

# SOLVAY COLLOQUIUM



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### Illuminating life by genome-scale imaging

Living organisms are composed of numerous different types of cells and thousands of different genes act collectively to give rise to cellular and tissue functions. Dissecting the inner workings of cells and cellular networks that give rise to tissue functions require imaging with high molecular specificity, high spatial resolution, and genome-scale throughput to answer fundamental questions such as how many types of cells are present, how they are organized, and what functions they play in living organisms, as well as how molecular interactions inside cells lead to cellular functions. I will describe a high-resolution genome-scale imaging method, MERFISH, which enables spatially resolved single-cell genomics, and our applications of MERFISH to generate the cell atlas of complex tissues, including the brain, identifying distinct cell types therein, mapping their spatial organization and interactions, and determining their functions.

**WEDNESDAY 11 MARCH 2026 at 4:00 P.M.**

COFFEE AND TEA WILL BE SERVED AT 3:45 P.M IN FRONT OF THE SOLVAY ROOM

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