IST AUSTRIA
Institute of Science and Technology

Invitation to Think & Drink

Understanding evolution by knowing how things are built

Mato Lagator

Postdoc, Guet Group

Imagine an architect, tasked with converting an old football stadium into a building with a different function, without completely demolishing it. While she might contemplate turning the stadium into a housing project, a shopping mall, or an office space, she will not consider turning it into an airport. This is because the existing architecture of a stadium imposes certain constraints: namely, the walls that surround it prevent airplanes from landing.

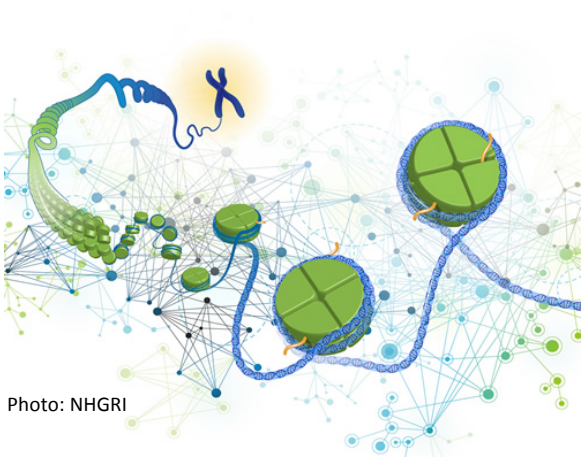

Photo: NHGRI

Evolution operates in much the same way as the architect: the existing molecular structures impose constraints that make it more difficult to evolve certain forms compared to others. Together with various members of Guet, Bollback, Barton, and Tkačik groups, I study precisely this – how the existing molecular structures determine the paths that evolution might take. I focus on gene regulatory networks, which consist of proteins that bind DNA and in doing so determine when a gene will be turned on or off, and study how the network structure impacts its potential to evolve.

Refreshments will be served after the talk.

17th of November 2017, 4pm

Lecture Hall

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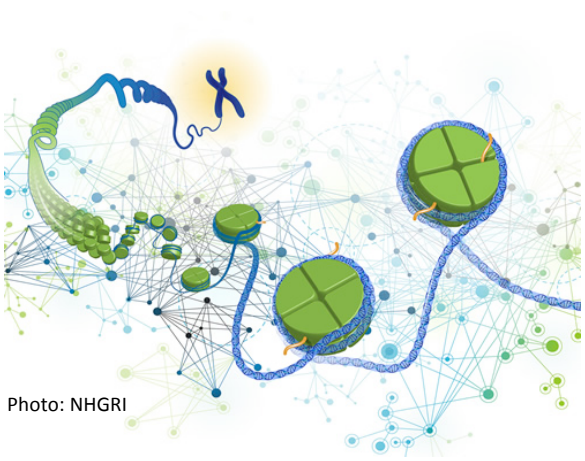

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