Memristors

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The Citadel
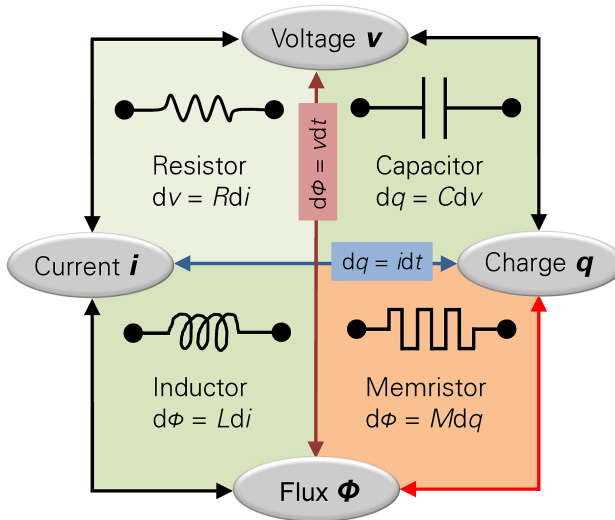ELEC-424

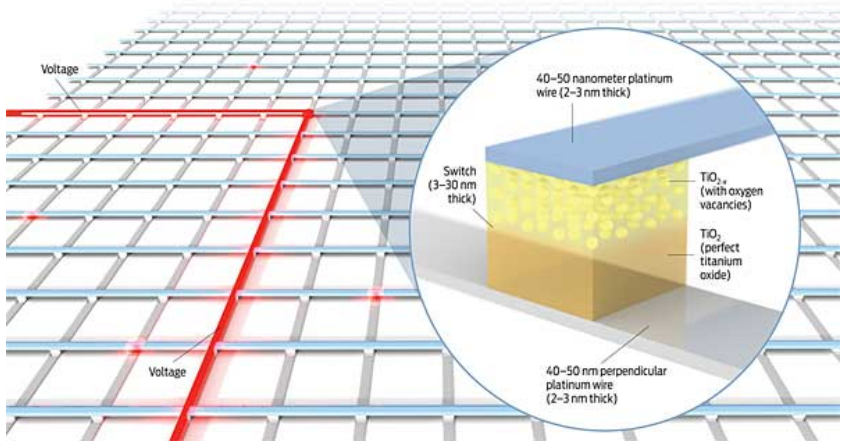June 22, 2015

Outline

1. **Introduction**
   - What is it?
   - How does it work?

2. **Applications**
   - Non-Volatile Memory
   - Learning Circuits

3. **Questions**

What is it?

How does it work?

Non-Volatile Memory

- HP's first goal
  - Cross-point memory researched since the 1960s
- Floating-Gate MOSFETs already used for flash memory

Learning Circuits

- FGMOS also used in artificial neural networks
- A simple memristive circuit can react to periodic input
- A memristive processor is massively-parrallizable

Questions?