

3D PRINTING

104TH Scientific Assembly and Annual Meeting

Radiological Society of North America
McCormick Place, Chicago

November 25–30

Meeting.RSNA.org #RSNA18



3D Printing Special Interest Group (SIG)

The RSNA 3D Printing SIG is an engaged community that will add value to your RSNA membership. 3D Printing crosses all subspecialties of medicine, with radiology at the intersection. This is your opportunity to be on the cutting edge of innovative 3D printing technology and its implications for the radiology specialty. Interested? RSNA members can join the 3D Printing SIG by visiting the Membership & Resources area, calling 877-776-2636 or visiting RSNA.org/3D-Printing-SIG.

Find out about the RSNA community and how to participate:

3D Printing SIG Business Meeting

Sunday, November 25, 2018

5:30–7:00 PM Location: E271AB

3D Printing in Radiology: What We Have Learned and Where We Are Going

Jane Matsumoto, MD, Mayo Clinic Radiologist and Chairman of the 3D Printing SIG

Wednesday, November 29, 2018

9:00–9:30 AM Location: Discovery Theater

In addition to many hands-on courses, the Learning Center will include a 3D Printing SIG kiosk featuring 3D prints, posters, information and resources about how to get involved in the 3D printing medical community.

3D Printing & Advanced Visualization Showcase and Theater

See 3D printing, virtual reality and augmented reality in action at this exciting **new showcase in the South Hall**. Interact with the experts and see daily presentations focusing on this groundbreaking technology. Plus the RSNA 3D Printing SIG will hold presentations on the latest research and innovations. See inside for a complete list of presentations or visit Meeting.RSNA.org.

Program information is subject to change. For the most up-to-date information, please use your Meeting App or visit Meeting.RSNA.org.

Walk Through The Week

SUNDAY, NOV 25, 2018

11:00 AM–12:30 PM

Educational Courses

Teaching Congenital Heart Morphology with 3D Print Models

II: Understanding Surgical Procedures in Congenital Heart Diseases with Illustrations and 3D Print Models (Hands-on)

Course RCB11 **S401CD**

4:00–5:30 PM

Educational Courses

3D/VR/AR Imaging: Staying on the Cutting Edge of Brain

Anatomy/Pathology (Hands-on)

Course RCA13 **S401AB**

Introduction to 3D Medical Printing

Course RCC13 **S501ABC**

MONDAY, NOV 26, 2018

7:15–8:15 AM

Educational Courses

Hot Topic Session: 3D Printing in Urologic Oncology

Session SPSH20 **E450A**

1:00–1:20 PM

Showcase Presentations

3D + AV Theater: Bridging Healthcare and Design-Using 3D

Printing to Solve Clinical Problems: Presented by Ultimaker

Session 3D21 **3D Printing & Advanced Visualization Theater, South Hall**

1:30–1:50 PM

Showcase Presentations

3D + AV Theater Presentation by TeraRecon

Session 3D26 **3D Printing & Advanced Visualization Theater, South Hall**

2:30–4:00 PM

Educational Courses

Creating Patient-Specific Anatomical Models for 3D Printing and AR/VR (Hands-on)

Course RCA24 **S401AB**

4:30–6:00 PM

Educational Courses

Image to 3D Prints: How 3D Printing Works (Hands-on)

Course RCA25 S401AB

3D Medical Printing Applications I

Course RCC25 S501ABC

TUESDAY, NOV 27, 2018

10:30 AM–12:00 PM

Educational Courses

3D/VR/AR Imaging: Staying on the Cutting Edge of Brain

Anatomy/Pathology (Hands-on)

Course RCA32 S401AB

12:00–12:20 PM

Showcase Presentations

3D + AV Theater: How to Meet the Growing Demand for 3D

Printing in Your Practice: Presented by Materialise

Session 3D32 3D Printing & Advanced
Visualization Theater, South Hall

1:00–1:20 PM

Showcase Presentations

3D + AV Theater: Measuring 3D Printing Value in the Hospital:

Presented by Stratasy, Inc

Session 3D22 3D Printing & Advanced
Visualization Theater, South Hall

1:30–1:50 PM

Showcase Presentations

3D + AV Theater: IOPS - EVAR with Non-Fluoro-Based

Navigation with Electromagnetic Tracking and Augmented

Reality: Presented by Centerline Biomedical, Inc.

Session 3D36 3D Printing & Advanced
Visualization Theater, South Hall

2:30–4:00 PM

Educational Courses

3D Medical Printing Technologies

Course RCC34 S501ABC

4:30–6:00 PM

Educational Courses

Emerging Technology: 3D Joint Imaging

Course RC417 S505AB

3D Printing Hands-on with Open Source Software:

Introduction (Hands-on)

Course RCA35 S401AB

WEDNESDAY, NOV 28, 2018

9:00–9:30 AM

3D Printing in Radiology: What We Have Learned and Where We Are Going

Course DT40 Discovery Theater

10:30 AM–12:00 PM

Educational Courses

3D Medical Printing Applications II

Course RCC42 S501ABC

12:30–2:00 PM

Educational Courses

Image to 3D Prints: How 3D Printing Works (Hands-on)

Course RCA43 S401AB

1:30–1:50 PM

Showcase Presentations

3D + AV Theater Presentation by Formlabs

Session 3D46 3D Printing & Advanced Visualization Theater, South Hall

3:00–4:00 PM

Scientific Papers Sessions

Informatics (3D Printing and Alt Realities - AR/VR)

Session SSM13 E353C

4:30–6:00 PM

Educational Courses

Creating Patient-Specific Anatomical Models for 3D Printing and AR/VR (Hands-on)

Course RCA45 S401AB

THURSDAY, NOV 29, 2018

8:30–10:00 AM

Educational Courses

Virtual Reality and 3D Printing

Course RCC51 S501ABC

4:30–6:00 PM

Educational Courses

3D Printing Hands-on with Open Source Software Introduction (Hands-on)

Course RCA55 S401AB

Transpositions of the Great Arteries in Your Hands (Hands-on)

Course RCB55 S401CD

Posters and Exhibits Discussions

(CME is available when the author is present for discussion during the lunch period)

SUNDAY, NOV 25, 2018

12:30–1:00 PM

Education Exhibits

3D Printing Applications for Abdominal and Genitourinary Imaging: Anatomic Models and Beyond

GI290-ED-SUA12 Station #12

Hybrid (CT and MR) 3D Printing Models in Chest Tumors: How I Do It Step-By-Step

CH238-ED-SUA6 Station #6

1:00–1:30 PM

Scientific Posters

EZ-Access: A Novel 3D Printed Groin Puncture Device

VI211-SD-SUB6 Station #6

1:00–1:30 PM

Education Exhibits

3D Printing for Liver Surgery Planning: A Step by Step Guide

IN142-ED-SUB2 Station #2

MONDAY, NOV 26, 2018

12:45–1:15 PM

Scientific Posters

Radiopaque 3D Printed Phantoms for Simulation and Development of CT-Guided Procedures

VI221-SD-MOB3 Station #3

WEDNESDAY, NOV 28, 2018

12:15–12:45 PM

Scientific Posters

Comparative Analysis of 3D Printed Materials for Cortical Mastoidectomy Simulation

IN224-SD-WEA5 Station #5

12:45–1:15 PM**Scientific Posters**

A Realistic Pediatric Abdominal Phantom with Contrast Enhancement Using 3D Printing Technology: Comparison with Patient Computed Tomography Images

PD237-SD-WEB3 Station #3

Development of Patient-Specific 3D Printed Model and Graft Guide for Open Surgical Repair of Thoracoabdominal Aortic Dissection

IN228-SD-WEB4 Station #4

THURSDAY, NOV 29, 2018**12:15–12:45 PM****Education Exhibits**

Intraoperative Use of 3D Printed Breast Models in the Setting of Breast Cancer

BR214-ED-THA10 Station #10

Education Exhibits

SPACE NO.	EXHIBIT TITLE
ER004-EB-X	Visualization of Retained Surgical Items Using a Tissue Realistic 3D Printed Abdominal Trauma Phantom
IN001-EB-X	The Augmented 3D Printing Technology with Artificial Intelligence of Deep Convolutional Neural Net Based on Medical Images
IN002-EB-X	Workflow for Patient-Specific Disease Simulation from CT Images to 3D Printed Model in Thyroid Cancer
IN003-EB-X	Enhancing Understanding of Pathology with 3D Printed Prostate Cutting Guides
IN004-EC-X	3D Printing and Virtual Reality Models Using DICOM Data, Inexpensive, Often Free and More Accessible Than You Think: An Introduction to Key Concepts
IN012-EB-X	Design Methods of 3D Printed Patient Specific Vascular Phantoms for Device Testing, Endovascular Treating Planning, and Residency Training
IN106-ED-X	3D Printed, Virtual Reality, or Augmented Reality Urological Cancer Models: What Works Best, When, and Why?
IN130-ED-X	Bringing Breast Imaging to Life: How and Why to Incorporate 3D Printing into Your Practice
IN139-ED-X	Designing, Engineering and Building a Custom and Versatile Liver Phantom for Multi-Energy CT using a 3D Printer: Challenges, Pitfalls, and Costs
PD005-EB-X	Benefit of 3D Printed Tracheas as Aids for Management of Deformed Airway in Complex Surgery for Children

3D Printing & Advanced Visualization Showcase Exhibitors

Sponsored by:



COMPANY	BOOTH NO.
3D Systems	1968T
axial3D	1968K3
CAD BLU, Inc	1968A
Centerline Biomedical Inc	1968H
Chengdu Gold Disk UESTC Multimedia Technology Co Ltd	1968B
EnvisionTEC	1968F
Formlabs	1968D
Materialise	1968K5
NewPro 3D	1968S
PhantomX	1968C
Stratasys	1968L
TeraRecon	1968K4
TomoVision	1968K6
Ultimaker	1968J
Ziosoft	1968K1

Exhibitor listing as of 10/15/18.



RSNA QUALITY ESSENTIALS AND ADVANCED LEVEL QUALITY CERTIFICATES

- Earn a Quality Essentials Certificate (QEC) by scoring 80% or higher on the SAM test at any of the following quality sessions: MSQI31, MSQI32 and MSQI33 on Monday, November 26 (Room S406B).
- Learn more about online opportunities for earning QECs and how QECs can lead to an Advanced Level Quality Certificate at RSNA.org/Quality-Improvement.

QUALITY IMPROVEMENT REPORT WALKTHROUGH

Learning Center, Quality Improvement Reports

Join experts in quality improvement in radiology, as they walk through the QI reports, highlighting examples of great work and sound methodology. Bring your walking shoes and come prepared for an interactive session. Those who are interested in leading and publishing QI projects in the coming months and years will find this especially valuable.

WALKTHROUGH DATE:

Monday, November 26,
3 to 4 PM

Questions? Please
email quality@rsna.org
for more information.

RSNA[®] 2018



Radiology: Artificial Intelligence

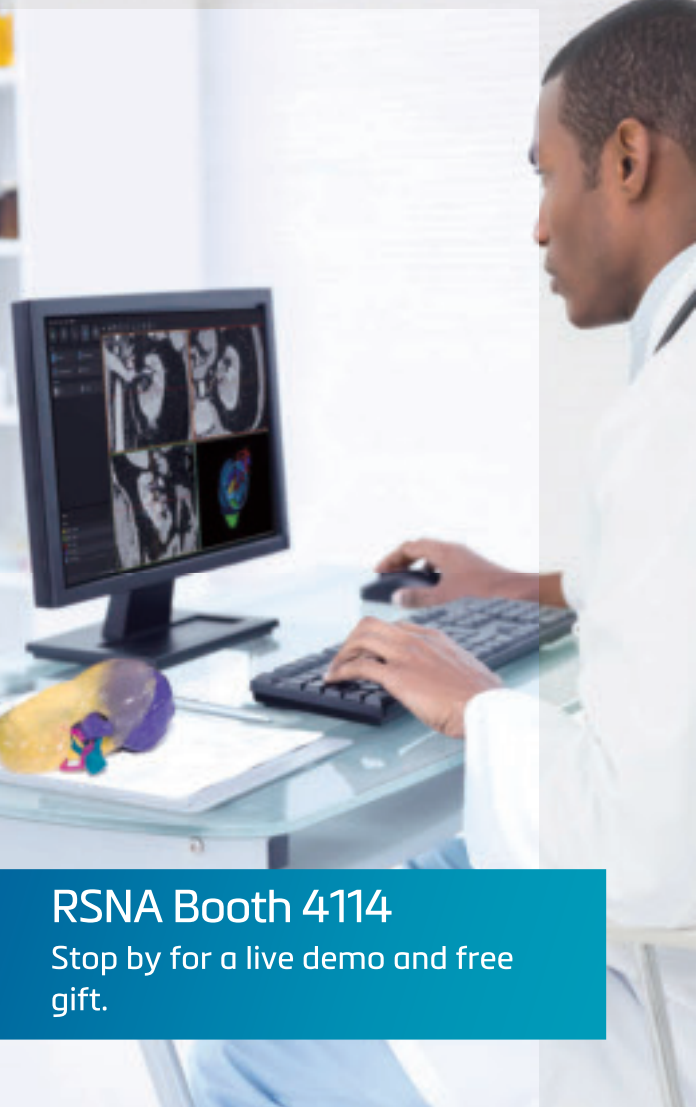
Held to the same high editorial standards found in all RSNA journals, *Radiology: Artificial Intelligence* will highlight the emerging applications of machine learning and artificial intelligence in the field of imaging across multiple disciplines.

Submit Your Manuscript Today!

Visit [RSNA.org/AI](https://www.rsna.org/AI) to submit your materials now to be among the first published in this important new journal.

materialise

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RSNA Booth 4114

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