



3rd Annual Calvin & Jean Long Lecture



The Department of Mathematics & Statistics at Washington State University welcomes



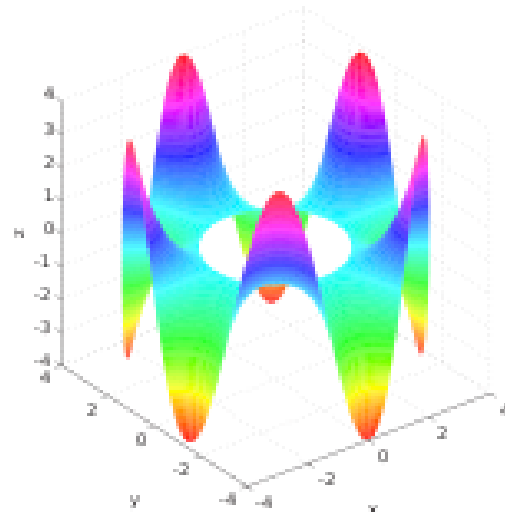
Dr. Barbara Lee Keyfitz

Dr. Charles Saltzer Professor of
Mathematics at Ohio State University

*Fellow of SLAM, of AAAS, of AMS,
and of the Fields Institute
Recipient of the SLAM Award for Distinguished Service*

Partial Differential Equations: What Do We Know When We Know that a Solution Exists?

In elementary mathematics, solving a problem often means finding a formula for the solution. However, for problems that lead to differential equations very often there is not a formula. Mathematicians may work hard to convince themselves, and their community, that a solution does nonetheless exist, but the wider world is often unconvinced that they have learned anything from this information. In this talk, I will illustrate with examples (not proofs!) how demonstrating that solutions to a problem exist can give insight into the nature of the problem, and the nature of the solution, even if the details of a particular solution can be found only approximately, for example by numerical simulation. The conclusion is that the payoff for analysing a partial differential equation goes well beyond an exercise in analysis.



**Thursday, October 12th, 2017
7:00 pm in Webster 17**

Free and open to the public, reception immediately following in Neill 216

Department Colloquium Friday, October 13th, 2017 at 4:10 pm, Neill 5W

The Calvin and Jean Long Distinguished Lecture in Mathematics brings internationally renowned mathematics scholars to the WSU campus each fall. The lecture honors former department chairman and professor emeritus Calvin Long and his wife Jean who arrived at WSU, then WSC, in the fall of 1956. After working in the Mathematics Department at WSU for 36 years he retired in 1992.