1046-J1-431   **Christine von Renesse** (`cvonrenesse@wsc.ma.edu`), 577 Western Ave, Westfield, MA 01086, and **Volker Ecke*** (`vecke@wsc.ma.edu`), 577 Western Ave, Westfield, MA 01086. *Mathematics of Salsa Dancing.*

In many dances, when you learn a new move, you have really learned two: the original one (e.g. to the right) and its mirror (e.g. to the left). Many more such symmetries exist: forward and backward,leading and following, with the dancers facing each other, or away from each other, etc. Motivated by an Argentine tango teacher explicitly exploiting such symmetries in his teaching, we became curious to explore their power in our Salsa dancing, as well.

With the talk, we intend to illustrate an approach to teaching mathematics that is well suited for liberal arts majors.

You will move with us through our analysis of possible starting and ending positions for a dance phrase, the rich mathematical symmetries and a range of possible dance moves that can take you from one to the other. In the process, we discover some mathematical facts that many good leaders embody and exploit all the time. Caution: you may feel moved to get up and dance! (Received September 02, 2008)