



Special seminar

Modeling inflorescences: from molecular processes to macroscopic forms

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**Wednesday, 14 June 2017, 2:00 – 3:15pm
George Evens Family Auditorium**

Showy inflorescences – clusters of flowers – are a common feature of many plants. They are significant from the evolutionary and ecological perspectives, and greatly contribute to the beauty of plants. To better understand the development of inflorescences we have devised computational models that relate molecular-level data to the macroscopic forms. The models capture the arrangement of individual florets in space (phyllotaxis), the dependence of floret types on their position within the inflorescence (floral dimorphism), the tendency of showy ray florets to occur in specific numbers (numerical canalization), the impact of mechanical interactions between florets on the form of inflorescences, and the developmental origins of the branching structures that support florets. From a broader perspective, the models highlight the self-organizing character of the morphogenetic processes through which the inflorescence forms emerge, and point to common elements in the development of inflorescences and leaves. The presentation will be illustrated with interactive simulations and visualizations.

Host: **Ariel Novoplansky**, Mitrani Department of Desert Ecology