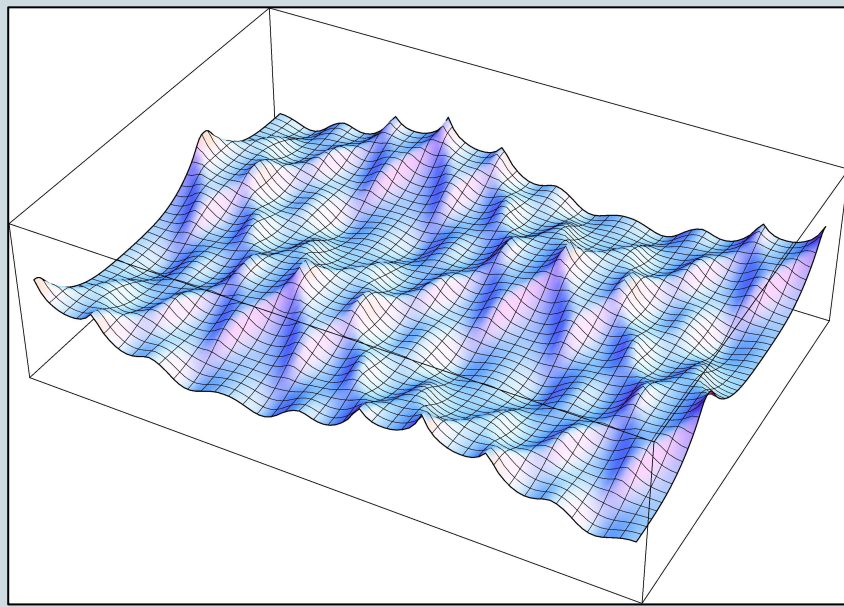


UCCS Department of Mathematics

Math Colloquium Series

DR. ROBERT JENKINS
COLORADO STATE UNIVERSITY



DATE:

THURSDAY
NOVEMBER 15, 2018

TIME:

12:30PM-1:30PM
(REFRESHMENTS AT 12:15PM)

LOCATION:

UNIVERSITY CENTER
ROOM #122

Soliton Resolution for dispersive nonlinear wave equations

Abstract: Heuristically dispersive wave equations like to spread energy out over time; localized coherent structures tend to break up into their component frequencies. Nonlinear effects can offset dispersion leading to localized traveling wave solutions called solitons. These special solutions have many surprising properties. The Soliton Resolution Conjecture is an open problem in PDE that suggest that solitons are not so special after all: loosely the conjecture says that if you wait long enough, almost any solution of a nonlinear dispersive wave equation that supports solitons will look increasingly like a sum of independent solitons.

In the first part of my talk I'll try to make sense of the fancy language above, I won't assume any knowledge beyond linear PDEs. In the second part of the talk I'll sketch how, for integrable PDE, we can use inverse scattering techniques to prove soliton resolution.

For More Information please contact the UCCS Math Department at
(719) 255-3311 <http://www.uccs.edu/math>