

LECTURE #1

ADMINISTRIVIA.

{ SOCIAL NETWORKS X  
CSCI - GA - 3033 - 004.

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Class Hrs: TUESDAYS 7<sup>10</sup> ~ 9<sup>00</sup> pm EST.

Class Room: Room 101; CIWW (251 Mercer St.)

TEXT Book: Easley & Kleinberg [EK]

"Networks, Crowds and Markets:  
Reasoning about a Highly Connected  
World"

Cambridge University Press, 2010.

## ◇ Introduction

## ◇ Syllabus (to be determined)

Exploring connections to

### ◇ Game Theory

→ Signaling Games

### ◇ Privacy, Anonymization and Distributed Computing

→ Virtualization; Graph Th.

### ◇ Economics

→ Payment Systems,  
Auction,

Cryptocoins.

### ◇ Statistical Inference

→ Data Science,

Machine Learning

Graph Theory / Linear Algebra

### ◇ Applications:

→ Healthcare

→ Finance

→ Advertisement

→ Data Markets

## Entrepreneurship.

Job creation → Social Goods  
 Venture Capitalism → Market Liquidity  
 Startups → Technological Innovation  
 Accelerators/Incubators → Education  
 Hardware/Platforms → Infrastructure.

A brief discussion on  
 "The Innovators"  
 Walter Isaacson.

### HISTORY

#### 1) Origin of Computing:

- ◇ Jevons, Leibnitz, Boole, Babbage  
 → Ada Lovelace
- ◇ Vannevar Bush → Memex.  
 Norbert Wiener, Claude Shannon  
 John von Neumann.
- ◇ Alan Turing  
 Alonzo Church, Steven Kleene  
 John von Neumann.
- ◇ Howard Aiken,  
 Mauchly, Atanosoff  
 Eckert

## 2) Origin of Digital Computing

- ◊ Konrad Zuse (Z3) Electromechanical
- ◊ Atanasoff → Mauchly, Eckert
- ◊ Turing → Colossus
- ◊ ENIAC, EDVAC, ...

## 3) Origin of Programming

- ◊ Grace Hopper → Compiler
- Jean Jennings, Frances Bilas,
- Frances Holberton, Kay McNulty,
- Frances Spence Jean Bartik

## 4) Origin of Integrated Circuit (Transistor...)

- ◊ Bardeen, Brattain, Shockley.
- ◊ Robert Noyce & the Traitorous Eight.
- ◊ Gordon Moore & Moore's Law.
- ◊ Silicon Valley.
- ◊ Jack Kilby.

## 5) Origin of DARPA Net.

- ◊ J.C.R. Licklider
- ◊ Doug Engelbart.
- ◊ Paul Baran - Packet Switching
- ◊ Taylor & Robert ARPANET
- ◊ Cerf & Kahn - TCP/IP

### 6) Origin of Augmented Intelligence.

- ◊ Alan Kay - Alto SmallTalk.
- ◊ Jobs & Gates - Windows/Macintosh
- ◊ Berners-Lee, Andreessen
  - WWW, Mosaic
- ◊ Page, Bryn - Google

### 7) Origin of Online Community

- ◊ Brand, Brilliant - The Well
- ◊ Steve Case - AOL
- ◊ Justin Hall - Web log - Blog
- ◊ Ward Cunningham - Wiki Wiki
- ◊ Jimmy Wells - Wikipedia

### WHAT NEXT?

- ◊ Deception
- ◊ Privacy
- ◊ Economy