



**The Future**

# Brain/Machine Hybrid

Prosthetics lack the control, flexibility, and durability of a real arm.

A possible solution is integrating mechanical devices with your



# Effective Tests for Performance Enhancing Drugs

The widespread use of steroids in professional sports (Major League Baseball) is hard to prevent given the drug tests currently used to identify PEDs in the blood.

Possible solution would detect more diverse types of steroids at smaller concentrations and different locations in the body than current tests do.

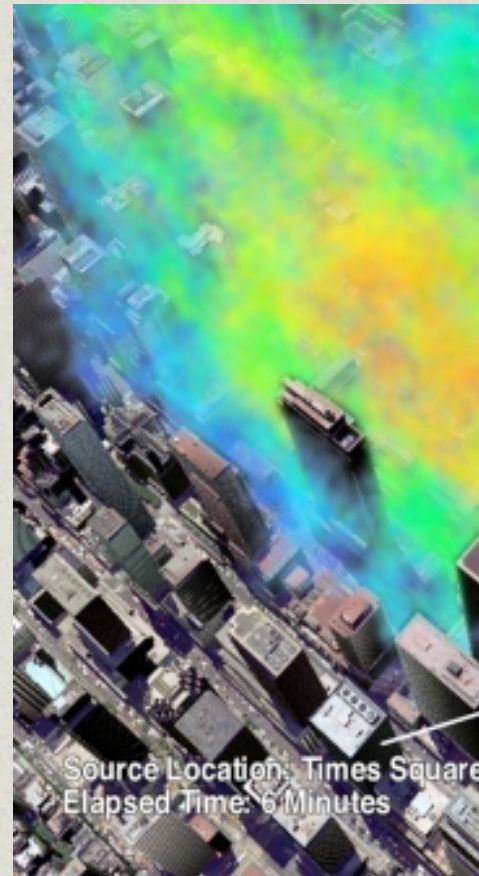


# Biological Terrorism

Problem: terrorists can employ infectious viruses as weapons.

Solutions:

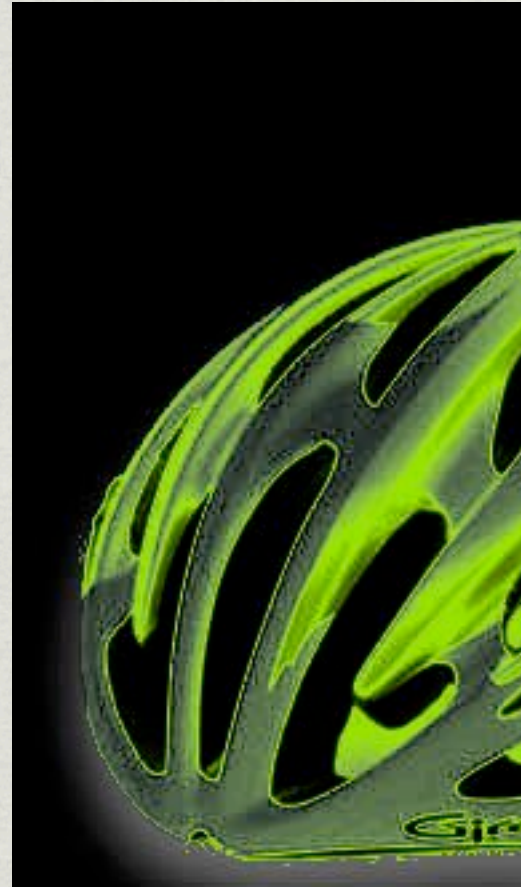
- Virus detectors (similar to metal detectors at airports)



# Luminary Mind Cra

Build glow in the dark helmets to attract attention and therefore safeguard cyclists.

Use glowing bacteria on a helmet substrate, kept alive and glowing



# Regenerative Computers

Computers are always breaking. Biological computers should be able to regenerate parts by themselves.

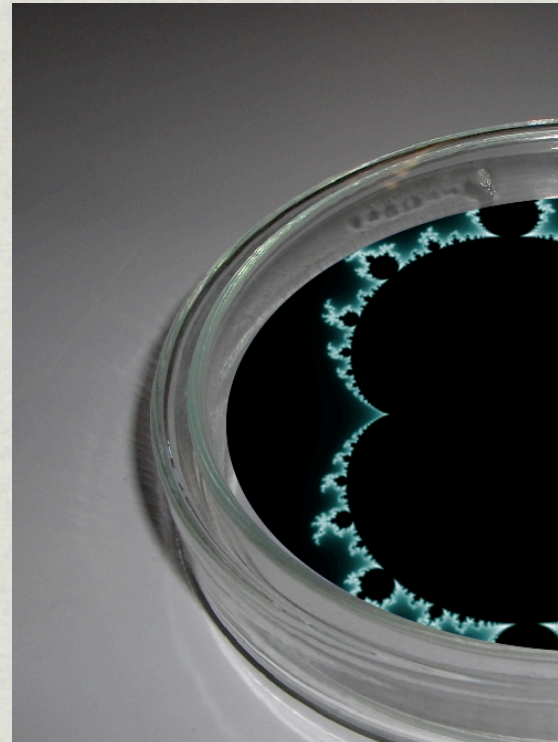
Make biological computers out of



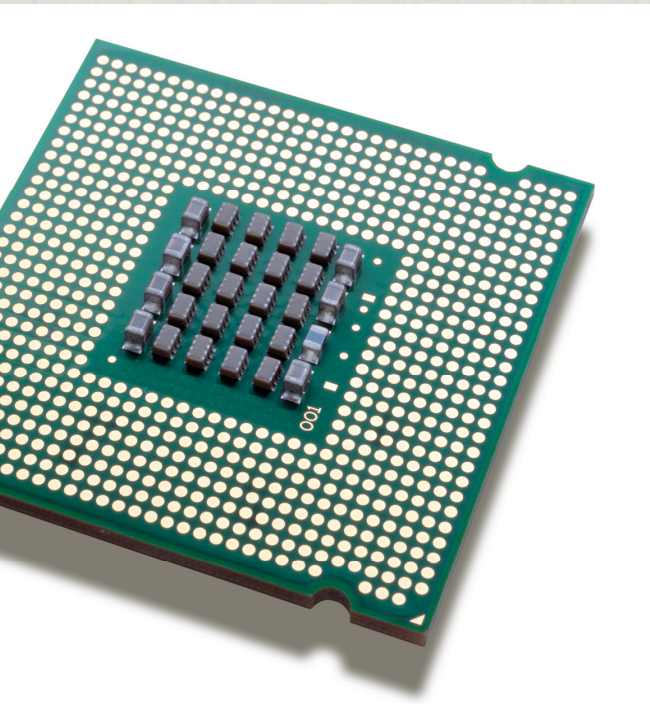
# Biological Computing of

Fractals are recursive, making them well-suited to solution by many autonomous individuals working together.

Cellular automata could be simulated



# Biological Logic Ga



- ✱ Computers are built structures chained ones.
- ✱ Biological parts are reproducing, which to make lots of them to solve problem parallel. Biological c

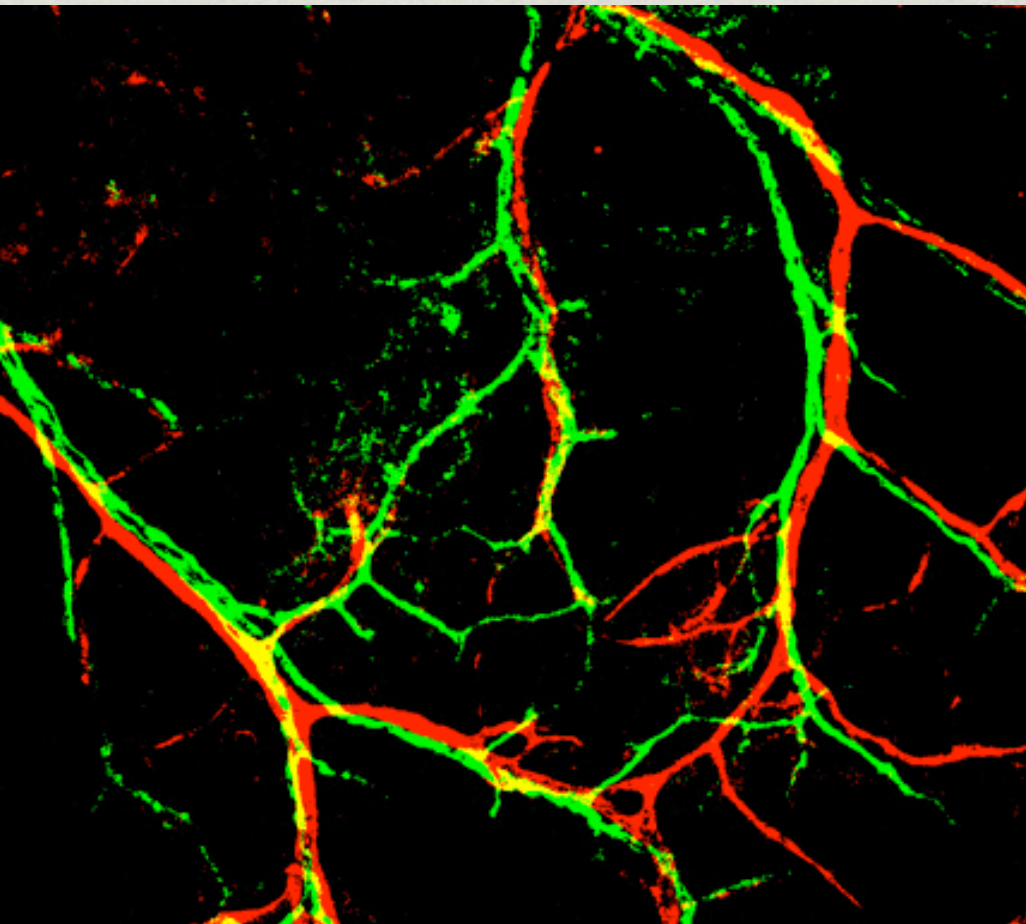


# Neural Nets

One criticism of electronic neural nets is “neurons” don't actually model biological neurons. Biological computers could use actual neurons to perform computation.

Would allow us to perform all the computations optimized for neural nets

# Nerve Regeneration



- ✱ Often during fractures, nerves are often intact
- ✱ Scar tissue in the CNS prevents signals from traveling along the axon
- ✱ Biological “w

# Programmable food

Food in vitro

Novel tastes

Hypoallergenic foods

