1023-F1-18 **Joanne C. Caniglia*** (jcaniglia@emich.edu), Eastern Michigan University, Dept. of Mathematics, Room 515 Pray Harrold, Ypsilanti, MI , and **Krish Narayanan** (knarayan@emich.edu), Room 511 Pray Harrold, Dept. of Computer Science, Ypsilanti, MI. *The Traveling Salesman Solves a Meals on Wheels Problem: Utilizing Academic Service Learning in an Integrated Algebra and Computer Science Course.*

The purpose of this session is to describe a college algebra and computer science interdisciplinary seminar utilizing academic-service learning. This seminar developed for mathematics or computer science majors exposes students to a real-world problem: making the process of providing meals to the elderly more efficient.

Through a National Science Foundation Talent Expansion Program (STEP) grant (DUE-0525514), Eastern Michigan University is developing a series of interdisciplinary seminars consisting of mathematics and computer science courses that not only provide data acquisition, design of experiments, use of theory, and computer programming, but also serve a non-profit community agency in the process.

The algebra and computer science classes set out to design a method to help the manager of the Meals on Wheels organization quickly generate efficient routes for a volatile list. The routing system implemented is based on a Traveling Salesman Problem heuristic that is extremely simple and yet provides good tours on the average (Bartholdi and Platzman, 1982). The idea behind this algorithm is a Sierpinski spacefilling curve.

Students gain an appreciation for how they can apply college algebra and computer programming. (Received August 30, 2006)