Rich Mather, PhD	Canon	rmather@mru.medical.canon
Alex Norbash, MD	UCSD	anorbash@ucsd.edu
Homer Pien, PhD	Philips	homer.pien@philips.com
Neil Rofsky, MD	UT Southwestern	neil.rofsky@utsouthwestern.edu
Mitch Schnall, MD, PhD	U Penn	Mitchell.Schnall@uphs.upenn.edu
Steven Seltzer, MD	CIBR Chair	sseltzer@bwh.harvard.edu
Jacob (Bram) Stolk, PhD, MBA	GE Healthcare	jacob.stolk@ge.com

Breakout sessions by alphabetical order of attendee:

Please attend the breakout sessions in order as they appear after your name. All attendees have been divided to ensure that each session is diverse and well balanced.

Andriole	Katherine	PhD	MGH & BWH Center for Clinical Data Science	B/D/A
Antani	Sameer	PhD	National Institutes of Health	D/A/B
Arnold	Corey	PhD	UCLA	D/A/B
Bello	Jacqueline	MD, FACR	American Society for Neuroradiology	D/A/B
Bergeron	Denis	PhD	National Institute of Standards and Technology	A/B/D
Brenner	Sara	MD, MPH	White House Office of Science Tech. Policy	B/D/A
Blackwell	Megan	PhD	Lincoln Laboratory	D/A/B
<i>Bronkalla</i>	<i>Mark</i>	<i>MBA</i>	<i>IBM Watson Health Imaging</i>	<i>facilitator</i>
Brown	Michael	MBA	GE Healthcare	D/A/B
Cappelletti	Casey		Academy for Radiology & Biomedical Imaging	A/B/D
Carey	Cheryl	MBA, CAE	Soc. for Imaging Informatics in Medicine	A/B/D
Carlos	Ruth	MD	University of Michigan	B/D/A
Cavanagh	Richard	PhD	National Institute of Standards and Technology	D/A/B
Cruea	Renee	MPA	Academy for Radiology & Biomedical Imaging	D/A/B
Dasey	Timothy	PhD	MIT Lincoln Laboratory	D/A/B
Day	Zara		Cavarocchi-Ruscio-Dennis	A/B/D
Dennis	Lyle		Cavarocchi-Ruscio-Dennis	B/D/A
Dennis	Matt		Cavarocchi-Ruscio-Dennis	D/A/B
Digby	Ward	PhD	Siemens-Healthineers	B/D/A
<i>Dilsizian</i>	<i>Vasken</i>	<i>MD</i>	<i>Society Nuclear Med & Molecular Imaging</i>	<i>facilitator</i>
Dixon	George		Allscripts	A/B/D
Farahani	Kevyan	PhD	National Institutes of Health/NCI	A/B/D
Feldman	Michael	MD, PhD	University of Pennsylvania	A/B/D
Filippi	Christopher	MD	Lenox Hill Hospital	A/B/D
<i>Folio</i>	<i>Les</i>	<i>DO, MPH</i>	<i>National Institutes of Health</i>	<i>facilitator</i>
Foos	David		Carestream	D/A/B
Garra	Brian	MD	FDA/AIUM	A/B/D
Garris	Michael		National Institute of Standards and Technology	A/B/D
Gill	Amanjit	MD	Cleveland Clinic	A/B/D
Gropler	Robert	MD	Washington U School of Medicine	D/A/B
Haller	John	PhD	Canon Medical Research USA, Inc.	D/A/B

Hartman	Douglas	MD	University of Pittsburgh Medical Center	B/D/A
Hazle	John	PhD	M.D. Anderson Cancer Center	B/D/A
Heemskerck	Jill	PhD	National Institutes of Health/NIBIB	A/B/D
Kagen	Alexander	MD	Mount Sinai Health System	A/B/D
Kandarpa	Krishna	MD, PhD	National Institutes of Health/NIBIB	B/D/A
Keenan	Kathryn	PhD	National Institute of Standards and Technology	B/D/A
Keller	Brad	PhD	Hologic, Inc.	B/D/A
<i>Krupinski</i>	<i>Elizabeth</i>	<i>PhD</i>	<i>Emory University</i>	<i>facilitator</i>
Liapi	Eleni	MD, ScM	John Hopkins University	B/D/A
Liu	Thomas	PhD	UCSD	A/B/D
Loevner	Laurie	MD	American Society for Neuroradiology	A/B/D
MacCutcheon	David		TeraRecon	A/B/D
Manoharan	Tina	PhD	Siemens-Healthineers	D/A/B
<i>Mather</i>	<i>Rich</i>	<i>PhD</i>	<i>Canon Medical Research USA, Inc.</i>	<i>facilitator</i>
McLennan	Gordon	MD	Society of Interventional Radiology	B/D/A
Meltzer	Carolyn	MD	Emory University	D/A/B
Michael	Cheetham		Fogarty International Center	D/A/B
Mirowski	Elizabeth	PhD	QalibreMD, Inc	A/B/D
Murray	Stephen	PhD	Epic R&D	B/D/A
Nolan	Martha		Academy for Radiology & Biomedical Imaging	B/D/A
O'Connor	Stacy	MD, MPH	Medical College of Wisconsin	D/A/B
Pekar	James	PhD	Johns Hopkins University	D/A/B
Pien	Homer	PhD, MS	Philips Research North America	B/D/A
Pisano	Etta	MD	American College of Radiology	A/B/D
Prevedello	Luciano	MD, MPH	OSU Wexner Medical Center	B/D/A
Qian	Yuechen	PhD	Philips Research North America	D/A/B
Raj	Ashish	PhD	UCSF	B/D/A
Reznik	Lenny	BS, MBA	Agfa Healthcare	A/B/D
Robinson	Andrew	PhD	National Physical Laboratory, UK	B/D/A
Rosen	Don	MD	American College of Radiology	A/B/D
Rosen	Max	MD MPH	UMass Medical School	B/D/A
Rothenberg	Steven	MD	EnvoyAI	A/B/D
Sanelli	Pina	MD, MPH	American Society for Neuroradiology	B/D/A
<i>Schnall</i>	<i>Mitchell</i>	<i>PD, PhD</i>	<i>Hospital of the University of Pennsylvania</i>	<i>facilitator</i>
Shabestari	Behrouz	PhD	National Institutes of Health/NIBIB	D/A/B
<i>Siegel</i>	<i>Eliot</i>	<i>MD</i>	<i>Department of Veteran Affairs</i>	<i>facilitator</i>
Slater	Ben	BS	Vital Images, Inc	B/D/A
Smith	Andrew	MD, PhD	University of Alabama at Birmingham	D/A/B
<i>Stolk</i>	<i>Bram</i>	<i>PhD, MBA</i>	<i>GE Healthcare</i>	<i>facilitator</i>
Stupic	Karl	PhD	National Institute of Standards and Technology	D/A/B
<i>Townley</i>	<i>Emily</i>		<i>Academy for Radiology & Biomedical Imaging</i>	<i>staff</i>
Trysla	Timothy		Alston & Bird	D/A/B
Wang	Kenneth	MD, PhD	Radiological Society of North America	D/A/B
Weir	Alexander	EngD, BEng	Canon Medical Research USA, Inc.	B/D/A
Woodard	Pamela	MD	Washington U School of Medicine	A/B/D
Young	Robert	MD	Memorial Sloan Kettering	A/B/D
Zinchini	Michael		Konica Minolta Healthcare Americas	A/B/D