

RSNA Launches Artificial Intelligence Initiatives

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OAK BROOK, Ill. (August 1, 2018) — The Radiological Society of North America (RSNA) is leading the field in machine learning (ML) and artificial intelligence (AI) research and education with expanded opportunities planned over the coming months and into the future.

"In the years to come, RSNA's support for education, research and innovation in this field will grow as AI becomes an integral part of radiology practice," said Curtis P. Langlotz, M.D., Ph.D., RSNA Board Liaison for Information Technology and Annual Meeting. "RSNA will continue to educate not only radiologists but also researchers and industry scientists about AI and ML."

In August, RSNA will launch the first in a series of live, 60-minute [webinars on AI and its applications](#) for radiology, featuring internationally renowned experts. The first webinar, "Intro to AI and Machine Learning: Why All the Buzz?" will be held on Aug. 29. RSNA will offer additional AI webinars on Oct. 25, Dec. 11, and Feb. 21, 2019.

Also in August, RSNA will co-sponsor the National Institutes of Health (NIH)/National Institute of Biomedical Imaging and Bioengineering workshop, "Artificial Intelligence in Medical Imaging," to foster collaboration in applications for diagnostic medical imaging. RSNA's co-sponsors for the workshop are the American College of Radiology and the Academy for Radiology & Biomedical Imaging Research.

Following the successful debut of the ML Challenge in 2017, the RSNA Pneumonia Detection Challenge kicks off in August, inviting teams to develop algorithms to identify and localize pneumonia on chest X-rays, using images from a publicly available National Institutes of Health (NIH) data set. The evaluation phase will be held in October, and the most accurate submissions will be recognized in the Machine Learning Showcase at [RSNA 2018](#) (Nov. 25-30, McCormick Place Chicago).

The 2018 challenge will be conducted using a software platform from Kaggle, a leader in data science competitions. Kaggle will donate \$30,000 to be shared among the top entries.

"This year's competition is a lot more image-heavy than in 2017," said Safwan Halabi, M.D., clinical assistant professor of radiology and pediatric radiology at Stanford and chair of the ML Data and Standards Subcommittee of the RSNA Radiology Informatics Committee (RIC). "It represents one of the largest uses of patient imaging to date for this type of competition."

The RSNA Spotlight Course, "[Practical Applications in Artificial Intelligence](#)," being held Sept. 23-24 in Paris, France, will focus on integrating AI with current medical imaging and examine how AI will impact the future of radiology. Additional AI Spotlight courses will be held in 2019 in San Francisco, Calif., and Paris, France, with more courses being developed in other regions of the world.

RSNA 2018 will offer a growing roster of programming focusing on the power and potential of AI in radiology and issues associated with implementation. Along with AI-focused refresher courses and scientific sessions, the meeting offers a variety of other educational experiences focusing on AI research.

Attendees can visit the National Cancer Institute's Crowds Cure Cancer exhibit returning for its second year. Presented in the Learning Center, the project invites radiologists to annotate clinical images for ML research.

Returning to the RSNA annual meeting this year is the RSNA Deep Learning Classroom, presented by NVIDIA Deep Learning Institute (DLI). Certified instructors from NVIDIA's DLI will be on hand to help attendees learn to write algorithms and improve their understanding of AI technology.

More than 1,000 people attended the 2017 classroom which provided a general overview of ML. The 2018 classroom will increase the focus on radiology imaging with advanced topics like data augmentation, segmentation and multiparametric classification.

"The RSNA Deep Learning Classroom offers an opportunity for anyone with a laptop to construct and train an actual computer-vision system based on a neural network in just 90 minutes," Dr. Langlotz said.

Also at RSNA 2018, the Machine Learning Showcase gives attendees an opportunity to learn about the latest ML technology and network with companies on the forefront of ML advances. The showcase will feature a Machine Learning Theater, offering presentations daily between 11 a.m. and 2 p.m.

In early 2019, RSNA will debut its new online journal, [Radiology: Artificial Intelligence](#), highlighting the emerging applications of AI and ML in the field of imaging across multiple disciplines. The journal's editor, Charles E. Kahn, Jr., M.D., M.S., invites submissions to the bi-monthly online journal.

To read more about these initiatives, visit:

[Artificial Intelligence, Machine Learning Play an Expanding Role at RSNA 2018.](#)

Read Dr. Langlotz' column: "[Radiologists Will Flourish During the Fourth Generation of Artificial Intelligence](#)."

For AI images, video, research, reviews and commentary, visit the [RSNA AI & ML Media Resource Page](#). For interviews, contact RSNA Media Relations staff at 1-630-590-7762 or media@rsna.org.

RSNA is an association of over 54,200 radiologists, radiation oncologists, medical physicists and related scientists, promoting excellence in patient care and health care delivery through education, research and technologic innovation. The Society is based in Oak Brook, Ill. ([RSNA.org](#))

Images (JPG, TIF):

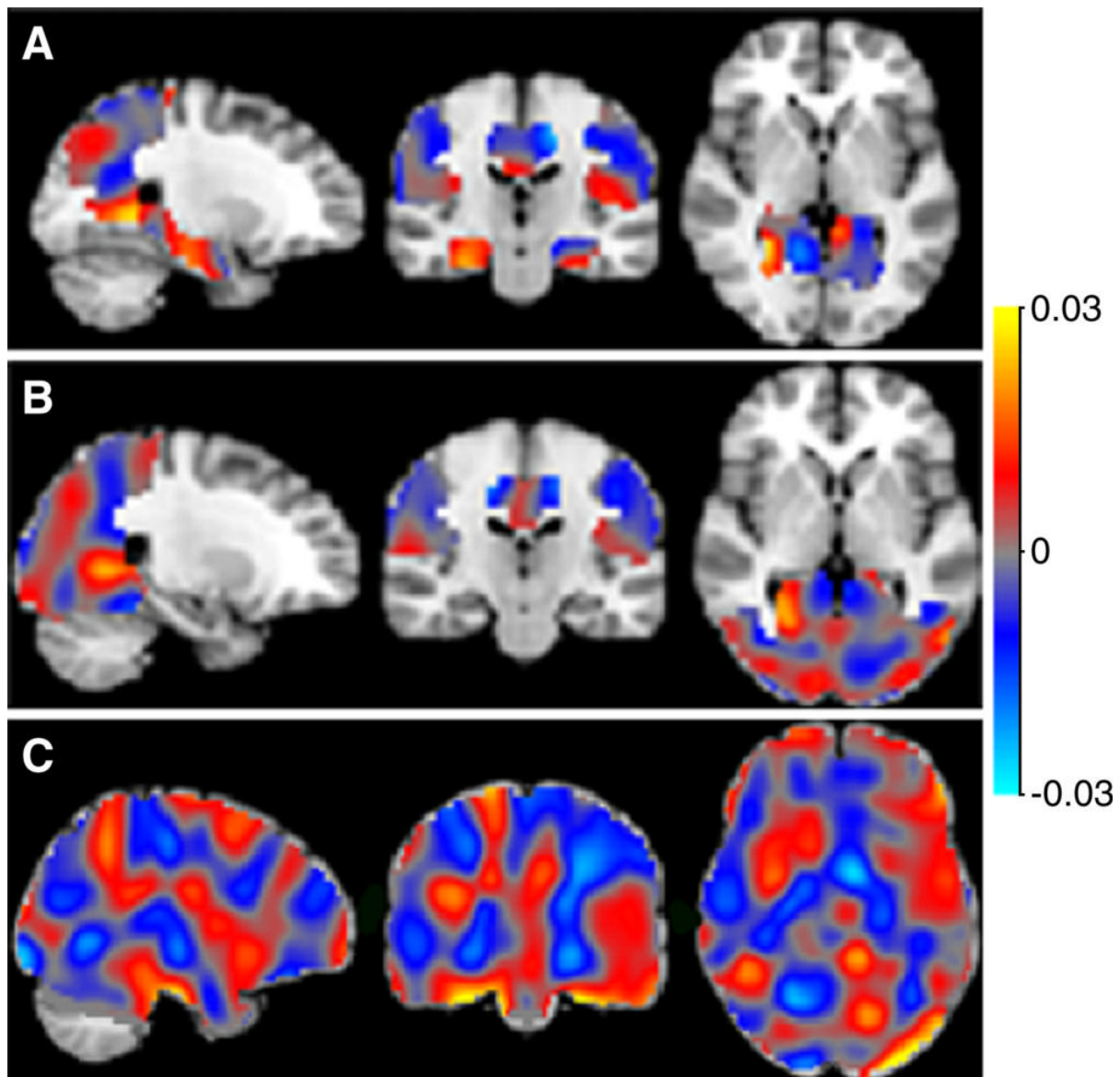


Figure 1. Researchers applied machine learning methods to special type of MRI called arterial spin labeling imaging to distinguish different stages of Alzheimer's disease.

[High-res \(TIF\) version](#)