Recent Progress on Serre's Conjecture

The proof of Fermat's Last Theorem, completed a dozen years ago, relied on the modularity of elliptic curves, which the media described as a bridge between two different parts of mathematics. The new techniques that were forged in the 1990s have flourished in the last several years. One spectacular development, completed during the winter, was the proof by Khare, Wintenberger, Kisin and others of a conjecture about the modularity of Galois representations that was made by J-P. Serre in 1987. Serre's Conjecture has influenced a great deal of the research in number theory over the last 25 years, including Professor Ribet's work on the link between the Shimura-Taniyama Conjecture and Fermat's Last Theorem. Prof. Ribet will explain the origins of this conjecture, and some of its earliest history (which predates the precise formulation of the conjecture!) Finally, he will sketch one or two of the new ideas used in the recent proof of the conjecture.

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Refreshments will be served at 3:30 PM in the Mathematics Department lounge (532 Malott Hall).

Wednesday, May 2, 2007 at 4:30 PM in 228 Malott Hall (Bache Aud.)

The Chelluri Lecture series is offered in memory of Thyagaraju (Raju) Chelluri, a brilliant student, gifted scholar, and wonderful human being who graduated magna cum laude in mathematics from Cornell in 1999 and was awarded a Ph.D. posthumously from Rutgers University in 2004.