

The effect of mutations on folded RNA structures: thermodynamic principles, indels and evolving populations

Variation, i.e. the molecular and phenotypic changes caused by random mutations, is a crucial component of evolutionary processes. One biologically relevant example for which variation can be modelled computationally is the RNA genotype-phenotype (GP) map. This GP map links RNA sequences to their folded secondary structures and thus allows us to identify structural changes after sequence mutations. In this talk, I will describe some recent progress on the biophysics of this GP map, compare the effect of short insertions/deletions (indels) to that of substitutions and discuss what the properties of this GP map mean for evolutionary processes.

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Institute for Biological Physics, Zùlpicher Str. 77a
Seminar Room 0.02, Ground Floor
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