

Mathematical Foundations of Neuroscience - Sample Questions - Lecture 10 - Bursting

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Questions marked with * are not obligatory.

1. What is bursting?
2. Can bursting occur in a 2d system? Is it relevant for neural models?
3. What is a fast-slow burster?
4. Consider the diagram below. Describe all of the shown bursters. Which of them can have a 1d slow system?

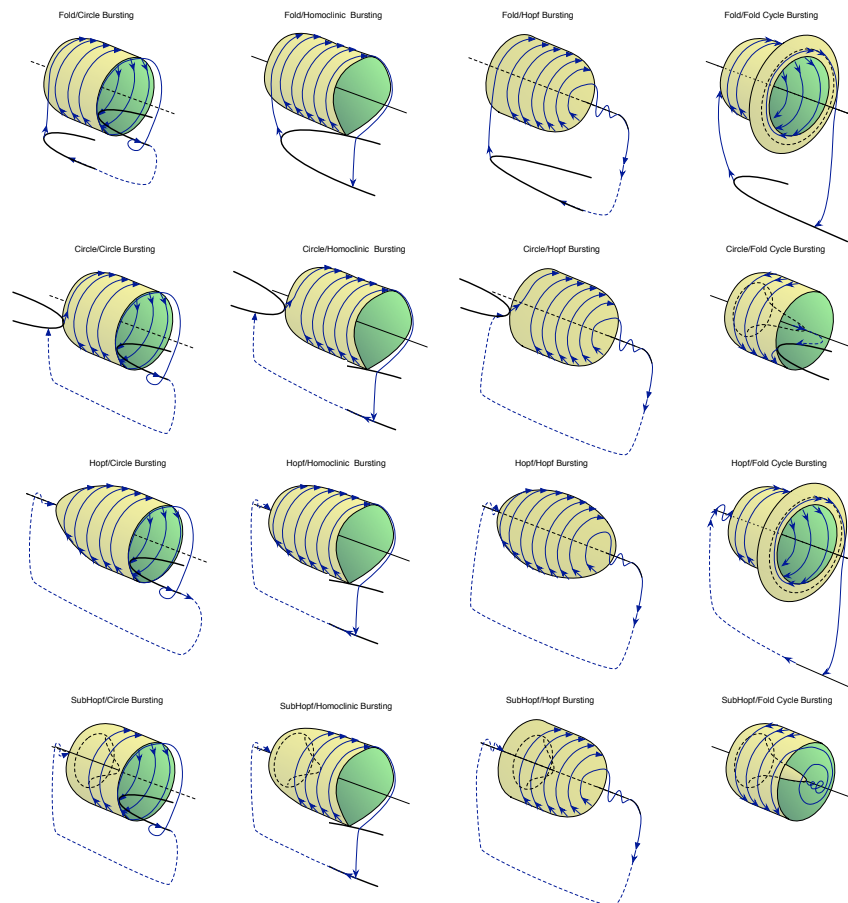


Figure 1: A diagram of a major bursting types in neurons (see Izhikevich 2000).

5. Describe the process of a burster dissection. Explain how to average the periodic orbit. Describe the concept of an equivalent voltage. (*)