

**JOINT**  
**APPLIED MATHEMATICS COLLOQUIUM &**  
**PHYSICAL MATHEMATICS SEMINAR**

**How Mathematics Has Helped Treat and Cure  
Viral Infections**

**Alan S. Perelson**  
**(Los Alamos National Laboratory)**

Abstract:

I will present an overview of work done on modeling HIV and hepatitis C virus infection within single individuals. I will show how mathematics has changed how both of these infections are treated, how it has helped speed up drug development, and in the case of HCV how it is helping increase the cure rate. In addition, I will survey what I think are the important problems that need to be addressed in the still developing field of “viral dynamics”.

**Tuesday November 13, 2012**  
**2:30PM**  
**Building 4, Room 145**

Applied Math Colloquium: <http://www-math.mit.edu/amc/fall12/>  
Mathematics Department: <http://www-math.mit.edu>



Massachusetts Institute of Technology  
Department of Mathematics  
Cambridge, MA 02139