

## **An Introduction to Graph Exploration**

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This talk is intended as a gentle introduction to the general problem of systematically traversing initially unknown graphs. We learn how to solve simple mazes when the right-hand rule fails, and how a few breadcrumbs can help if we don't have memory. For non-planar mazes, we see that some memory or randomization is needed if we don't want to get lost forever, and that breadcrumbs are more useful than memory bits. Finally, we observe that directed mazes are much more challenging to explore, and that a friend is worth  $\log \log n$  breadcrumbs.