



Seminar/Talk

EvoLunch - The role of non-adaptive evolutionary processes in shaping genomic variation

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Host: Beatriz Vicoso

The question of the relative evolutionary roles of adaptive and nonadaptive processes has been a central debate in population genetics for nearly a century. While advances have been made in the theoretical development of the underlying evolutionary models, as well as in statistical methods for estimating their parameters from large-scale genomic data, a framework to account for the joint effects of multiple evolutionary processes is still lacking. We show how segregating deleterious mutations affect patterns of variation at neutral sites near functional genomic components and how not accounting for linked effects of selection affects inference in population genetics. We demonstrate a potential solution to this fundamental problem a novel statistical framework for jointly inferring the contribution of the relevant selective and demographic parameters, accounting for effects of selection on linked sites. Our approach represents an appropriate baseline model for inference in population genetics at large which is necessary to accurately assess the role of adaptive processes in shaping genomic variation and is especially relevant for species whose genomes have a high density of selected sites.

Wednesday, December 1, 2021 03:30pm - 04:30pm

Online Event ()



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