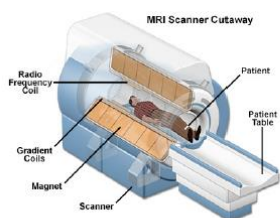


RESEARCH FOR MEDICINE & BIOLOGY CAREERS IN THE AGE OF PANDEMIC

PRESENTED BY:

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In collaboration with Suzy Lidström, Ph.D.

Thursday, September 29, 2020 via WebEx
9:40 a.m. - 11:00 a.m. Presentation
11:00 a.m. - 11:25 a.m. Q&A

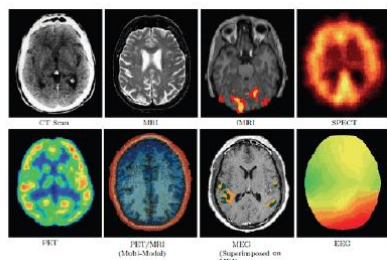


from <http://www.magnet.fsu.edu/education/tutorials/magnetacademy/mri/>



ultrasound,
17 weeks

from <http://www.pregnancycheck.com/pregnancy-ultrasound.html>



brain activity measurements:
EEG, electroencephalography
MEG, magnetoencephalography
PET, positron emission tomography
MRI, magnetic resonance imaging
fMRI, functional magnetic resonance imaging
CT, computer tomography
SPECT (single-photon emission computed tomography with gamma-emitting radioisotope)

from <http://mazoubci.net/78.net/neurosignal.html>

We will discuss the very large number of important instruments and techniques in medicine which have originated in physics, from x-rays to functional magnetic resonance imaging (fMRI). A few are shown in the accompanying image, and many more are currently under development. As one example we will mention a very recent paper in which tip-enhanced Raman scattering was used to study DNA in the context of a new COVID-related research program at Texas A&M.

Roland E. Allen received his B.S. from Rice University and his Ph.D. from the University of Texas and has been a professor of physics at Texas A&M University for 50 years. So, except for his years at the University of Illinois and the Solar Research Institute in Colorado, and several hundred national and international conferences, he is very much a Texan! He has published about 270 papers and 2 books in many different areas of physics and related areas of science, as can be seen at <http://people.physics.tamu.edu/allen/>. The courses he has taught range from introductory physics for students in biology and engineering to specialty classes related to research. A recent interest is tutorial articles for undergraduate students, such as "From crystallography to life": <https://iopscience.iop.org/article/10.1088/0031-8949/89/6/068005>.



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Meeting Link: [Click Here](#)
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