Recommended Reading

Variational Bayes

Chapter 1 and 2
http://www.cse.buffalo.edu/faculty/mbeal/thesis/

Bayesian Model Selection & Averaging

Bayesian model selection for group studies
Stephan KE, Penny WD, Daunizeau J, Moran RJ, Friston KJ
Neuroimage (2009) 46(4): 1004-1017
http://www.sciencedirect.com/science/article/pii/S1053811909002638

Markov chain Monte Carlo

A quick introduction to Markov chains and Markov chain Monte Carlo
Waagepetersen R
http://people.math.aau.dk/~rw/Papers/mcmc_intro.pdf

Hierarchical Gaussian Filter

Uncertainty in perception and the Hierarchical Gaussian Filter. Frontiers in Human Neuroscience
Mathys CD, Lomakina, EI, Daunizeau J, Iglesias S, Brodersen KH, Friston, KJ, & Stephan KE
Frontiers in Human Neuroscience (2014) 8:825
http://doi.org/10.3389/fnhum.2014.00825

Markov Decision Models

Planning and acting in partially observable stochastic domains
Kaelbling LP, Littman ML & Cassandra AR
Artificial Intelligence (1998),*101*(1-2): 99–134
https://www.cis.upenn.edu/~mkearns/papers/barbados/klc-pomdp.pdf

Drift Diffusion Model

HDDM: Hierarchical Bayesian estimation of the Drift-Diffusion Model in Python
Wiecki TV, Sofer I and Frank MJ
Front. Neuroinform. (2013) doi: 10.3389/fninf.2013.00014
http://journal.frontiersin.org/article/10.3389/fninf.2013.00014/full

Dynamic Causal Modeling for fMRI

Understanding DCM: Ten simple rules for the clinician
Kahan J, Foltynie T
Neuroimage (2013) 83: 542-549
http://www.sciencedirect.com/science/article/pii/S105381191300760X

Analyzing effective connectivity with functional magnetic resonance imaging.
Stephan KE and Friston KJ
WIREs Cognitive Sience (2010), 1:446-459,
http://www.fil.ion.ucl.ac.uk/spm/doc/papers/Stephan_WIREsCognSci_1_446_2010.pdf

Dynamic Causal Modeling for EEG

Losing Control Under Ketamine: Suppressed Cortico-Hippocampal Drive Following Acute Ketamine in Rats
Moran RJ, Jones MW, Blockeel AJ , Adams RA, Stephan KE and Friston KJ
Neuropsychopharmacology (2015) 40: 268–277
http://www.nature.com/npp/journal/v40/n2/abs/npp2014184a.html

Dynamic Causal Modeling for Behavior

Dynamic causal modelling of brain-behaviour relationships
Rigoux L & Daunizeau J
NeuroImage, (2015)*117*(C): 202–221
http://www.ncbi.nlm.nih.gov/pubmed/26008885

Free-energy & Decision Making

Thermodynamics as a theory of decision-making with information-processing costs
Pedro PA & Braun DA
Proc R Soc A (2013) 469: 20120683
http://rspa.royalsocietypublishing.org/content/469/2153/20120683

Information Theory — The Bridge Connecting Bounded Rational Game Theory and Statistical Physics
http://link.springer.com/chapter/10.1007%2F3-540-32834-3_12

Predictive Coding & Active Inference

Computational psychiatry: the brain as a phantastic organ
Friston KJ, Stephan KE, Montague R, Dolan RJ
Lancet Psychiatry (2014) 1:148–158
http://www.fil.ion.ucl.ac.uk/~karl/Computational%20psychiatry.pdf

Optimal inference with suboptimal models: Addiction and active Bayesian inference
Schwartenbeck P , FitzGerald THB, Mathys C, Dolan R, Wurst F, Kronbichler M, Friston K
Medical Hypotheses (2015) 84 :109–117
http://www.medical-hypotheses.com/article/S0306-9877(14)00442-3/pdf

Reinforcement Learning

Decision-theoretic psychiatry

Huys QJM, Guitart-Masip M, Dolan RJ and Dayan P
Clin Psychol Sci (2015) 3(3):400-421
http://quentinhuys.com/pub/HuysEa15-DecisionTheoreticPsychiatry.pdf

Sutton & Barto
Reinforcement learning
MIT Press, 1998
https://webdocs.cs.ualberta.ca/~sutton/book/the-book.html