You are Invited Today

**Special Presentations
Held for Math 121**

**December 6, 2013
1:00-1:50 PM
120 Budig**

Former students Mark Frei and Shane Haas will be guest speakers in Math 121 today. You are welcome to join us.

**Applied Mathematics in Medicine: Epileptic Seizure Detection and Control
Mark Frei, Ph.D.**

Mark G. Frei is a co-founder of Flint Hills Scientific, L.L.C., of Lawrence, Kansas, which he also managed for 16 years. He specializes in real-time quantitative analysis, filtering, identification and control of complex systems and signals and in algorithm development for intelligent medical devices. He is an inventor on over 40 patents, has authored or co-authored over 60 scientific articles and abstracts, and is a world-leader in the field of epileptic seizure detection. Prior to his work with FHS, Dr. Frei was a post-doctoral fellow at the University of Kansas, in the Kansas Institute for Theoretical and Computational Science, the Comprehensive Epilepsy Center, and the Department of Mathematics. He received his Ph.D. in mathematics from K.U., with research specialties in the fields of modeling, prediction, and adaptive control of complex systems. He received his M.S. in applied mathematics/electrical engineering from the University of Southern California and B.A. in mathematics from UCLA.

**Using Math to Invest
Shane Haas**

Shane Haas grew up in the town of Wellsville, Kansas. He attended the University of Kansas and graduated with bachelor's and master's degrees in both electrical engineering and mathematics. He then moved to Boston and studied at the Massachusetts Institute of Technology as a National Science Foundation and Department of Defense scholar. After completing a doctorate in electrical engineering with a minor in financial technologies, Shane became a partner at the hedge fund AlphaSimplex Group where he traded stocks, bonds, currencies, and commodities. Shane then moved to New York City and worked for Goldman Sachs as a portfolio manager. He currently trades stocks and futures at Moon Capital using quantitative techniques.