

# Research Evaluation and Publication Culture in CS

ECSS 2016 Panel

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Research evaluation in CS – the good way:

- Evaluating individuals:
  - Evaluate just a few times (hiring, tenure, promotion) and deeply.
  - By a group of experts.
  - Reading the papers, assessing significance and impact, . . .
  - Taking into account, e.g., significant artifacts, tech. transfer, . . .
- Evaluating departments, institutes
  - By a group of experts.
  - In person: presentations, interviews, lab visits, artifact demos, . . .
  - Talking to "clients": students, graduates, industry.

Bibliometry not really appropriate (at least not by itself) here!

## However, bibliometry inevitably creeps in:

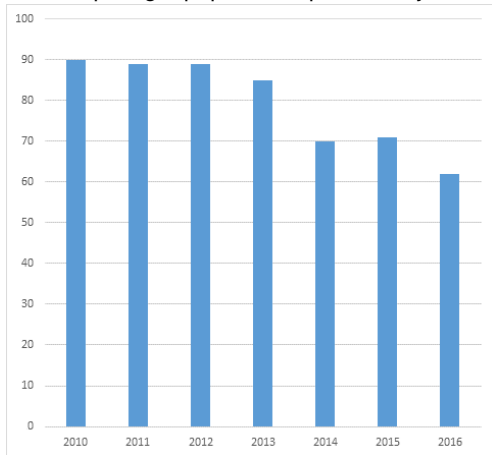
- People also want to evaluate and rank:
  - Many researchers (tens of thousands).
  - All departments in a country.
  - All universities in the world.
- In those cases:
  - The good alternative (deep evaluation) is costly and thus [unscalable](#).
  - Standard (JCR) bibliometry becomes the norm.
  - University presidents, politicians, etc. rely on it more and more.
  - And assign funds, awards, etc. based on it.

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  - Standard (JCR) bibliometry becomes the norm.
  - University presidents, politicians, etc. rely on it more and more.
  - And assign funds, awards, etc. based on it.
- This is a **serious** problem for CS:
  - Only *Thompson ISI indexed journals* really count in practice.
  - Our (conference) papers and citations are **invisible** to this system.
  - I.e., this kind of bibliometry is fundamentally **flawed** for CS.
  - No alternative bibliometric mechanism that *other sciences* will accept.

## Evolution of Gent U. in Shanghai (less is better)

After requiring 2 papers in top indexed journals for PhD:



(Thanks to: K. DeBoeschere)

## The value of our conference papers beyond CS

- The value of conference papers is often OK at the CS dept level:
  - E.g., pushing a tenure case up with few or no journal papers:  
often OK *with explanations* (and some *contempt* from other departments).  
(but worrying trend in opposite direction, e.g.: many universities in the EU)
- But problems start when something is at stake that crosses disciplines:
  - A university award / a distinguished professor position / a national prize . . .

Then:

- The low number of journal papers of the CS candidates quickly becomes an issue.
- Colleagues from other disciplines quickly turn less understanding here with our "publication culture" –seen as just an excuse vs. someone with 100 "real" papers.

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- The low number of journal papers of the CS candidates quickly becomes an issue.
- Colleagues from other disciplines quickly turn less understanding here with our "publication culture" –seen as just an excuse vs. someone with 100 "real" papers.
- This is not a problem that is "just regional" or "solved":
  - Even where "solved" it often gets "unsolved" over and over again –will not go away.
  - In the cases where bibliometry is used we offer no viable alternative.
  - **We cannot be there to fight every time, in every place.**

## We need to publish in journals our conference papers

- We need to switch ASAP to publishing **all** CS papers in **indexed** journals.
- And this has to be done while preserving the conference model:
  - Our culture will simply not change overnight.
  - And it is not a good idea either: the CS model does work for us!
  - Our communities will not give up their excellent conferences with a long tradition.

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  - Our communities will not give up their excellent conferences with a long tradition.
- A promising current trend:

Publish the papers of the conference directly in an (indexed) CS journal, acting as conference proceedings.

- The papers in our better conferences are equivalent to journal publications of other sciences in length, speed of refereeing/publication, number of reviews. . .
- Not talking about our 50-page CS-style journal papers, which close a topic –different purpose: monographs.

## Some models:

### Keeping Conference deadline/PC/etc.

- Yearly **call for papers** issued ahead of the conference (same lead time).
- Joint for submission to journal **special issue** and presentation at the conference.
- Keeps submission deadline, dates for notification, etc.
- PC chair is editor of special issue.
- PC meeting held as usual, but two rounds of refereeing.
- The journal special issue (the proceedings) is ready by conference start.
- Short/poster papers not published in journal.

Used successfully by, e.g., ICLP w/papers published in TPLP (Cambridge U. Press).

### In this line, **new**: Proceedings of the ACM (c.f., Michael Hicks)

- Common journal for proceedings of ACM flagship conferences.

## Some alternatives:

Very good too: PVLDB, ACM TACO – similar, but:

- Continuous submission to the journal all year round.
- Accepted papers of previous year invited to present at conference.

Definitely interesting, but maybe too radical a change for *widespread* adoption?:  
no meeting comparing *all* papers, no single deadline, no PC?, ...

Special issue after conference / recommending papers to journal.

This is really the current model, which is obviously not working –why?:

- Normally new editor/reviewers – double work, uncertain results.
- Turning 15-page paper into a traditional CS (i.e., /long) journal publication in a short time is not realistic.
- You are either creating a *double publication* or forcing people to produce a *different* paper in a rush –mixes issues!

Thus, only a small percentage of papers go through this process.

A longer note on this position statement can be found here:

<http://dagstuhl.de/mat/Files/12/12452/12452.HermenegildoManuel.Paper.pdf>