

Research

Mechanics of Development lab

The Saunders laboratory studies how biological systems manage to function so reliably despite the inevitable presence of noise (i.e. how is nature "robust"?). There are numerous potential sources of error for living organisms, ranging from biochemical fluctuations inside single cells to specimen-to-specimen variability. We use developing organisms to study questions related to robustness due to the large-scale cell and tissue changes (both genetic and mechanical) that typically occur over a relatively short period during embryogenesis and the remarkably high level of reproducibility. We use techniques from biology, physics and engineering to better understand how the process of a single-cell egg develops into a viable adult with such amazing precision.

