Rethinking the role of Informatics conferences

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Goal of the session

- 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?
Publication

• From Latin *publicare*—*make public*

• An essential aspect of research, which aims at developing knew "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
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 online?
  • 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 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