

Review Process Considered Harmful

Mary Fernández
AT&T Labs Research



Why am I here?

- Author, researcher, research “manager”
 - “Experimentalist”: I build & measure artifacts
- 25+ program committees
 - Mostly DB, some PL & SE
- TODS Associate Editor 2003-06
- SIGMOD Secretary/Treasurer 2005-09
 - Conference publication policies & standards
 - Confer & coordinate with sister conferences & journals

Review Process Considered Harmful to Authors' Integrity

"the quality or state of being complete or undivided"

"Publication in the prestige conferences is inferior to the prestige journals only in having significant page limitations and little time to polish the paper. In those dimensions that count most, conferences are superior." CRA Best Practices Memo, 1999

- Everything that is significant doesn't fit in 12 pages!
 - What to include, what to omit?
- Authors forced to make sacrifices
 - Completeness: Shorten the *pseudo-code*
 - Clarity: Merge plots & shrink font size
 - (Self) Honesty: "I'll put it in the tech report..."

Review Process Considered Harmful to Reviewer's Sanity

- Suffer through authors' sacrifices
 - Can't completely understand the algorithm
 - Can't interpret the conflated plots
 - Can't entirely believe the results
- Leads to exhaustion & cynicism
 - Low investment in paper's outcome
- Thorough review is optimistic leap of faith
 - Little or no opportunity to follow through & help authors improve their work in meaningful way
- Journal review process most authentic & rewarding

...But journal papers are not being written

Review Process Considered Harmful to Scientific Scholarship

"Falsifiability is the demarcation between science and non-science" – Karl Popper

- Our scientific brethren depend on us more each passing day
 - In drug discovery, physical wet labs being replaced by virtual computation labs in high-throughput screening of compounds
- *“. . . verifying the science part of any model is relatively easy compared with producing a reliable computer simulation of that science.”*
–Prof. Les Hatton, Geophysics & Forensic Software Engineering, Kingston University
- Why should they trust us if we can't trust ourselves?

Suggestions

- Link conference to *efficient* journal
 - Requires & permits authors to be thorough
 - Requires & permits reviewers to focus & invest in outcome
 - Opportunity to improve scholarship
 - *E.g.*, VLDB e-Journal
- Education campaign to teach experimental method in CS
 - Tamer will elaborate next
 - Use new CACM as delivery platform

Thanks to Phil Bernstein, Phokion Kolaitis, Guido Moerkotte, Stephen Spiegel, Michela Taufer, ..., Edsger Dijkstra for their ideas & slides