Modeling Social Network Dynamics

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Understanding the forces shaping the social lives of animals is a central topic in the study of evolution. Although animal sociality has been studied extensively, until recently only rudimentary tools were available for the analysis of complex social structures and their multidirectional relationships with individual traits, life history and fitness. The rise of network science in the last decade introduced advanced tools that enable us to quantify the social structure in unprecedented detail. In this talk I will describe my recent studies on the rock hyrax and the spotted hyena. I will show how individual preferences for specific local social structures shape the network landscape. I will also discuss the effect of the social structure on individual longevity. Finally, I will present tools for modeling network dynamics.

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