

Speaker:

**Alexander G. Ophir, PhD**

Cornell University  
Department of Psychology  
Behavioral & Evolutionary  
Neuroscience  
USA



Time/Location: **Monday, Oct 8<sup>th</sup> 2018 at 14:00 p.m. (s.t.)**  
**in H53**

invited by: Prof. Dr. Oliver Bosch (oliver.bosch@ur.de)

Title: **The cognitive ecology of monogamy: Socio-spatial memory and early life social experience impact alternative mating tactics.**

Abstract: A complete understanding of the nervous system and its interactions with the physical and social environment requires knowledge of the proximate mechanisms that produce natural variation and the ultimate factors that perpetuate heritable characters. It is essential to understand neuromodulatory influences on behavior under simulated and natural contexts if we are to know how complex behaviors are produced. Perhaps no neuromodulatory system is more important for social behavior than nonapeptides (oxytocin and vasopressin), and no behaviors more complex than reproductive strategies. The role of memory in monogamy is often neglected despite the fact that nonapeptides influence memory and mating tactics impose inherently spatial challenges to animals. Furthermore, postnatal experiences profoundly shape adult behavioral and neural phenotypes. Thus, adult phenotypes that bias reproductive decisions may have roots in social environments experienced in youth. In this talk I will use evidence from the lab and field to argue that nonapeptides modulate a putative socio-spatial memory neural circuit resulting in the regulation of monogamous or non-monogamous mating decisions. I will provide evidence that reproductive decisions appear to be related to nonapeptide patterns in areas of the brain associated with socio-spatial memory, and that memory relates to reproductive success in natural contexts. I will discuss potential ways in which developmental experience might shape brain and behavior to predispose prairie vole reproductive decision-making. In this sense, the motivation to engage in differential reproductive tactics may have a foundation in early life experience and an individual's ability to assess the socio-spatial landscape of their immediate environment.