# DFT Bootcamp 2018!

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## Formal theories are essential

Creates challenges...

Not everyone understands models

+Bootcamp!

+Which modeling approaches should be taught as part of graduate training?





# Where does DFT fit in?

Many classes of models...

- +Cognitive models (prototype models; Bayesian models)
- Process models (multivariate time series models; SUSTAIN)
- +Hybrid models (ACT-R)
- +Neural process models: do process in a neural way...

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## DFT: The conceptual picture

First topic: the reality of neural systems

- The neural system is densely interconnected; massively recurrent
  - +Can go from any neuron in the brain to any other neuron in the brain in 5-8 steps.
  - The vast majority of cells are part of recurrent loops rather than feed-forward pathways
- <u>The creates a stability problem</u>: how do neural systems maintain a stable pattern of activation in the presence of massive interactivity







- +Dynamic fields are a generalization of this basic story
- Later today, you'll get to play with these systems yourselves and I'll introduce you to COSIVINA (our objectoriented framework for DF simulations)



















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