

RSNA® 2019
DECEMBER 1-6

3D Printing

**RADIOLOGICAL SOCIETY
OF NORTH AMERICA**
105TH Scientific Assembly
and Annual Meeting

Meeting.RSNA.org
#RSNA19

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 and non-radiology professionals can join the 3D Printing SIG by visiting the Membership & Resources area, calling 877-776-2636 or visiting RSNA.org/3D-Printing-SIG.

3D Printing & Advanced Visualization Showcase and Theater

See 3D printing, virtual and mixed reality in action in this exciting showcase located in the North Hall. Interact with companies featuring the latest products and services and listen to industry presentations in the 3D & AV Theater focusing on this ground-breaking technology. Plus, the RSNA 3D Printing SIG will conduct presentations Sunday through Wednesday, 2 to 3 PM on the latest research and innovations in 3D printing for medical applications. See inside for a complete list of industry and 3D Printing SIG presentations or visit Meeting.RSNA.org.

Attend RSNA Medical 3D Printing in Practice in March 2020!

March 6–8, 2020, Chicago, USA

Further explore the clinical value of 3D printing and get practical information from experienced leaders at the RSNA Medical 3D Printing in Practice course. This opportunity is open to all medical professionals and CME credit is available. Explore a wide variety of topics, such as:

- Clinical applications of 3D printing by subspecialty
- Challenges of using this technology in a hospital setting
- How to participate in the RSNA-ACR 3D Printing Registry
- Integration of 3D printing with virtual and augmented reality

Experts will be available to answer questions about this course during the daily 3D Printing SIG presentations. To register for the course, visit RSNA.org/3D-Printing.

Walk Through the Week

Demonstrations

3D Printing Special Interest Group (SIG) Kiosk

Session IN042. IN Community, Learning Center

Monday, Dec. 2, 2019

8:30–10:00 AM

Educational Courses

Emerging Technology: 3D Joint MR Imaging

Course RC217 S504CD

11:30–11:50 AM

Showcase Presentations

3D + AV Theater: Overcoming Common Challenges to Scale 3DP at the Point-of-Care. Lessons from an Innovation Lab:

Presented by Formlabs

**Session 3D22 3D Printing & AV Theater
North Building**

12:00–12:20 PM

Showcase Presentations

3D + AV Theater: New Patient-tailored Radiology based on a Synergy of Artificial Intelligence and 3D Printing: Presented by Medical IP

**Session 3D23 3D Printing & AV Theater
North Building**

12:30–12:50 PM

Showcase Presentations

3D + AV Theater: The Future of 3D Printing at the Point-of-Care Innovation through Collaboration: Presented by Materialise

**Session 3D24 3D Printing & AV Theater
North Building**

Tuesday, Dec. 3, 2019

8:30–10:00 AM

Educational Courses

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

Course RCA31. S401AB

10:30 AM–12:00 PM

Educational Courses

Understanding Anorectal and Cloacal Malformations with 3D Printed Models (Hands-on)

Course RCA32. S401AB

**11:30–11:50 AM****Showcase Presentations**

3D + AV Theater: Experimental Applications of Desktop 3DP:
Pioneering Research from the Field: Presented by Formlabs

Session 3D32 **3D Printing & AV Theater**
North Building

12:00–12:20 PM**Showcase Presentations**

3D + AV Theater: Next Generation of Advanced Visualization
for Surgical Planning and Optimizing Analysis Utilizing
Immersive Reality with Haptic Feedback and Air Models:
Presented by ImmersiveTouch, Inc.

Session 3D33 **3D Printing & AV Theater**
North Building

12:30–2:00 PM**Educational Courses**

Medical 3D Printing: How to Start?

Course RCC33 **E351**

12:30–12:50 PM**Showcase Presentations**

3D + AV Theater: Hospital Enterprise-grade Workflow Futures
for Patient-centered Radiology: Presented by GE Healthcare

Session 3D34 **3D Printing & AV Theater**
North Building

1:00–1:20 PM**Showcase Presentations**

3D + AV Theater: Medical 3D Printing SW and Service Using
Collaboration Platform in Korea: Presented by Coreline Soft

Session 3D35 **3D Printing & AV Theater**
North Building

2:30–4:00 PM**Educational Courses**

Reimbursement Topics in 3D Printing

Course RCC34 **E351**

3:00–4:00 PM**Scientific Papers Sessions**

Informatics (3D Printing, Augmented Reality, and Virtual
Reality)

Session SSJ13 **S501ABC**

4:30–6:00 PM**Educational Courses**

Virtual Reality (VR) Improves Analysis of Complex Brain and
Skull Base Tumors (Hands-on)

Course RCA35 **S401AB**

Wednesday, Dec. 4, 2019**8:30–10:00 AM****Educational Courses**

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

Course RCA41 **S401AB**

9:20–10:20 AM**Educational Courses**

ASRT@RSNA 2019: 3D Printing from the Radiologic
Technologist's Point of View

Course MSRT42 **N230B**

12:30–2:00 PM**Educational Courses**

Regulatory Considerations for Hospital-based 3D Printing

Course RCC43 **E353B**

Thursday, Dec. 5, 2019**8:30–10:00 AM****Educational Courses**

How to Prepare 3D Models to Develop Multi-material 3D
Printed Vascular Phantoms (Hands-on)

Course RCA51 **S401AB**

10:30 AM–12:00 PM**Educational Courses**

Applications and Simulations in 3D Medical Printing

Course RCC52 **E451B**

4:30–6:00 PM**Educational Courses**

Introduction to Medical 3D Printing

Course RC753 **S406B**



Posters and Exhibits Discussions

[CME is available when the author is present for discussion during the lunch period]

Sunday, Dec. 1, 2019

1:00–1:30 PM

Scientific Posters

Understanding Potential Customers of an In-House 3D Print Lab - A Survey amongst Physicians of Their Awareness, Needs and Comprehension of 3D Printing Technology
IN243-SD-SUB2 Station #2

1:00–1:30 PM

Education Exhibits

Handbook of 3D Printing for Cardiothoracic Radiologists: The Ultimate Guide
CH215-ED-SUB7 Station #7

High-Resolution Medical Image Generation and Disentanglement Using Progressive Growing of Generative Adversarial Networks: Possible Applications and Limitations
IN010-EB-SUB Hardcopy Backboard

Tuesday, Dec. 3, 2019

12:15–12:45 PM

Scientific Posters

CT Attenuation Characteristics of 3D Printed Materials
IN232-SD-TUA5 Station #5

12:45–1:15 PM

Scientific Posters

ROSA Robot Rehearsal: Utilizing 3D Printing to Facilitate the Integration of Robotic Stereotactic Assistance (ROSA) in Neurosurgery
IN249-SD-TUB2 Station #2

Wednesday, Dec. 4, 2019

12:15–12:45 PM

Scientific Posters

3D Printing of Whole Breast and Individual Breast Tissue Types based on Transmission Ultrasound
BR273-SD-WEA4 Station #4

Using 3D Printing to Model Occlusive Balloon Performance in Aneurysmal Defects

NR384-SD-WEA3 Station #3

12:45–1:15 PM

Scientific Posters

Dosimetric Validation of 3D Printed Quality Assurance Phantoms and Gynecologic Applicators for High Dose Rate Brachytherapy
PH219-SD-WEB3 Station #3

12:45–1:15 PM

Education Exhibits

Essential Operations and Workflow in the 3D Printing Anatomic Modeling Lab
IN013-EB-WEB Hardcopy Backboard

Thursday, Dec. 5, 2019

12:15–12:45 PM

Scientific Posters

Reduction of Metal Artifacts From after 3D Printed Patient-Specific Hip Arthroplasty for the Treatment of Bone and Soft Tissues Malignant Tumors in Computer Tomography: Value of Virtual Monochromatic Spectral and Metal Artifacts Reduction Software
MK392-SD-THA5 Station #5



Education Exhibits

SPACE No.	EXHIBIT TITLE
CA112-ED-X	Novel Assessment of Physiological Tricuspid Valve Morphology and Specific Right Ventricular Shape via 3D Printed Cardiac Models
IN003-EB-X	How to Make a Patient and Surgeon-Specific Surgical Guide by 3D Printing Technology Based on the Medical Image
IN004-EB-X	Design of Benchtop Clinical Trials Using Patient Specific 3D Printed Vascular Phantoms
IN011-EB-X	Primer of 3D Printers and Segmentation Software Used in Anatomic Modeling
IN012-EB-X	Quality Assurance Program in 3D Printing: Assuring Accuracy and Understanding Limits of Model Creation
IN014-EB-X	The Role of Advanced 3D Reconstruction as a Tool for Anatomic Model Visualization and Surgical Planning
IN110-ED-X	Establishing a Registry for Medical 3D Printing
IN120-ED-X	3D Printed Patient-Specific Surgical Cutting Guides Based on CT-Derived Anatomic Meshes
IN121-ED-X	3D Printing in Medicine: A Primer for Radiologists
IN124-ED-X	Use of 3D Printing to Aid in Complex Surgical Cases
IN131-ED-X	Use of CT-RMI Fusion for Printing 3D Models to Plan Complex Traumatological Surgeries: Our Experience
IN132-ED-X	3D Printing in Neuroradiology: Fundamentals, Methods, and Clinical Applications
IN137-ED-X	Clinical Applications of 3D Printing in Abdomen and Pelvic Diseases
MK269-ED-X	Handbook of 3D Printing for Tibial Plateau Fracture Sequelae Surgery
MS119-ED-X	Establishing Quality and Safety within a 3D Printing Program: A Patient-First Approach

GREAT RESEARCH NEEDS A GREAT AUDIENCE.

Be a Presenter at RSNA 2020!

We're looking for radiology thought leaders to provide:

Scientific Presentations / Applied Science
Education Exhibits / Quality Improvement Reports

EARN RECOGNITION

Kuo York Chynn Neuroradiology Research Award: \$3,000

The top scientific paper as selected by the Scientific Program Committee will earn this prestigious award.

The RSNA Trainee Research Prize: \$1,000

Up to 48 medical students, residents or fellows who submit expanded abstracts of their 2020 RSNA scientific presentation may receive a \$1,000 prize and certificate.

VISIT [RSNA.ORG/ABSTRACTS](https://www.rsna.org/abstracts) FOR COMPLETE GUIDELINES

Submit Online

beginning January 2020 at [RSNA.org/Abstracts](https://www.rsna.org/abstracts) through Wednesday, April 8, 2020 NOON CT.

Questions?

Call 1-877-776-2227 (within U.S.) or 1-630-590-7774 (outside U.S.)

Includes courses in joint sponsorship with the American Association of Physicists in Medicine.





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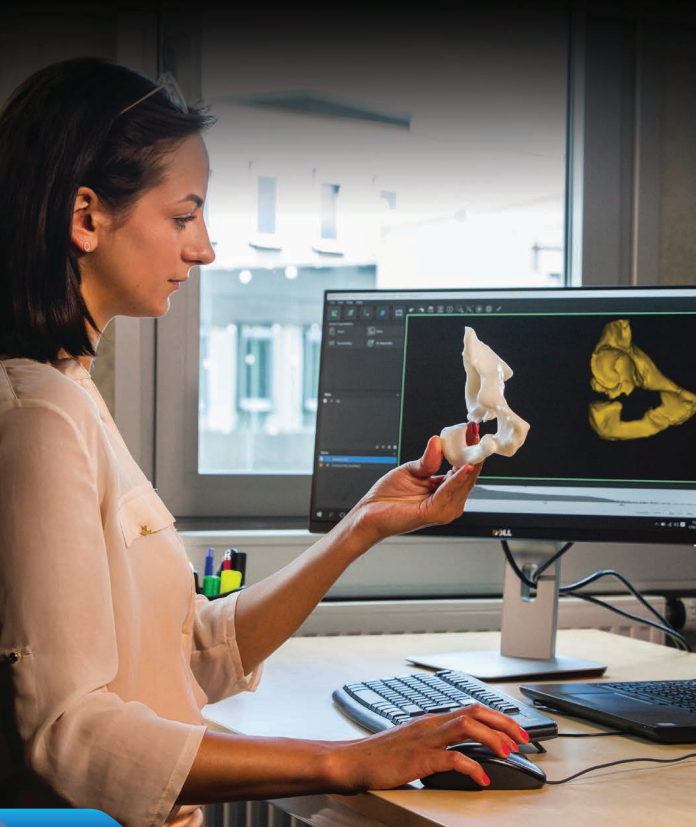
AI is here. RSNA 2019 is your chance to experience it all. From the exciting hands-on learning experiences to the latest AI imaging products and solutions from over 100 companies—you simply can't miss this opportunity to see all AI, all in one place. Whether it's visiting the RSNA AI Deep Learning Lab or engaging in captivating RSNA AI Theater Presentations and hands-on workshops—visit the AI Showcase in the North Building, Level 2 to find out what AI means for you from the experts leading the conversation—RSNA.

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of the Future.



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