Claremont Center for the Mathematical Sciences

COLLOQUIUM

Best Approximation in Metric Trees

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The study of injective envelopes of metric spaces, also known as metric trees (R-trees or T-theory), has its motivation in many subdisciplines of mathematics as well as biology/medicine and computer science. Its relationship with biology and medicine stems from the construction of phylogenetic trees. Concepts from "string matching" in computer science are closely related with the structure of metric trees. A metric tree is a metric space (M, d) such that for every x, y in M there is a unique arc between x and y and this arc is isometric to an interval in $\mathbb{R}$.

In this talk, we examine convexity and compact structures in metric trees and apply these results to show the existence and uniqueness of best approximations. Several applications of best approximation in metric trees will also be discussed.

Wednesday, January 21, 2009, at 4:15 P.M.
Beckman B126, Harvey Mudd College

Coffee & cookies at 3:45 P.M.
Olin B161, Harvey Mudd College.

The dinner will be hosted by Sandy Grabiner.
If interested in attending, call 18707 or e-mail `sgrabiner@pomona.edu`.

For Math Colloquium information, visit the website
`http://ccms.claremont.edu/math-colloquia/`