

Biophysics: Because Life is Weird

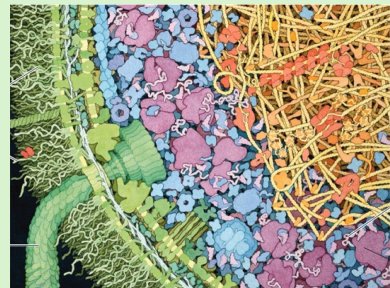
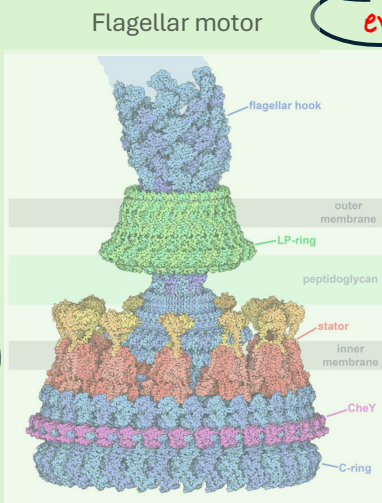
Cells jiggle. Muscles twitch. Slime molds solve mazes. Your body runs on tiny molecular machines more efficient than Teslas. And somehow... it all works? Physics usually deals with neat, tidy systems. But life? It's messy, gooey, chaotic and full of surprises. Welcome to **Biophysics** — where physics meets the messy, beautiful world of life.

Why doesn't your DNA get tangled like earbuds?

Why molecular machines in your cells are more efficient than any engine we've built?

How do cells move without wheels or gears?

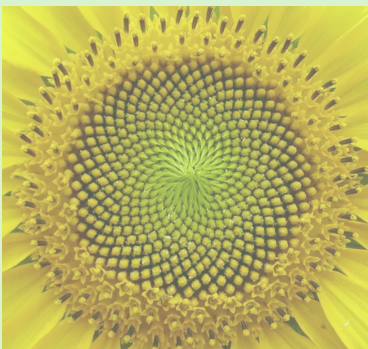
How living systems stay organized and pretty reliable, even when everything seems random



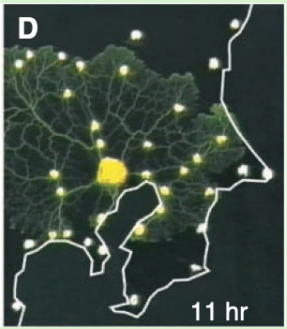
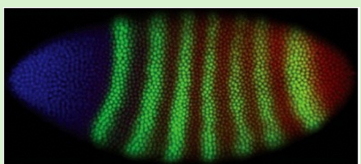
Why don't your organs fall apart, even though everything's jiggling and noisy at the molecular level?

How do forms develop?

How do cells know what shape to become?



How proteins fold, muscles contract, and how squishy stuff like slime molds think



If you've taken some physics and you want to see it applied in unexpected, new ways – this course is for you. **Fall 2025 – Phys 383: “Special Topics in Biophysics”**. Pre-req Math 201 or equivalent; co-req Phys 242 or equivalent -or- with the permission of the instructor.

Questions? Contact Prof. Oleg Kogan, okogan@qc.cuny.edu