**Tao Zhang**
**How Technology Molds our Assumptions**
**Dr. Bob Rinker**
**March 24th, 2014**

## Summary


- Dr. Rinker pointed that we use hardwares, but many of us don't know hardwares. So he showed some technology knowledge of the computer hardware from past.
- Why Silicon? Dr. Rinker showed us the Periodic Table and talked about the conductors-Allow a generous flow of elements with very little applied forces-and the material with their relative conductivity. Semiconductors are poor. The effect of Dopant level on Resistivity: there are approximately $5 \times 10^{22}$ silicon atoms/$cm^3$. "Pure" silicon usually contains 0.1-1 ppba of impurities. This corresponds to an impurity density of $0.5 - 5 \times 10^{13}$ atoms/cm.
- Dr. Rinker also talked about the Junction Diode. Also, how photoresist Masking process work.
  - Grow $SiO_2$ Layer on Silicon
  - (missed several steps)
  - Etch $SiO_2$ with HF
  - Remove photoresist
  - Perform diffusion
  - Remove $SiO_2$ Layer
- What's more, Dr. Rinker talked about the TTL Gates(Transistor-transistor logic).