1087-37-123   **Davide Ambrosi** (`davide.ambrosi@polimi.it`), **Gianni Arioli** (`gianni.arioli@polimi.it`) and **Hans Koch*** (`koch@math.utexas.edu`). *A computer assisted enclosure for invariant manifolds.*

We describe a new technique for computing a tight enclosure for the stable and unstable manifolds at a stationary point of an autonomous, finite dimensional dynamical system. This method is used to prove the existence of a traveling wave for a PDE modeling the propagation of electric signals in biological tissues, and to give an accurate and rigorous estimate of the wave speed. (Received December 01, 2012)