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**HOMOCLINIC ORBIT SOLUTIONS OF A ONE DIMENSIONAL
WILSON-COWAN TYPE MODEL**

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We analyze a time independent integral equation defined on a spatially extended domain which arises in the modeling of neuronal networks. In this paper, the coupling function is oscillatory and the firing rate is a smooth “heaviside-like” function. We will derive an associated fourth order ODE and establish that any bounded solution of the ODE is also a solution of the integral equation. We will then apply shooting arguments to prove that the ODE has N -bump homoclinic orbit solutions for any even-valued $N > 0$. homoclinic orbit.

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