The Math Colloquium
Department of Mathematics
San José State University

Bruno Sanso
UC Santa Cruz

Are the oceans warming?
Statistical models for ocean temperatures

OCTOBER 14, 2009, MH320

Abstract: We develop statistical spatio-temporal models for historical records of ocean temperatures and salinity collected sparsely in space over periods of several decades. Our models seek to estimate ocean climatologies for the variables of interest, together with quantification of the anomalies, the trends and the seasonal cycles.

While ocean temperature data are relatively numerous, salinity measurements are scarce. Our model considers both variables jointly and imposes density stability conditions to avoid unstable water columns. Particular attention is given to the problem of handling large datasets. We use data from the North Atlantic to illustrate our method.

Background: Students should have taken a first course in statistics.

About the speaker: Bruno Sanso is a Professor of Statistics and Chair of the Department of Applied Mathematics and Statistics at UC Santa Cruz. He received a Ph.D. in mathematics at Universidad Central de Venezuela, and before coming to UCSC, taught at Universidad Simón Bolívar, Caracas, Venezuela.

SNACKS IN MH331B AT 2:30 PM
TALK STARTS AT 3 PM

For more information, see our full schedule at:

http://www.math.sjsu.edu/~hsu/colloq/