Dynamic accessibility percolation
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Accessibility percolation is a simple model in evolutionary biology describing how a population driven by the evolutionary forces of selection and mutation explores a fitness landscape. On a mathematical level this leads to the question, whether given a random fitness landscape there are paths of increasing fitness of a certain length. I will review some of the progress in this area and then consider the question what happens if the fitness landscape changes over time. In particular, I will focus on the case when the underlying graph is a homogeneous tree and show how the time it takes to see an increasing path scales in the different regimes of the model.