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Linghai Zhang* (liz5@lehigh.edu), 14 East Packer Ave, Bethlehem, PA 18015. *How many stable pulses can a synaptically coupled neuronal network support?* Preliminary report.

We study a singularly perturbed system of integral differential equations arising from synaptically coupled neuronal networks. We establish the existence and stability of three stable pulses under certain assumptions on the model parameters. The method and technique we apply include: linearization, Evans functions, and asymptotic analysis. (Received February 27, 2007)