



*Knowledge shared is knowledge squared.*

## SIAM Student Chapter seminar

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# BIG CONSEQUENCES OF SMALL MOLECULES

*continuum modeling of (sub)cellular structures*

Friday December 8 at 14:00  
in K12, Karlín campus

**Abstract:** Continuum models provide a simple and effective means of describing materials at a scale accessible to our direct experience. They can even be applied to explain the shape and microscopic deformations of cells and subcellular structures. Inside the cell, the chemical composition is highly heterogeneous and undergoes fluctuations and driven processes, so the individual effects of, e.g., protein molecules must be incorporated. I present methods developed to extract local continuum properties from complex particle-based systems and example applications from drug delivery to mitochondrial structure and bacterial growth.

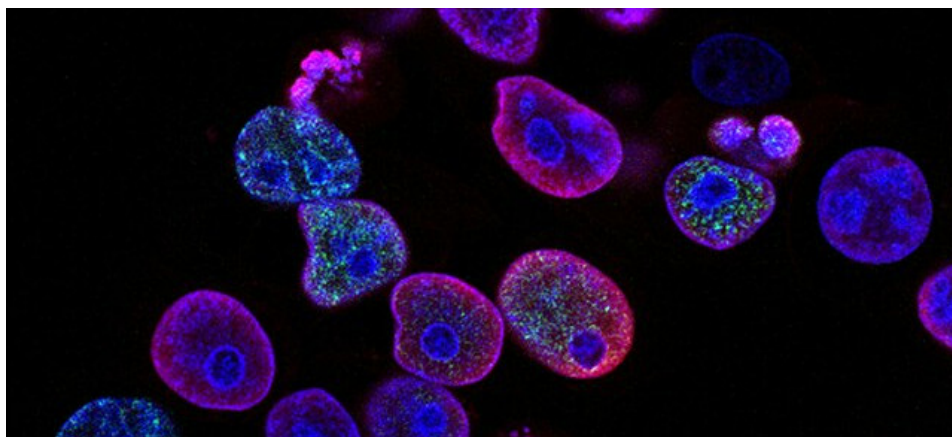


image source: National Cancer Institute