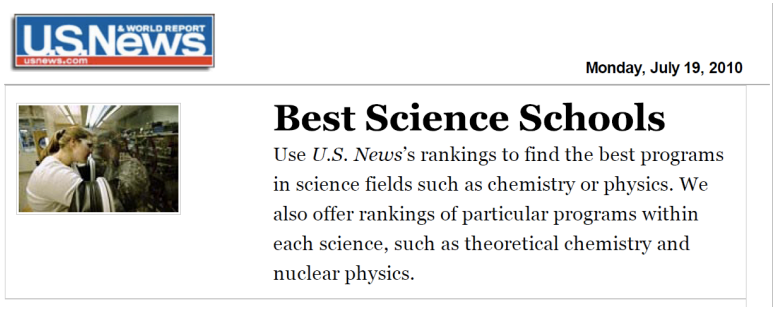
Understanding and Using Graduate Program Rankings in Computer Science

Panel Chair: Jim Kurose, U. Massachusetts
Panelists: Charlotte Kuh, National Research Council
Valerie Taylor, Texas A&M
Jeffrey Vitter, U. Kansas

Rankings: of interest to many



others….

- students (and potential students), faculty (and potential faculty), advisors, administrators, policy makers, others…
- love them or hate them: we need to understand them

Goals of this session

- survey the rankings
- understanding ranking methodologies and consequently what those rankings reflect
  - metrics, methodologies, role of reputation
  - particular emphasis on NRC assessment
- community Q&A, discussion

A perspective on assessments

"… it was not the intent of the assessment committee to produce the final verdict (as of 2006) on the characteristics and quality of doctoral programs. Rather, we intend to ***present data that are relevant to the assessment of doctoral programs*** and to make them available to others. Users will want to ***bring to these data their own knowledge of programs*** and to compare the assessment that the NRC has produced with that knowledge. ***This should be a dynamic process that leads to further discussion and insights***."

Prominent rankings/assessments:

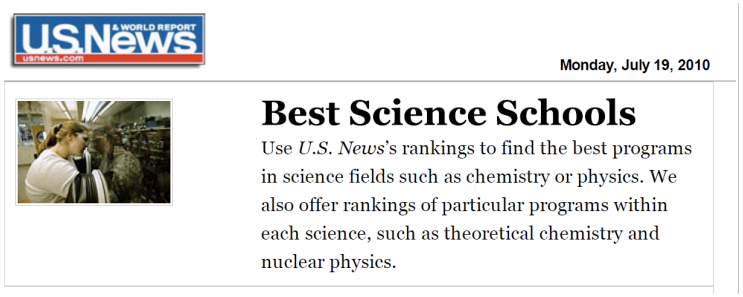
- "Assessment of Research Doctorate Programs", National Research Council
  - presentation by C. Kuh
- *US News and World Report*

Comparative data, surveys

- NSF: *Survey of Research and Development Expenditures*
- Publications: Ren & Taylor, "Automatic and versatile publications ranking for research institutions and scholars," *CACM 50,* 6

US News and World Report

- strictly reputational
- CS program rankings based solely on questionnaires sent to the “department heads and directors of graduate studies at each program”
  - 1 (“marginal”) to 5 (“outstanding”), or “don’t know”
  - overall response rate in CS: 46%
- CS specialty areas (AI, Programming Language, Systems and Theory) “are based solely on nominations by department heads and directors of graduate studies … ranked up to 10 programs in each area. Those with the most votes appeared here.”


U.S.News & WORLD REPORT
usnews.com

Monday, July 19, 2010

Best Science Schools

Use *U.S. News*'s rankings to find the best programs in science fields such as chemistry or physics. We also offer rankings of particular programs within each science, such as theoretical chemistry and nuclear physics.

Resources

- National Research Council, “A Guide to the Methodology of the National Research Council Assessment of Doctorate Programs”
- *USNWR:* “Frequently Asked Questions: The Grad Rankings”
- CRA Best Practices Paper (underway)

CRA Best Practices paper on rankings

- underway (A. Anton, R. Kasturi, J. Kurose, M. Martonosi, H. Schulzrinne, M. Snir, V. Taylor)
- ***audience:*** potential grad students, using rankings in decision making
  - … just one aspect in deciding about grad schools
- ***resource:*** survey, pointers to various rankings of graduate programs and research activity in CS depts
  - discussion of ranking methodologies: metrics, reputation
  - pointers to discussion about rankings
  - identifying, discussing CS-specific issues

Session panelists:

Charlotte Kuh

- Deputy Executive Director, Policy and Global Affairs Division, National Research Council (NRC)
- Study director for NRC's Assessment of Research Doctorate Programs

Valerie Taylor

- Royce E. Wisenbaker Professor and Head, Dept. Computer Science and Engineering, Texas A&M
- CRA Board member

Jeffrey Vitter

- Provost, Exec. Vice Chancellor, U. Kansas
- CRA Board (2000-2009)
- Co-chair CRA Government Affairs Committee

Q&A, Discussion

- Questions about specific rankings/assessments
- How do students, faculty use rankings?
- What can we do to enable fully-informed decisions?
  - students, faculty, administrators, others?
- NRC rankings use Thomson/Reuters plus material from resumes, for publication information
  - can/should the CS community assist?
  - alternate sources: e.g., Google Scholar, Academic Analytics?