Agenda: Two themes (DNA-Nano, DNA-Comp), Summary and Prospects:

DNA-Nano

Unit of construction: animation of DX

Demo of my method

Origami: Good, bad, ugly

Fixing the bad and the ugly: inspired by puzzle, pcr-driven

DNAComp

Unit of Computation

Adleman example: demo,

Puzzle example:

Other computing primitives: strand displacement, Riboswitches-ligands-mRNA

Note about complexity: problems 1) all the same (reduction) 2) intractable

Summary and Prospects:

BioComp:

Circuits for the sake of circuit 🡪 wrong way to go.

Molecular automata

Aiming for a platform

Delivery: difficult into cell (SW bug fixing = new bug), synthetic cells alternative

Besides engineering hardware (syn. Biology) and software (simulation, oligo. Design) based on **chemical and physical law**, insight deduced from computability law, heavy/light inquiries, if heavy (avoid or find assumptions) if light (why hasn’t natural selection solved it, maybe shifting search space) discrete/continuous computation

Conclusion: lost in translation (merging computation and biology folks),

end note: debugging faulty machines that we call our bodies