Computer Science Department Highlights

2019–2022
UIC’s PoliThinkers (2 ECE, 3 CS, 1 BioE, PoliMi &To) claim victory and $10K at BuiltWorlds Hackathon Chicago (Dec 2018)

System to warn workers of dangerous situations and remind them about safety procedures while utilizing certain kinds of machinery.
D. Fossati:  
MS UIC 2003, 
Laurea Poli Mi 2004, 
PhD UIC 2009, 
Teaches at Emory University 
(Atlanta Georgia)
CS: Tremendous Undergraduate Enrollment — And still growing

• Fall 2021: **1708 CS, 32 DS**
• **5.3 x growth since 2011; 2.1 x since 2016**

Three Undergraduate Degrees, plus one more coming Fall 2022

• BS Computer Science (CS)
• BS Data Science (DS) (new Fall 21!)
• Partner in LAS-housed CS + Linguistics (new Fall 21!)
• BS in CS + Design, coming Fall 2022
Growth continues: Grad

<table>
<thead>
<tr>
<th>Fall 2021</th>
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<th>Fall 2020</th>
<th></th>
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<th>△ MS</th>
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• PhD program roughly stable, COVID-19 special factors last year and this
• MS program +46%; COVID-19 special factors last year and this
New building June 2023!
UIC CS Very Highly Ranked Nationally

CSRanking.org’s ranking of UIC CS among all US PhD granting departments:

- Overall: 38
- Across all AI & Machine learning related subfields: 20
  - Ahead of U Chicago, Northwestern, most of Big Ten
- The Web & Information Retrieval subfield: 7

- CSRanking.org is an open-source ranking developed by computer scientists for computer science, and is ranking given most weight by both PhD and faculty applicants nationwide
Bing Liu’s has won TWO KDD Test of Time awards:
2014, for 1998 paper on rule mining
2015, for 2004 paper on fake online reviews
BiAffect app: Can typos give insight into your mental health?

Prof Pete Nelson (COE Dean, CS Professor)
Electronic Visualization Lab NASA-funded ENDURANCE project analyzes information captured by an autonomous underwater vehicle (AUV) in the extreme environment of West Lake Bonney, a perennially ice-covered Antarctic dry valley lake.
Curve25519

Encryption system that allows users to securely create a shared key

Daniel J. BERNSTEIN
Jason Polakis: Breaking and Fixing the Web

Pieces to the puzzle: web browsers, web applications, mobile applications and operating systems

- Analyzing systems, mechanisms and protocols:
  - Identifying design flaws or deployment issues
  - Demonstrating novel attacks against popular services/systems (i.e., incentivizing major companies to better protect users)
  - Developing privacy-preserving mechanisms & better security mechanisms
  - Creating automated frameworks for large-scale black-box security auditing
Bob Sloan: Security and Privacy Policy

Fundamental questions:
- What surveillance schemes and limitations are technically feasible?
- How do we make good tradeoffs between privacy versus free good stuff (Gmail? FB?) and crime and terrorism fighting?
- How do economics, and especially laws affect the above?