

# PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute at VTC and co-sponsored by the institute's Center for Human Neuroscience Research



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## Thinking the Right Thoughts

In realistic choice tasks, especially sequential ones like mazes, actions are separated from their consequences by many steps of space and time. A central computational problem in decision-making — which arises in various guises such as credit assignment and planning — is spanning these gaps to work out the long-term consequences of candidate actions. Dr. Daw will review recent experimental and theoretical work aimed at understanding the mechanisms by which the brain solves this problem. First, he will review a new study that monitors neural signatures of reward expectancy in rodents to monitor how the brain propagates information about individual experiences with outcomes to distal choicepoints. Second, he will report ongoing theoretical work that aims to clarify how the brain can judiciously build and maintain cognitive maps so as to achieve effective decisions while minimizing computational costs. This offers a formal, resource-rational perspective on a range of issues such as habits and slips of action in the healthy brain, but also may explain dysfunctions such as compulsion, rumination, and avoidance.

**FRIDAY, MAR. 7, at 11 a.m.**

Room G101 A/B, 4 Riverside Circle

Watch live via Zoom at <https://FralinBioMed.info/PBR-Join>



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