

THE UNIVERSITY AT ALBANY
PSYCHOLOGY DEPARTMENT
IN CONJUNCTION WITH CIEGS/ISSS

Presents a remote colloquium by



Dr. Michael Peer

Israeli Fulbright
University of Pennsylvania
The Hebrew University of Jerusalem

“Cognitive Maps Across Domains”

Friday, February 12, 2021

2:45 pm

Zoom link:

<https://albany.zoom.us/j/93403142335?pwd=VnZnbXJHeGRiVndGaUUyK0dJQWJ6QT09>

Meeting ID: 934 0314 2335

Passcode: 440864

Abstract:

During our daily lives, we encode information on relations between items in multiple cognitive domains: locations of places with respect to each other, personal relations between people in our social network, the temporal order of events, and more. However, it is unclear how this knowledge is organized, and whether the same brain systems are involved in mapping relations across different cognitive domains. I will present three functional MRI studies on the organization of spatial and nonspatial cognitive maps, suggesting that cognitive maps are organized hierarchically, they are processed along a cortical gradient of abstraction, and the same cortical systems are used to represent relations in different cognitive domains.

About the Speaker:

Michael Peer was awarded a Fulbright postdoctoral fellowship to pursue his research project titled “characterizing the brain’s large-scale space representation system” at the University of Pennsylvania. This research will investigate the neurocognitive systems used to encode cognitive maps of the large-scale environment, and their possible use to map other types of knowledge in more abstract domains.

His PhD research was conducted in the Hadassah Hebrew University Medical Center. This research focused on disruptions of brain networks in neuropsychiatric disorders, and on the use of similar brain mechanisms to orient in space, time and the social domain.

Dr. Peer’s recent publications include:

Peer, M., Brunec, I. K., Newcombe, N. S., & Epstein, R. A. (2021). Structuring Knowledge with Cognitive Maps and Cognitive Graphs. *Trends in Cognitive Sciences*, 25(1): 37-54.

Peer, M., Ron, Y., Monsa, R., & Arzy, S. (2019). Processing of different spatial scales in the human brain. *ELife*, 8, e47492.

Peer, M., Salomon, R., Goldberg, I., Blanke, O., & Arzy, S. (2015). Brain system for mental orientation in space, time, and person. *Proceedings of the National Academy of Sciences*, 112(35), 11072-11077.