



Society for Undergraduate Mathematics
and TU-Teach

Lecture

The Automated Drawing of Weather Fronts

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Meteorologists have long drawn curves on weather maps to show the placement of large bodies of warm or cold air. These weather fronts have traditionally been drawn by hand after examining a combination of information such as temperature, pressure, and precipitation data. Efforts to automate this process began in the 1960s when scientists described weather fronts with simple equations using derivatives of the temperature function. However, the techniques developed thus far have some flaws and few are fully automated. We present a simplified method which both draws and classifies warm and cold weather fronts. By using only first derivatives, we avoid some of the flaws of previous methods. Single frame and animated results will be presented.

Wednesday, February 9, 2011

1:00 in 617 Wachman Hall



¹ This is a joint work with fellow PhD candidate Meredith Hegg, who is on leave this semester.