Physics 607 (Fall 2014)

- Brief introductions: then & me.

- PPT Superconducting Qubit up mechanical oscillator. Goal is to understand how to make these devices.
  - These devices are ubiquitous in electronics.
  - Purpose of the course

- PPT Gallery of devices.
  - Bardeen, Brattain & Schockley 1947 (Bell Labs)
  - Miniaturization is also important to other physical domains & use similar tricks.
    - Photonics
    - Microfluidics
    - Electronic devices

- Integration:
  - Electronics + Fluidics
  - C p electro mechanics
  - Quantum ↑

- Electronics are important: why small?
  - Ex of optoelectronics
  - Challenges of small
    - Paradigm shift to disorder?
    - Micro/Nano fabrication still important!

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