

# What IS Engineering?

Matt Hillin, Daniel Jimenez,  
Naomi Stein



## Define Engineering....



- Problem solving
- Design
- Analyzing
- Purposeful
- Synthesizing our understanding of the world in order to accomplish \_\_\_\_
- Application of Science/Technology/Math
- Relevant to humans
- Descriptive to Prescriptive
- Social/Environmental Context

## Kinds of Engineering?



- Civil
- Environmental
- Mechanical
- Materials
- Aerospace
- Nautical/Ocean
- Chemical
- Biological/Biomedical
- Nuclear / Energy
- Agricultural
- Petroleum
- Industrial
- Systems
- Operations

→ *Is it really one specific list...  
...or more just a way of thinking?*

## Civil Engineering



The Brooklyn Bridge

Hoover Dam



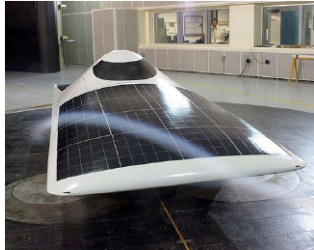
MBTA Red Line



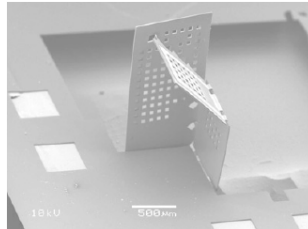
Burj Dubai  
(under construction)



## Mechanical Engineering

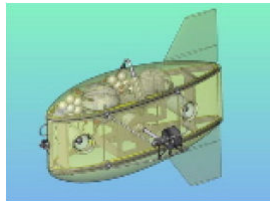


MIT Solar Electric Vehicle



Nano- & Microscale Polymer 3D Structures

Odyssey IV Robotic Submarine



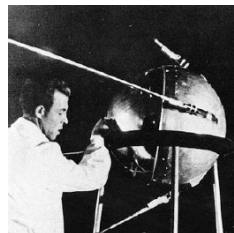
Honda Electric Hybrid Engine



## Aerospace Engineering



A380-Biggest Passenger Jet



Sputnik First in space



Apollo 11 Lunar Landing



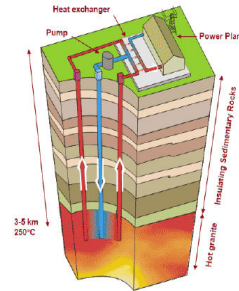
International Space Station

# Energy Engineering



Wind Farm

Solar Panels

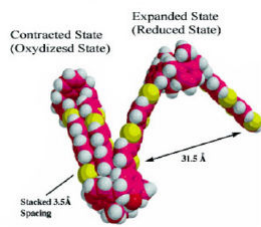


Geothermal



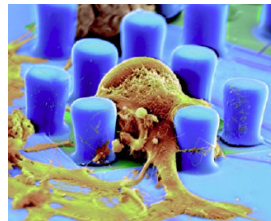
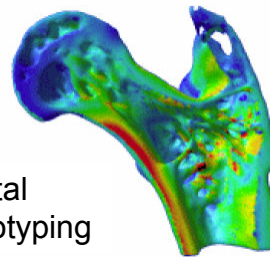
Nuclear Power

# Bioengineering



Conducting Polymer Actuators

Skeletal Phenotyping



Nerve cell on microchip

Protein Assembly

