

Rethinking the role of Informatics conferences

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Goal of the session

me

- Setting the stage: kick-off discussion
- Identifying basic questions the community needs to address
- How to address them?
 - prioritize
 - plan and act
 - who takes responsibility?

US²

Publication

- From Latin *publicare*—*make public*
- An essential aspect of research, which aims at developing new "knowledge"
 - aspiration to "knowledge" distinctive trait of humans
- Knowledge is by its nature *global*
 - it is not a personal asset—it belongs to the public sphere

fatti non foste a viver come bruti,
ma per seguir virtute e canoscenza

you were not born to live like brutes,
but to follow virtue and knowledge

Dante canto XXVI Inferno

Corollaries

- Trustworthiness required to qualify as knowledge
 - ▶ validation prior to publication
- Knowledge made public facilitates development of new knowledge
 - ▶ No discrimination/barrier to access knowledge
 - ▶ *tension towards open access*
- Knowledge is broader than papers
 - ▶ artifacts (prototypes, datasets, ...) play a key role in Informatics

More on "publication"

- Main form of making knowledge public is through peer reviewed scientific papers
- Traditional form: journal papers
- In Informatics, conferences have same status as journals
- Artifacts are still not as established as a form of publication
 - mainly viewed as "internal proofs of concept", instrumental to papers
 - seldom peer reviewed

WRONG!!!

Artifacts

- We are in a very immature stage
- The need to make artifacts first-class citizens is clear, especially for Informatics
- my assessment back in 2009 –TOSEM papers 2001-2006
 - 60% refer to a tool, only 20% *installable*
- Only a few very preliminary steps

Conference vs journal papers

- Conferences considered better for a young and dynamic field like Informatics
 - predictable delay between submission and publication
 - favor community building and collaborations
- Severe sources of misunderstanding wrt most other disciplines, which are still journal-dominated

Never-ending confrontation

- We live in a world where quality criteria **within** our discipline conflict with quality criteria **outside** our discipline
- This tension becomes especially serious when different areas compete
- In some cases we were successful at explaining that top conferences are at least as "prestigious" as top journals, but this not accepted everywhere

Navigating the stormy Sea of Publications

- A very stormy sea, also populated by predators
- Less stormy for journals
- How can one select worthy venues?
- *Are rankings helpful/valuable?*
- *Are the ones available equally helpful/valuable for journals and conferences?*

The varied world of conferences

- Conferences may differ in scope
 - broad vs highly specialized
 - consolidated vs in-progress work — *workshops*
- High variability (see Zeller's point on his experience with 3 top conferences, ICSE, PLDI, CCS)
- What makes a conference a valid scientific venue? Can we distill assessment criteria?

Intrinsic pitfalls of conferences

- Peer review mostly used for selection, not for improvement
- High bar for acceptance, which leads to prestige, exacerbates the problem
- "Conference is a journal that meets in a hotel" (M. Vardi, CACM Jan. 2020) —> *sustainability*
- for each paper, 1 or more individuals travel, possibly overseas, with estimated **total** contributions of 1.8 tons of CO₂

Turbulence

- The landscape journal/conferences is generating heated debates and will lead to changes
- Despite pitfalls, conferences play a crucial role as community building and networking
- Can we address sustainability of conferences by moving them on-line?
 - Covid forced us to do it, but did it work???
 - does technology support the needed interactions?
 - how does it work with different time zones?

Turbulence: mixed modes

- Different attempts to merge the best of the two words
- Conferences relaxing the "pure verdict model"
 - rebuttal phase
 - revisions
- Journal-conference collaboration:
 - Journal-first (e.g., ICSE)
 - selected papers accepted by journal also presented in conference
 - reduce acceptance/publication delay + add "social" value to journal papers
- Journal becomes "conference proceedings"
 - add "journal status" to conference papers

Managing the publication process

- Although "making public" is part of the researcher's mission, the process is complex and its management requires/d specific skills
- Publishers have played a fundamental role
- Role less relevant in digital world?
- The tension between researchers and publishers

Publication in digital world

- Potentially no barriers to access to knowledge
- Open access
- Time to act? Time to take back full responsibility — rights and duties?
- Threats? Difficulties?
- Challenges? Opportunities?

Who are/should be the main stakeholders?

- Research production and assessment is mainly self-managed by **us** researchers
 - **we** define the objectives and set directions
 - **we** define the methods
 - **we** do the research
 - **we** evaluate own research and act as peer reviewers
- The rules of the game, however, are increasingly defined and imposed by others
- Among those, professional publishers and societies, evaluation agencies, ...
- **What role do/should we play? What role should European academic research play?**

Pre-workshop questionnaire

- Conference and journal publications are equally legitimate, valid, and effective ways of disseminating research results? **NO 2/24** (in comment, + conf)
- When it comes to evaluating researchers (for hiring, promotion, funding, ...), are conference and journal publications treated equally? **NO 16/24**
- Do we *need* precisely formulated criteria to evaluate the level of credibility and quality of journals? **NO 6/24**
- Do we *have* precisely formulated criteria to evaluate the level of credibility and quality of journals? **NO 16/24**
 - If so, do these criteria lead to a reliable ranking? **YES 1/8**
- Do we *need* precisely formulated criteria to evaluate the level of credibility and quality of conferences? **NO 3/24** (it will hinder the appearance of NEW conferences, can only be subjective)
- Do we *have* precisely formulated criteria to evaluate the level of credibility and quality of conferences? **NO 14/24**
 - If so, do these criteria lead to a reliable ranking? **YES 3/10**
- Do you think that, in the future, conferences will continue to play a prominent role in research dissemination, au pair with journals? **NO 1/24** (carbon footprint)
- Artifacts, such as software tools, software prototypes and data sets, are also ways of disseminating research results. Do you think that they are adequately considered as valid and effective dissemination ways? **NO 11/24**

What can we do?

- Inside the community
- Outside—society at large