

# Unlocking the Cell

The processes that cells perform are as wondrous as their individual mechanisms are mysterious. Molecular biologists and mathematicians are using models to begin to understand operations such as cellular division, movement, and communication (both within the cell and between cells). The analysis of cells requires many diverse branches of mathematics since descriptions of cellular activity involve a combination of continuous models based on differential equations and discrete models using subjects such as graph theory.

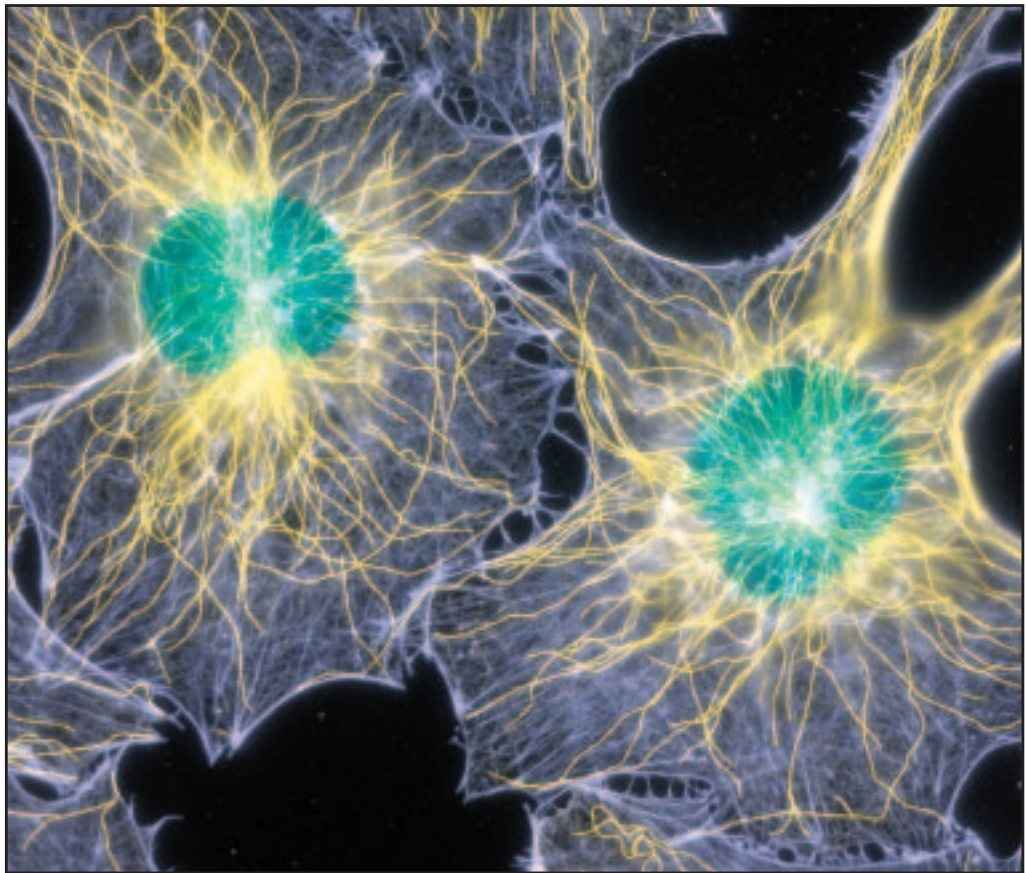


Image: Filamentous actin and microtubules in mouse fibroblasts (Dr. Torsten Wittmann), courtesy of Nikon SmallWorld.