

California State University, Fullerton

DEPARTMENT of MATHEMATICS

Atousa Sarcon, Nasser Abbasi and Angel Pineda

Department of Mathematics
California State University, Fullerton

“The Applied Math Project in 2008 (The Mathematics of Imaging Blood Flow)”

During the final course of the master’s program in applied mathematics, we worked on industrial projects for GE Healthcare. One of the projects studied the mathematics of a new method for imaging blood flow, Highly constrained back-Projection (HYPR), using Magnetic Resonance Imaging (MRI). We placed the HYPR method in a theoretical framework that identified it as the first step of an iterative method for solving linear systems of equations which arise in statistical estimation. We compared the HYPR method with other existing techniques to understand its benefits and limitations. Using theory and simulation, we will explain the mathematics of HYPR at a level accessible to students who have or are taking Math 250B (linear algebra with differential equations) but all students are welcome.

This talk presents the work of the following CSUF students in the HYPR team of the Applied Math Project: N. Abbasi, K. Jacklin, S. Jalal, A. Sarcon, D. Stang, and M. Torabi under the supervision of W. Gearhart and A. Pineda.

Co-sponsored by the CSUF Math Club

Friday, November 21

1-2 pm

MH 238



Please Join Us!

PIZZA and DRINKS will be served at the beginning of the talk.