

Publication strategies and practices

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ACM TOSEM EIC

talk organisation

questions — answers

initial questions

- Is it worth my time to **publish in workshops**?
- How to **balance conference and journal** submissions?
- All my ICSE/FSE/ASE papers got rejected.
Should I send the work to **lesser venues** so I don't have a big hole in my CV?
- Should I target the **top 2 conferences** or is building a reputation in less **high-profile but tight-knit** communities acceptable?
- How much wood does a woodchuck chuck if a woodchuck would get **tenure**?
(where wood is papers, and chucking is publishing, and the woodchuck is a junior faculty)
-
-
-
-

topics

- publication venues
 - conferences
 - workshops
 - journals
- publication strategy
 - general venues (ICSE/FSE)
 - high-profile tight-knit events (ISSTA, ICST)
- tenure strategy
 - top venues ~ only (few) high-quality
 - lesser venues ~ many (not-all-top) publications

main goals of publishing your results?

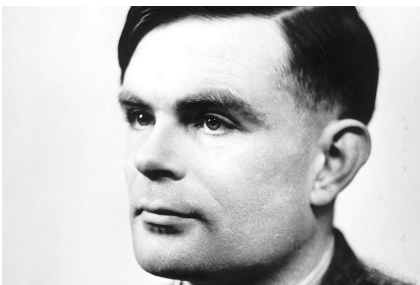
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main goals of publishing

- visibility
- curriculum
- feedback

visibility and impact

a simple trivia pursuit

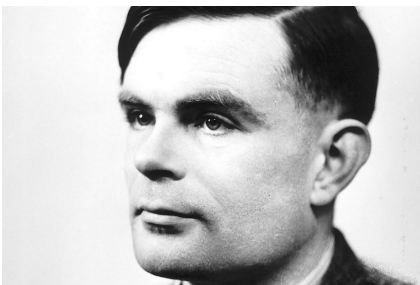


Who?



Who?

Alan Turing

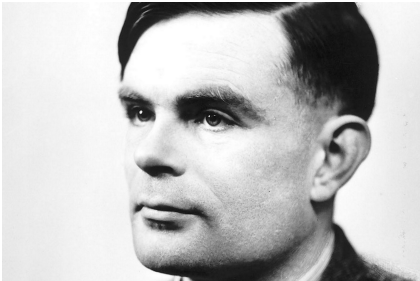


Who?

Alan Turing



Who?



Who?

Alan Turing



Who?

Konrad Zuse



Who?

Alan Turing



Who?

Konrad Zuse

Their role in CS?

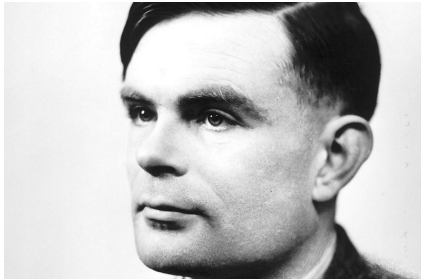
invention

contribution

Their role in CS?

invention

contribution



Who?

Alan Turing



No visibility No impact No relevance



Who?

Konrad Zuse



impact of visibility on ...?

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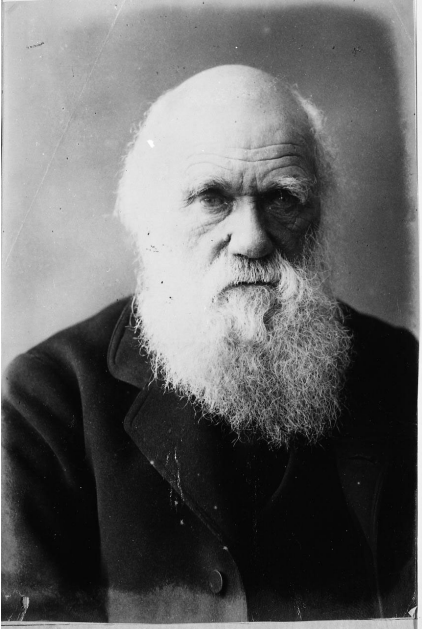
impact of *visibility* on

- publication venues
 - **conferences**
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 - **quantity** lesser venues
 - **quality** **top venues**

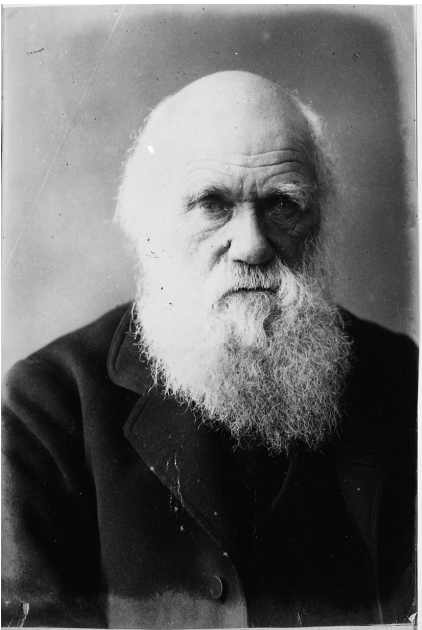
privilege highly visible
events
top conferences

curriculum and timeline

another trivia pursuit

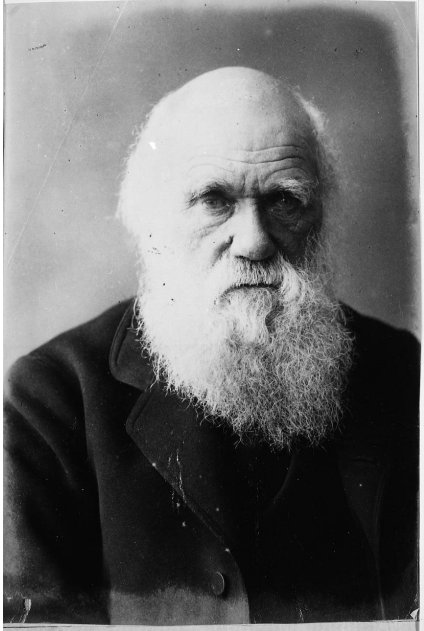


Who?



Who?

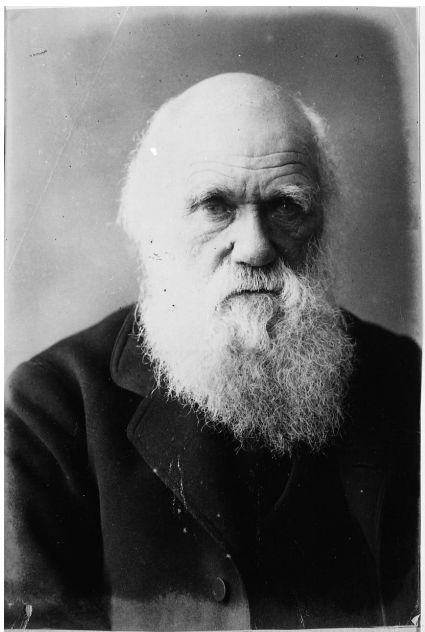
Charles Darwin



Who?

Charles Darwin

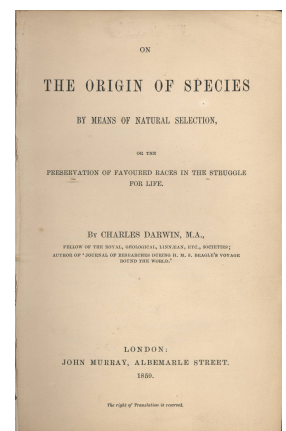
What?
(top publication)

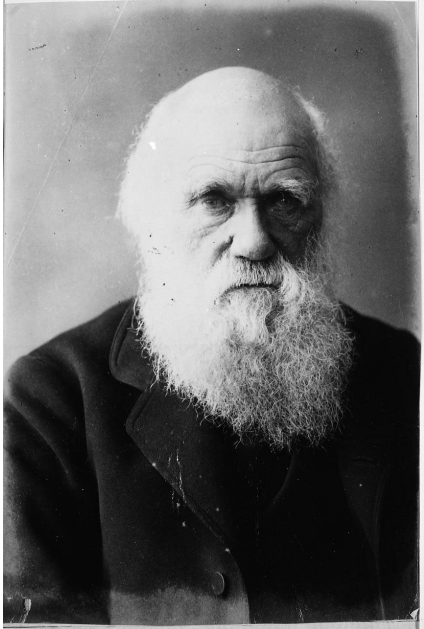


Who?

Charles Darwin

What?
(top publication)

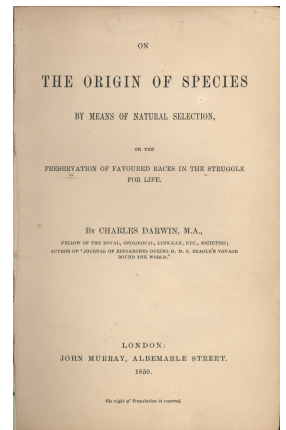




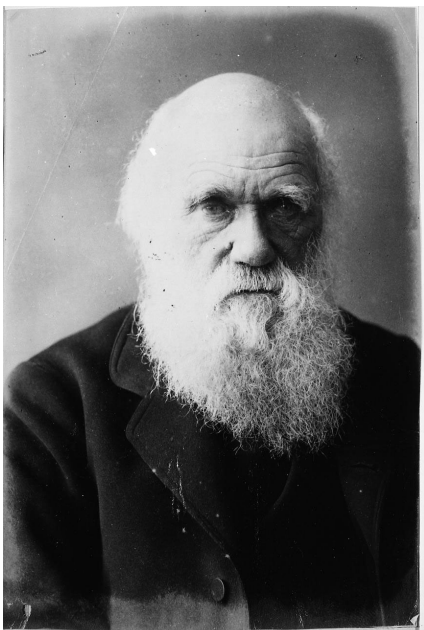
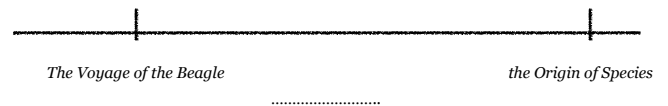
Who?

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What?
(top publication)



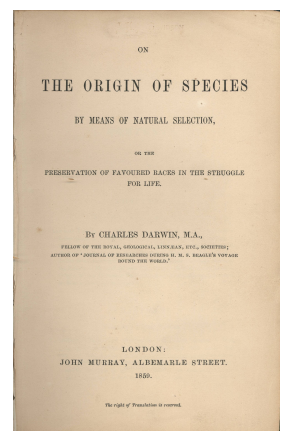
When?
(timeline)



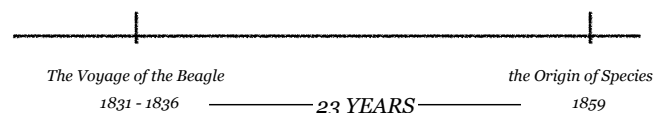
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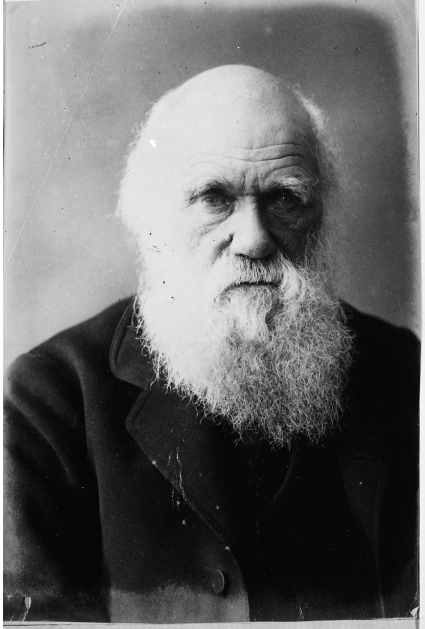
What?
(top publication)



When?
(timeline)



one top publication sitting for over 5 year in the drawer



Darwin's time

son of a wealthy society doctor and financier

no need to work for living

(as most scientists before the 1900 century)

curriculum and timeline

Darwin's time is gone

few of us if any can afford science as a hobby

we need a **strong curriculum** to sustain our research
(positions, grants, collaborations)

impact of **curriculum** and timeline on ...?

- **VISIBILITY**
 - publication venues
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 - publication strategy
 - **top general venues (ICSE/FSE)**
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 - tenure strategy
 - **quantity** lesser venues
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 - top vs lesser venues ~ only (few) high-quality vs many (not-all-top) publications

evolution (of computer science)

research grants and tenure
the woodchuck dilemma

- the past (amateur)
- the present (professional)
- the (near) future (DORA)

evolution (of computer science)

research grants and tenure
the woodchuck dilemma

- the past (amateur)
- the present (professional)
- the (near) future (DORA The San Francisco Declaration on Research Assessment)

past



past (amateur era)

- ... late eighties
- few good papers
- relatively small amount of publications
- some holes in the CV could be tolerated
- good academia—industry osmosis

Edgar W Dijkstra
1972 Turing Award

1959	2 papers
1960	
1961	1 paper
1962	1 paper
1963	
1964	1 paper
...	...
1959-1972	10 journals 1 conference
...	...
TOTAL	36 journals 31 conferences

past and present



past (amateur era)

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present (professional era)

- late eighties ... now
- many good papers
- no holes
- bibliometrics
- hard to move between academia and industry

Edmund M Clark
2007 Turing Award

1979-2007	68 journals 145 conference
TOTAL	80 journals 207 conferences

the (near future)

DORA: The San Francisco Declaration on Research Assessment (2012)

The Declaration on Research Assessment (DORA) recognizes
the need to improve the ways in which the outputs of scholarly research are evaluated

Reducing bias in the evaluation of researchers

DO NOT focus on Bibliometrics
BUT on impact

DORA Roadmap

A two-year strategic plan for advancing global research assessment reform at the institutional, national, and funder level

June 27, 2018

Signing the 2013 San Francisco Declaration on Research Assessment (DORA) is an important way for individuals and organizations to publicly *acknowledge their commitment to improve research by strengthening research assessment*. But *it is only a first step*. The next and more challenging steps require *changes in academic culture to ensure that hiring, promotion, and funding decisions focus on the qualities of research that are most desirable – insight, impact, reliability and re-usability – rather than on questionable proxies*. To advance this agenda, the DORA roadmap for the next two years will focus on *three strategic goals* to enable signatories to take action:

1. We will increase awareness of the need to *develop credible alternatives to the inappropriate uses of metrics in research assessment*.
2. We will research and promote tools and processes that *facilitate best practice in research assessment*.
3. We will *extend the reach and impact* of DORA's work across scholarly disciplines and in new areas of the world.

example

ERC

- starting — consolidator
 - early achievements track-record
- advanced
 - track-record of significant research achievements in the last 10 years
 - ten representative publications

DORA reach

DORA principles increasingly popular in

- top institution
- highly competitive grant options
- an increasing number of countries

1,356 organisations

- UCL (University College London)
- University of Bern
- University of Zurich
- Stockholm University
- University of Oxford
- VSNU - Association of Universities in the Netherlands
- swissuniversities
- Swiss National Science Foundation
- Science Foundation Ireland
- Israel Science Foundation (ISF)
- Canada Foundation for Innovation
-

14,250 individuals

impact of curriculum and timeline on

• VISIBILITY

• publication venues

- **conferences**
- workshops
- journals

• publication strategy

- **top general venues (ICSE/FSE)**
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- **quantity** lesser venues
- **quality** top venues

privilege highly visible
events
top conferences

• publication venues

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- **top** vs **lesser** venues ~ **only (few) high-quality**
vs **many (not-all-top)** publications

privilege highly visible
venues

SE venues per top cited papers

- | | |
|------------------|---------------|
| 1. TSE | 8 journals |
| 2. IEEE software | 2 conferences |
| 3. TOSEM | 0 workshops |
| 4. STTT | |
| 5. SPE | |
| 6. ICSE | |
| 7. IST | |
| 8. JSS | |
| 9. STVR | |
| 10. RE | |

journals vs conferences 8:2

the least publication unit dilemma

parcelling the results into tiny 'least-publishable' units

maximises publication number
reduced long term visibility

small (short term) self satisfaction

small (long term) impact

may help you if you desperately need it for tenure — better avoid it if possible

the continuity dilemma

acrobatic jumping across winning wagons

maximises publication number

reduced long term visibility

small (short term) self satisfaction

large (long term) impact

may help you if you desperately need it for tenure — better avoid it if possible

feedback and originality

yet another trivia pursuit



Who?



Who?

Edmund Clarke

Joseph Sifakis

Allen Emerson





Who?

Edmund Clarke

Joseph Sifakis

Allen Emerson



What?

Model Checking



Who?

Edmund Clarke

Joseph Sifakis

Allen Emerson



What?

Model Checking



When and Where

- ☐ 1980 ICALP
- ☐ 1981 Logic of Programming
- ☐ 1982 ISP
- ☐ 1986 TOPLAS



Who?

Allen Emerson, E.; Clarke, Edmund M., "Characterizing correctness properties of parallel programs using fixpoints", ***Automata, Languages and Programming 1980***



What?

Edmund M. Clarke, E. Allen Emerson: "Design and Synthesis of Synchronization Skeletons Using Branching-Time Temporal Logic". ***Logic of Programs 1981***



When and Where

- 1980 ICALP
- 1981 Logic of Programming
- 1982 ISP
- 1986 TOPLAS

Queille, J. P.; Sifakis, J., "Specification and verification of concurrent systems in CESAR", ***International Symposium on Programming, 1982***

Clarke, E. M.; Emerson, E. A.; Sistla, A. P., "Automatic verification of finite-state concurrent systems using temporal logic specifications", ***ACM Transactions on Programming Languages and Systems 1986***

impact of feedback and originality on...

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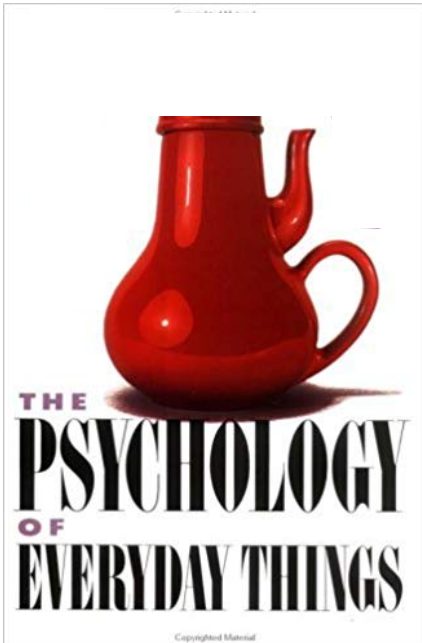
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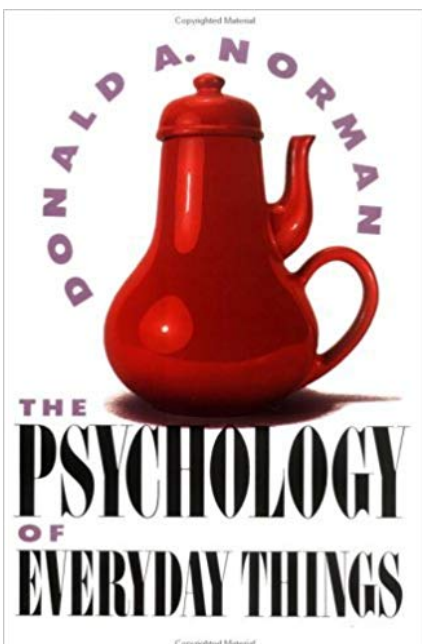
incremental strategy

human factors

never-ending trivia pursuit

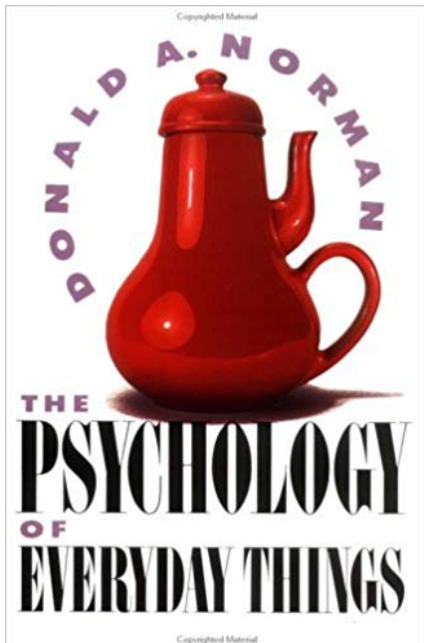


Who?



Who?

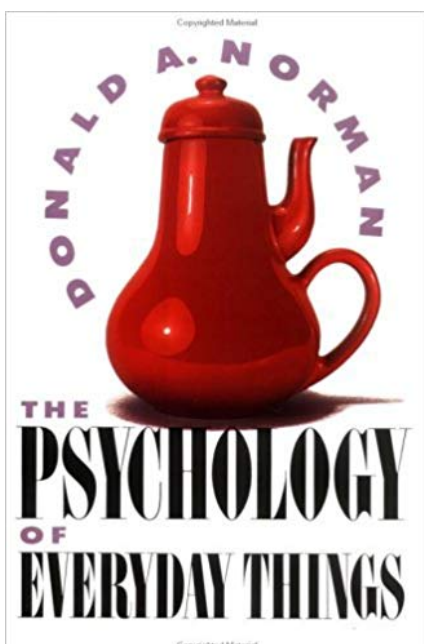
Donald Norman



Who?

Donald Norman

Why?



Who?

Donald Norman

Why?

The psychology of everyday PhD Student

The psychology of everyday faculty member

All my ICSE/FSE/ASE papers got rejected.

Should I send the work to lesser venues so I don't have a big hole in my CV?

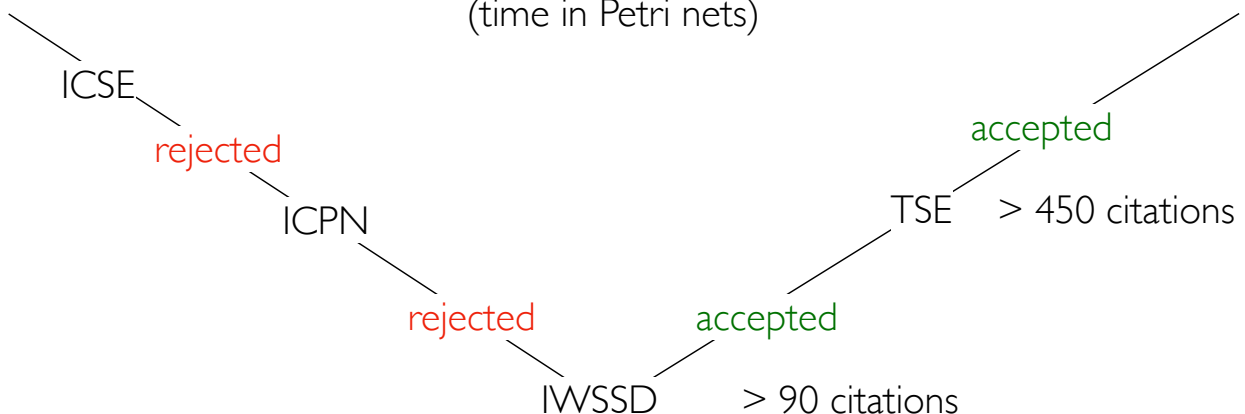
YES

if this makes you (and your student) feeling more comfortable

Life (and program committees) are not perfect

a personal anecdote

my early experience
(PhD work)
(time in Petri nets)



one more anecdote

David HAREL

1987

STATECHARTS: A VISUAL FORMALISM FOR COMPLEX SYSTEMS

Science of Computer Programming 1987

(after being rejected at ICSE)

1998

ICSE Keynote

lessons learned

All my ICSE/FSE/ASE papers got rejected.

Should I send the work to lesser venues so I don't have a big hole in my CV?

When shall I give up resubmitting paper?

Do not give up resubmitting a **good** paper

Do not insist with a **poor** paper

learn from reviews **why did the reviewers not understand my paper?**

accept a lesser venue

If the paper is good there is space for a second life

summing up

Publications venues

- early presentation at focus events for early feedback
- scaling up to high profile events for early visibility
- do not forget archive journals (for long lasting impact)

Publication strategy

- few strong papers on highly visible events
- do not pulverize your results to maximise amount of publications
- do not give up too soon if the paper is good and try to learn from reviews

Human factors

- do not underestimate human factors
 - people (and committee members) are not perfect
 - trust yourself and insist

conferences vs journals

ICSE 2019 Journal-First Papers

ICSE has formed partnerships with prestigious software engineering journals to incorporate journal-first papers into the ICSE program. Through this initiative, authors of journal-first papers accepted in the partnering journals will be invited to present their work at ICSE, thus providing an opportunity for the authors to engage directly with the community and offering the ICSE attendees an additional dimension to the research track program.

The journals that support the journal-first model as partners with ICSE are:

- IEEE Transaction of Software Engineering (IEEE TSE),
- ACM Transactions on Software Engineering and Methodology (ACM TOSEM),
- Empirical Software Engineering (EMSE).

37 journal first

+

16 Journal industry first



New Fast-Impact Track

ACM Transactions on Software Engineering and Methodology

Solutions to complex software engineering problems

Editor-in-Chief

Mauro Pezzè, USI Università della Svizzera italiana, Switzerland
and Università degli studi di Milano-Bicocca, Italy

ACM Transactions on Software Engineering and Methodology (TOSEM) is pleased to announce the forthcoming **Fast-Impact Track** and a new **Board of Distinguished Reviewers**.

The Fast-Impact Track will give journal-first papers the opportunity to be published quickly, by guaranteeing an upper limit to the turn-around time. The Board of Distinguished Reviewers acknowledges the underestimated contribution of many reviewers, whose conscientious work is fundamental to the journal's success.

Read more about the new Editor-in-Chief's plan's for the journal at dl.acm.org/citation.cfm?id=3317953.

For further information and to submit your manuscript, please visit tosem.acm.org, or write to tosem@acm.org.

and to conclude

some “biased” suggestions

ACM TOSEM *fast-impact track*

journal paper

fast (and predictable) response time

conference presentation

ACM TOSEM *Board of Distinguished Reviewer*

early visibility of ongoing work

proper acknowledge of review time