The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University

Allan Greenleaf

U. Rochester (visiting MSRI)

(Trying to) Diagnose Strokes with Electrostatics

September 18, 2019, MH320

Abstract: Electrical impedance tomography (EIT) is an imaging technique that has been proposed for imaging and nondestructive testing of oil fields, manufactured parts and human bodies. Over the last 40 years it has led to much beautiful mathematics, but the very features that make EIT such an interesting mathematical problem also makes the images it produces very blurry. I will describe some of the math behind it, and work in progress on trying to apply it to stroke diagnosis.

Background: Multivariable calculus and linear algebra. Some exposure to complex analysis and electricity and magnetism would be helpful.

About the speaker: Allan Greenleaf, a Professor of Mathematics at the University of Rochester in Rochester, NY, is a Fellow of the AMS and a former chair of the AMS Committee on the Profession. He received his Ph.D. at Princeton, held an NSF Postdoc at MIT, and has been at Rochester ever since. He is currently a Research Member in the Fall 2019 program on Microlocal Analysis at MSRI.

Snacks in MH331B at 2:30 pm
Talk starts at 3:00 pm

For more information, see our full schedule at:

`http://www.timhsu.net/colloq/`