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**Nida Obatake\***, 4503 College Main St Apt B, Bryan, TX 77801, and **Elizabeth Gross** and **Nora Youngs**. *Place field diagrams of neural codes*.

A rat has special neurons that encode its geographic location. These neurons are called place cells and each place cell corresponds to a region in the space, called a place field. Neural codes are collections of the firing patterns of place cells. In this talk, we investigate how to algorithmically draw a place field diagram of a convex neural code, building on existing work studying neural codes, ideas developed in the field of information visualization, the toric ideal of a neural code, and the neural ideal and general relationship graph of a neural code. This talk is based on joint work with Elizabeth Gross and Nora Youngs. (Received September 08, 2017)