

Meeting: 1002, Pittsburgh, Pennsylvania, SS 13A, Special Session on Mathematical Biology

1002-92-214 **Alla Borisyuk** and **Janet A. Best*** (jbest@mbi.osu.edu), Mathematical Biosciences Institute, Ohio State University, 231 W. 18th Ave, Columbus, OH 43210, and **David H. Terman.**
Frequency Separation in Neuronal Systems. Preliminary report.

Sparsening and orthogonalization of input are believed to occur in numerous neuronal systems; it is believed to play an important role in olfaction and formation of associative memories, for example. In order to explore possible biological mechanisms for orthogonalization, we have constructed a minimal neuronal model that separates two frequencies contained in its input. In this talk, we describe the mathematical ideas underlying the model implementation. (Received September 14, 2004)