



**University of
Zurich**^{UZH}

Department of Evolutionary Biology
and Environmental Studies

SEBES Seminar for Evolutionary Biology and Environmental Studies

Islands in a sea of possibilities: On reconciling stability and innovation in evolution

Speaker: **Dr. Alexander Badyaev**
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Date/Time: Thursday, 2018-12-13
15:00 to 16:00

Place: Y24-G-55/UZH Irchel
Winterthurerstr. 190; 8057 Zürich

Access: only intern

Host: Prof. Dr. Wolf Blanckenhorn

Abstract:

Evolution proceeds by forming uninterrupted lineages from past functional solutions of ancestors to the features of extant forms. In this historical process, as species evolve adaptations and traverse ecological communities, they inevitably gain and lose dependencies on external environments and other species. Using insights from control theory and empirical studies of enzymatic networks underlying carotenoid-dependent avian traits, I will show that historical cycles of gains and losses of external dependencies in these networks explain the rate of their evolutionary diversification and enable long-term evolution despite contingencies of environment-specific inputs.

last update: 2021-05-21