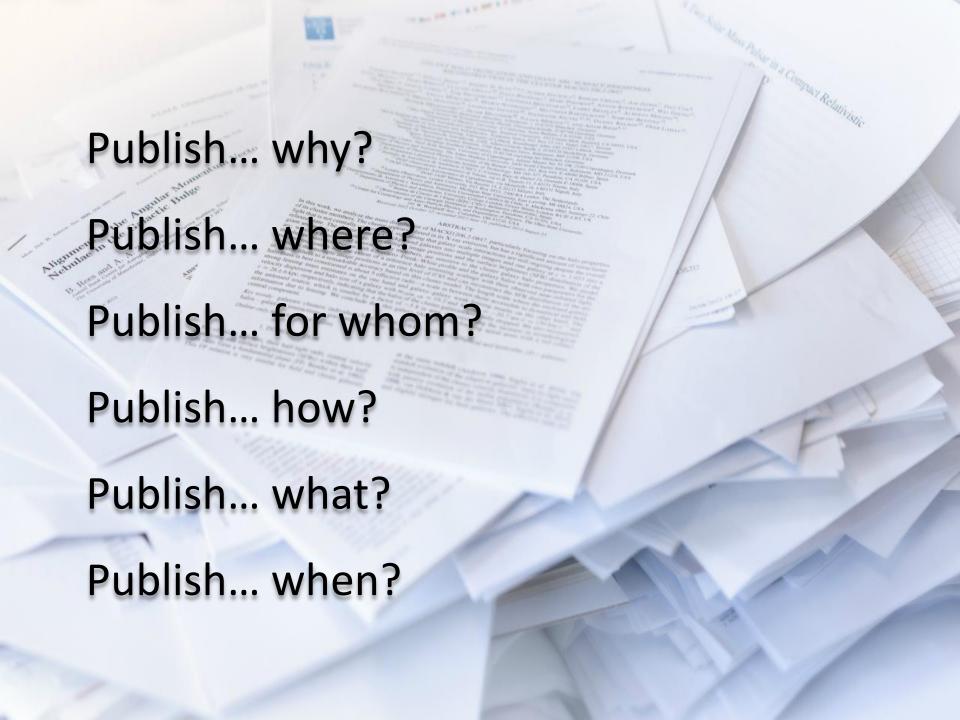
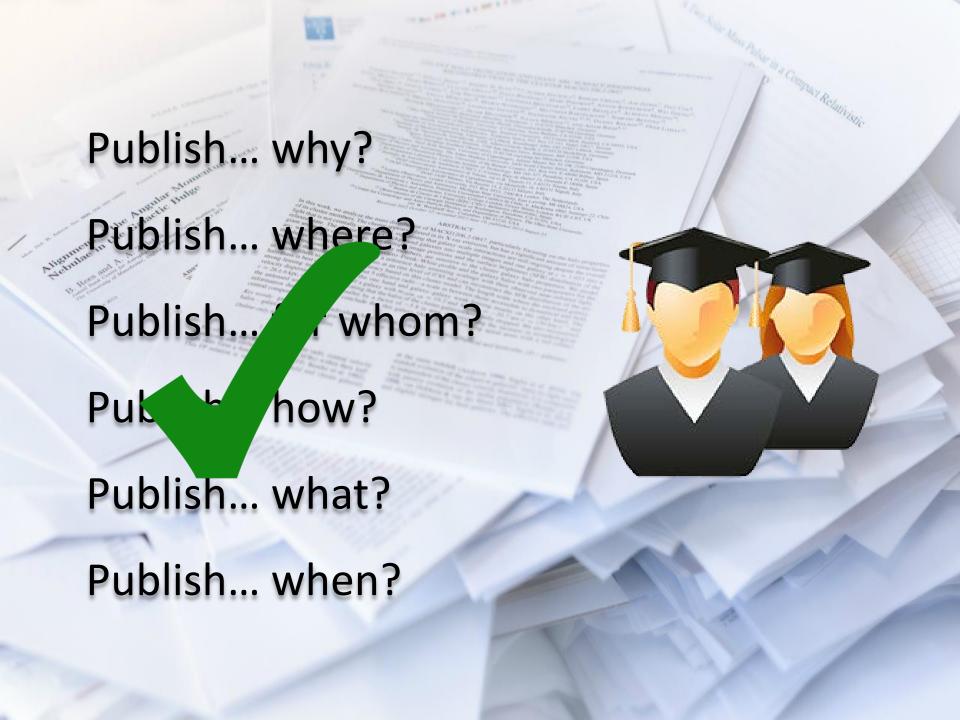
## Publishing your Research

### Sven Apel









# My...



# Possibly...



### Career Stages









2003 PhD Student @ University of Magdeburg

2007 Post-Doc @ University of Passau

2010 Junior Research Group Leader



2013 Full Professor



### My Record

28 papers in top conferences (ICSE, ESEC/FSE, ASE)

13 articles in top journals (TSE, TOSEM, TOPLAS, EMSE)

CACM, ACM Computing Surveys, IEEE Computer, ...

Text book



### The Currency of Research?



#### Beware!



#### Meaning:

- 1. a person who puts on a false appearance of virtue or religion
- 2. a person who acts in contradiction to his or her stated beliefs or feelings

# Quality over Quantity!

#### h-index

- → pressure
- → misbehavior



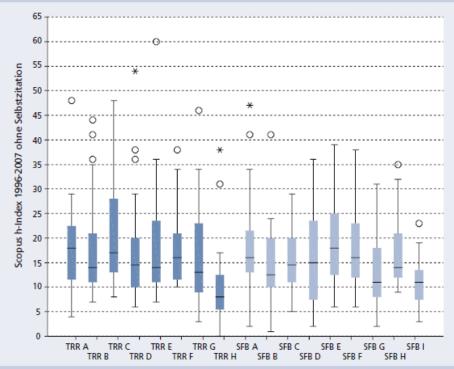
Deutsche Forschungsgemeinschaft

Evaluation des DFG-Förderprogramms SFB/Transregio



#### Abbildung 11:

Vergleich der h-Indices der Teilprojektleiterinnen und Teilprojektleiter von acht SFB/Transregio (TRR) und neun Sonderforschungsbereichen (SFB) aus dem Fachgebiet Medizin (Einrichtungsjahre 2000 bis 2007)



Die Grenzen der markierten Rechtecke entsprechen dem 25 %- bzw. 75 %-Percentil (Interquartilsabstand). Der Medianwert ist als waagerechter Strich im Rechteck zu erkennen. Die Länge der Whisker nach oben und unten beträgt maximal das Eineinhalbfache der Länge des Rechtecks. Alle Werte außerhalb der Whisker werden als Ausreißer (bis maximal dem Dreifachen der Rechtecklänge außerhalb der Box – hier als Kreise markiert) bzw. als Extremwerte (mehr als dem Dreifachen der Rechtecklänge außerhalb der Box – hier als Sterne markiert) bezeichnet.

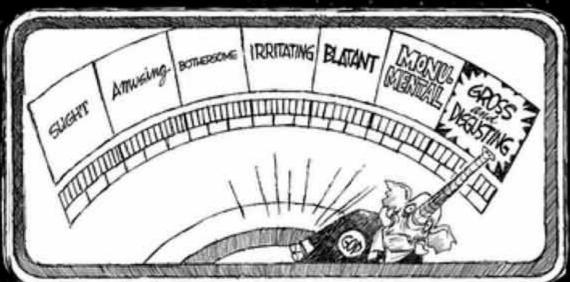
Quelle: DFG-Geschäftsstelle, Elsevier Scopus Datenbank, Auswertung und Darstellung Technopolis

Deutsche Forschungsgemeinschaft

Evaluation des DFG-Förderprogramms SFB/Transregio



### HYPOCRISY METER



### Topics...

Venues

**Bibliometrics** 

Tradeoffs and Strategies

Co-Authors



Top venues: ICSE, ESEC/FSE, ASE

Focus venues: SPLC, GPCE, ICPE, RE, MoDELS, ...

Community meetings: FOSD, VaMoS, ...

Top venues: ICSE, ESEC/FSE, ASE

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Community meetings: FOSD, VaMoS, ...

Top venues: ICSE, ESEC/FSE, ASE

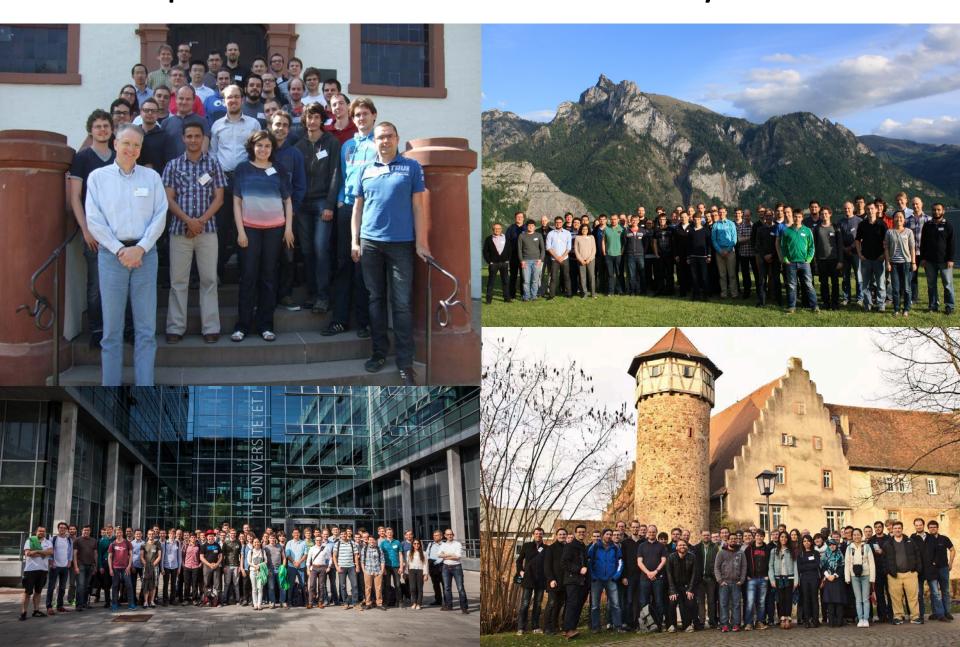
Focus venues: SPLC, GPCE, ICPE, RE, MoDELS, ...

Community meetings: FOSD, VaMoS, ...

Going beyond: IEEE Software, CACM, ...

issues: prestige, outreach, feedback, networking, ...

### Pro tip: Grow a Community



## Bibliometrics

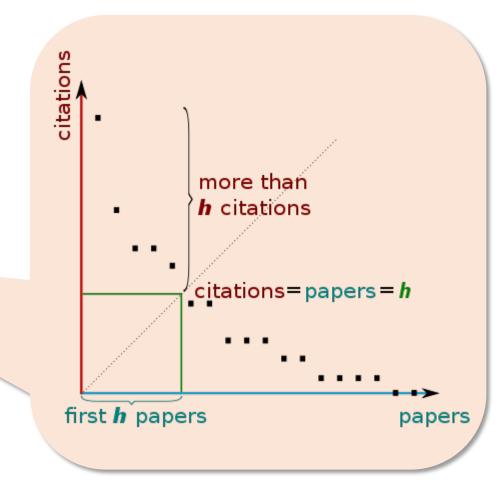


### **Bibliometrics**

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# citations
i10-index
i100-index
h-index
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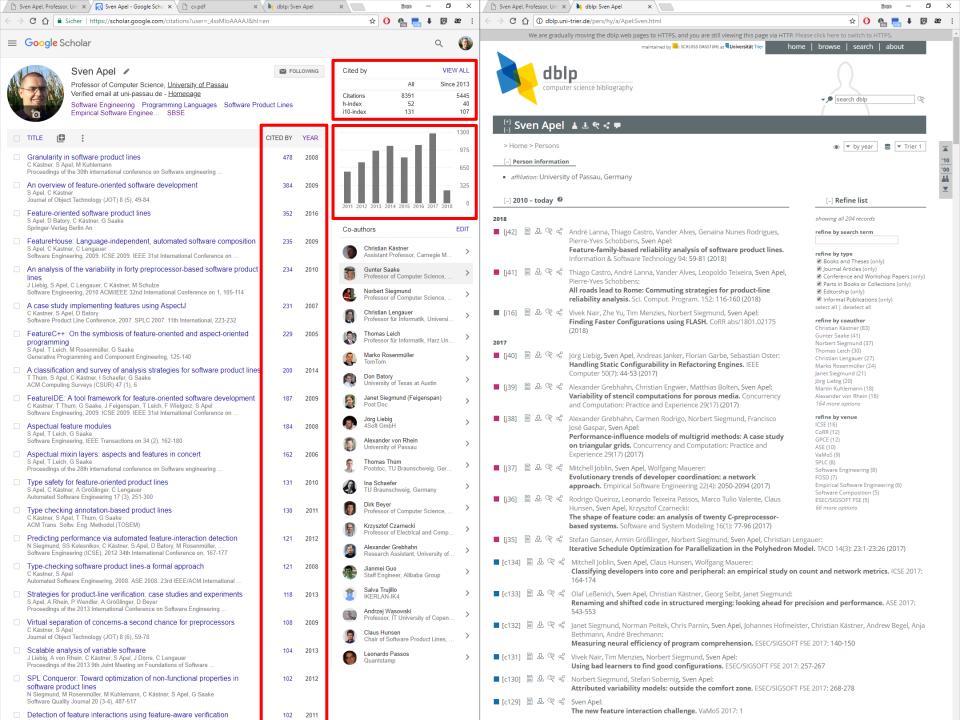
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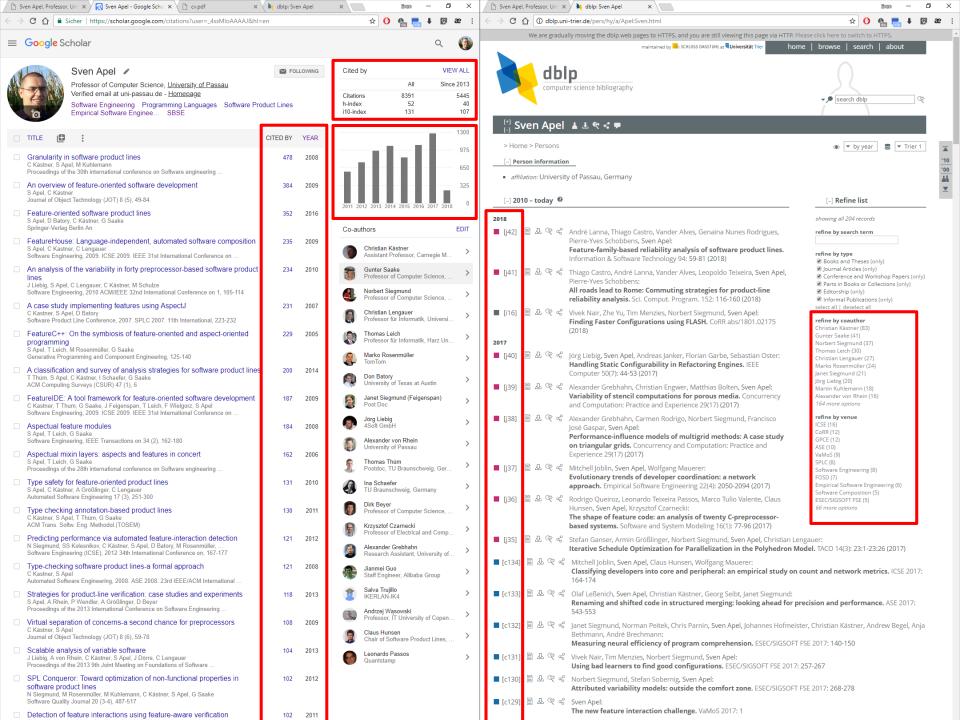
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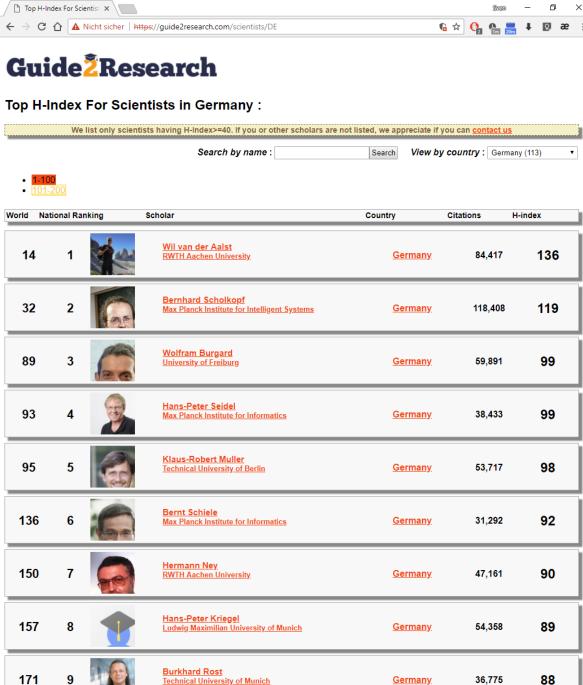


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	FeatureHous S Apel, C Kastn	e: Language-independent, automated software composition	235	2009	Christian	ı Kästner t Professor, Carnegie M.	
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	An overview of feature-oriented software development S Apel, C Kästner	384	2009	325			
	Journal of Object Technology (JOT) 8 (5), 49-84	050		2011 2012 2013 2014 2015 2016 2017 2018			
	Feature-oriented software product lines S Apel, D Batony, C Kasher, G Saake Springer-Verlag Berlin An	352	2016	Co-authors EDIT			
	FeatureHouse: Language-independent, automated software composition S Apel, C Kastner, C Lengauer Software Engineering, 2009. ICSE 2009. IEEE 31st International Conference on	235	2009	Christian Kästner Assistant Professor, Carnegie M			
	An analysis of the variability in forty preprocessor-based software productines	ct 234	2010	Gunter Saake Professor of Computer Science,			
	J Liebig, S Apel, C Lengauer, C Kästner, M Schulze Software Engineering, 2010 ACM/IEEE 32nd International Conference on 1, 105-114	1		Norbert Siegmund			
	A case study implementing features using AspectJ C Kastner, S Apel, D Batory Software Product Line Conference, 2007. SPLC 2007. 11th International, 223-232	231	2007	Professor of Computer Science,  Christian Lengauer Professor für Informatik, Universi			
	FeatureC++: On the symbiosis of feature-oriented and aspect-oriented programming	229	2005	Thomas Leich Professor für Informatik, Harz Un			
	S Apel, T Leich, M Rosenmüller, G Saake Generative Programming and Component Engineering, 125-140	1		Marko Rosenmüller			
	A classification and survey of analysis strategies for software product line TThum, S Apel, C Kästner, I Schaefer, G Saake	es 200	2014	TomTom  Don Batory University of Texas at Austin			
	ACM Computing Surveys (CSUR) 47 (1), 6  FeatureIDE: A tool framework for feature-oriented software development C Kastner, T Thum, G Saake, J Feigenspan, T Leich, F Wielgorz, S Apel	187	2009	Janet Siegmund (Feigenspan) Post Doc			
	Software Engineering, 2009. ICSE 2009. IEEE 31st International Conference on  Aspectual feature modules	184	2008	Jörg Liebig 4Soft GmbH			
	S Apel, T Leich, G Saake Software Engineering, IEEE Transactions on 34 (2), 162-180	1		Alexander von Rhein			
	Aspectual mixin layers: aspects and features in concert S Apel, T Leich, G Saake Proceedings of the 26th international conference on Software engineering	162	2006	University of Passau  Thomas Thum Postdoc, TU Braunschweig, Ger			
	Type safety for feature-oriented product lines S Apel, C Kastner, A Großlinger, C Lengauer	131	2010	Ina Schaefer TU Braunschweig, Germany			
	Automated Software Engineering 17 (3), 251-300  Type checking annotation-based product lines C Kästner, S Apel, T Thüm, G Saake	130	2011	Dirk Beyer Professor of Computer Science,			
	ACM Trans. Softw. Eng. Methodol.(TOSEM)  Predicting performance via automated feature-interaction detection	121	2012	Krzysztof Czarnecki Professor of Electrical and Comp >			
	N Siegmund, SS Kolesnikov, C Kästner, S Apel, D Batory, M Rosenmüller, Software Engineering (ICSE), 2012 34th International Conference on, 167-177			Alexander Grebhahn Research Assistant, University of			
	Type-checking software product lines-a formal approach C Kastner, S Apel Automated Software Engineering, 2008. ASE 2008. 23rd IEEE/ACM International	121	2008	Jianmei Guo > Staff Engineer, Alibaba Group			
	Strategies for product-line verification: case studies and experiments S Apel, A Rhein, P Wendler, A Größlinger, D Beyer Proceedings of the 2013 International Conference on Software Engineering	118	2013	Salva Trujillo IKERLAN-IK4			
	Virtual separation of concerns-a second chance for preprocessors C Kästner, S Apel	108	2009	Andrzej Wąsowski Professor, IT University of Copen			
	Journal of Object Technology (JOT) 8 (6), 59-78  Scalable analysis of variable software	104	2013	Chair of Software Product Lines,  Leonardo Passos			
	J Liebig, A von Rhein, C Kästner, S Apel, J Dörre, C Lengauer Proceedings of the 2013 9th Joint Meeting on Foundations of Software  SPL Conqueror: Toward optimization of non-functional properties in	102	2012	Quantstamp			
	Software Quality Journal 20 (3-4), 487-517	102	£V12				
	Detection of feature interactions using feature-aware verification	102	2011				





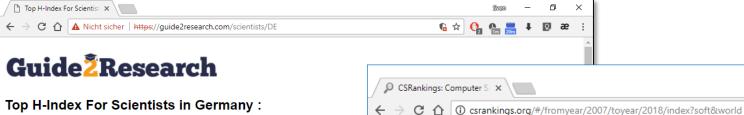


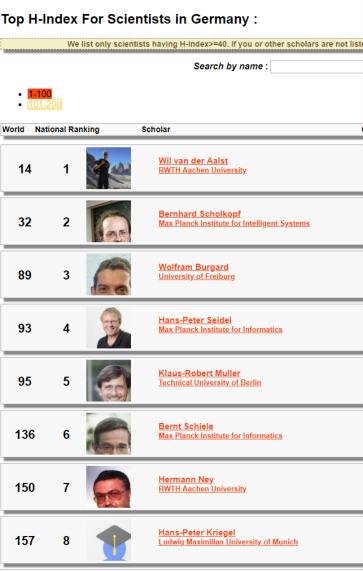


Burkhard Rost Technical University of Munich

<u>Germany</u>

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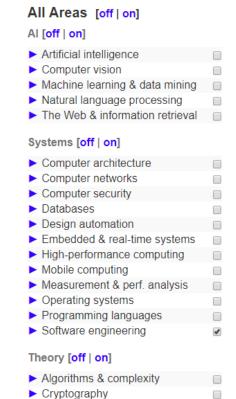
**Burkhard Rost** 

Technical University of Munich

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#### CSRankings: Computer Science Rankings

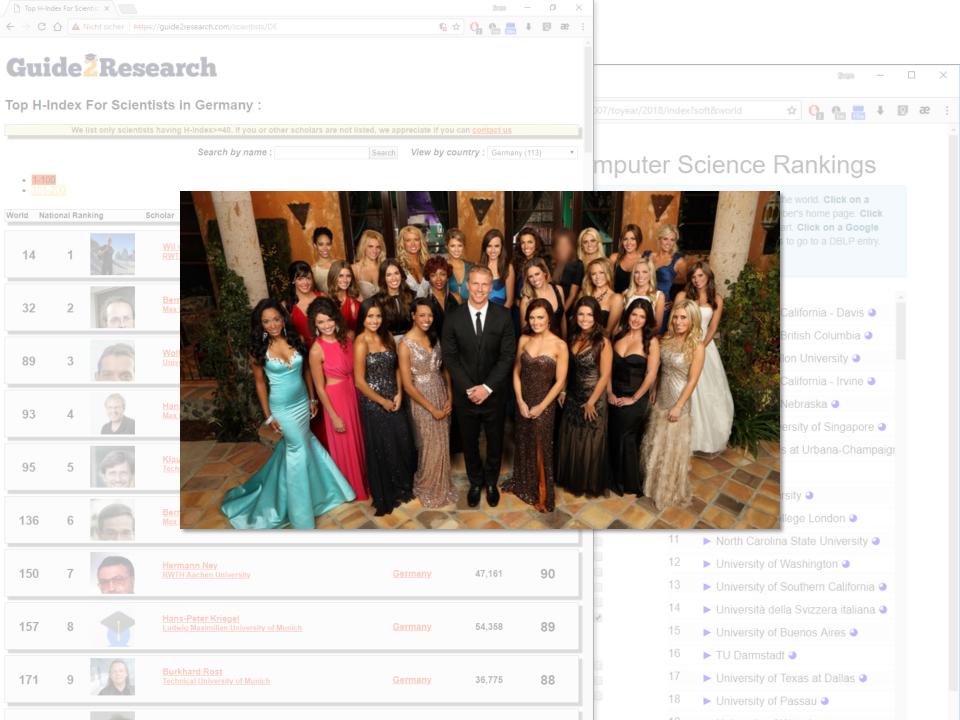
CSRankings is a metrics-based ranking of top computer science institutions around the world. Click on a triangle (►) to expand areas or institutions. Click on a name to go to a faculty member's home page. Click on a pie (the 4 after a name or institution) to see their publication profile as a pie chart. Click on a Google Scholar icon (N) to see publications, and click on the raw number of publications to go to a DBLP entry. ▼ by publications from 2007 ▼ to 2018 ▼



Logic & verification

Rank institutions in the world

Rank	Institution
1	➤ University of California - Davis •
2	► University of British Columbia •
3	➤ Carnegie Mellon University ●
4	► University of California - Irvine •
5	► University of Nebraska ●
6	➤ National University of Singapore ●
7	► Univ. of Illinois at Urbana-Champaigr
8	► HKUST •
9	► Peking University ●
10	► University College London •
11	► North Carolina State University ●
12	► University of Washington ●
13	► University of Southern California ●
14	► Università della Svizzera italiana •
15	► University of Buenos Aires ●
16	► TU Darmstadt •
17	► University of Texas at Dallas ●
18	► University of Passau •
40	



### Pro tip: Do not ignore bibliometrics

Applying for a Greencard

Selecting program committee members

"Sorting" job and grant applications (e.g., ERC)

• • •

### Pro tip: Do not ignore bibliometrics

Applying for a Greencard

Selecting program committee members

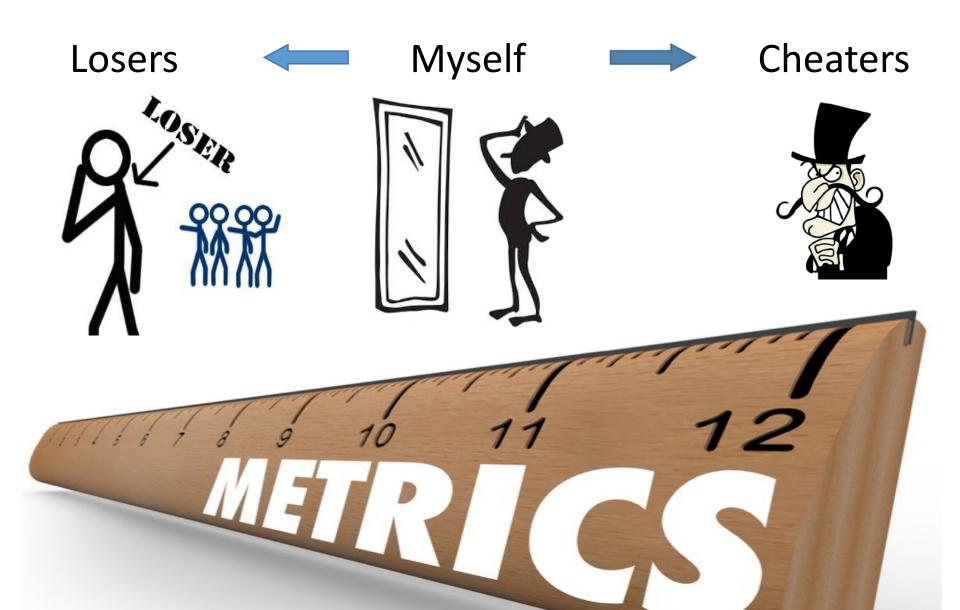
"Sorting" job and grant applications (e.g., ERC)

. . .

#### Pro question:

How often is your DBLP or Google Scholar profile opened during your talk?

### Bibliometrics Psychology



### Yes, but Impact?

See talks by:





## Tradeoffs and Strategies



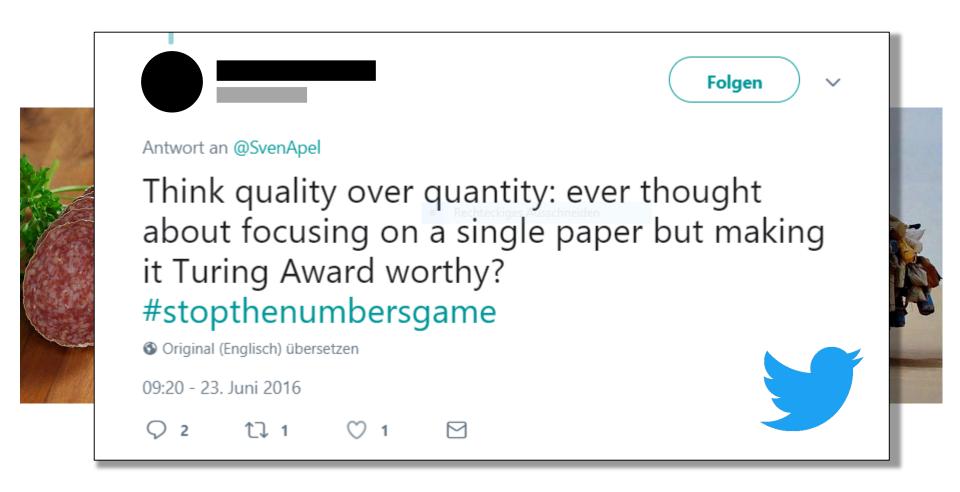
#### #1: Salami vs. All-In-One



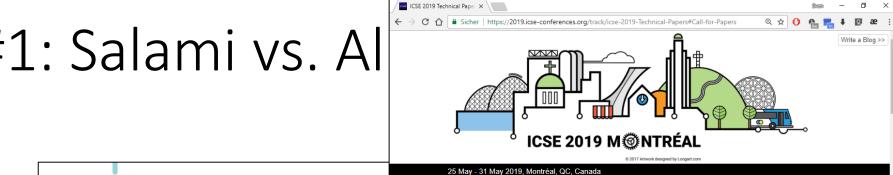
VS.



#### #1: Salami vs. All-In-One



#### #1: Salami vs. Al





Antwort an @SvenApel

Think quality over q about focusing on a it Turing Award wor #stopthenumbersga

Original (Englisch) übersetzen

09:20 - 23. Juni 2016





♠ ICSE 2019 (series) /

#### ICSE 2019 Technical Papers

Committees -

Q Search

Call for Papers Double Blind Review Process

#### Call for Papers

ICSE is the premier forum for presenting and discussing the most recent and significant technical research contributions in the field of Software Engineering. We invite high quality submissions of technical research papers describing original and unpublished results of software engineering research. We welcome submissions addressing topics across the full spectrum of Software Engineering

Each paper submitted to the Technical Track will be evaluated based on the following criteria:

- . Soundness: How well the paper's contributions are supported by rigorous application of appropriate research methods,
- . Significance: The extent to which the paper's contributions are novel, original, and important, with respect to the existing body of
- · Verifiability: Whether the paper includes sufficient information to support independent verification or replication of the paper's claimed
- · Presentation: Whether the paper's quality of writing meets high standards of ICSE, including clear descriptions and explanations, adequate use of the English language, absence of major ambiguity, clearly readable figures and tables, and adherence to the formatting instructions provided below.

#### **How to Submit**

A Technical Track submission must not exceed 10 pages including all text, figures, tables, and appendices; two additional pages containing only references are permitted. It must conform to the IEEE Conference Proceedings Formatting Guidelines (title in 24pt font and full text in 10pt type, LaTEX users must use \documentclass[10pt,conference] {IEEEtran} without including the compsoc or compsocconf option).

The submission must also comply with the ACM plagiarism policy and procedures. In particular, it must not have been published elsewhere and



Sign in

Sign up

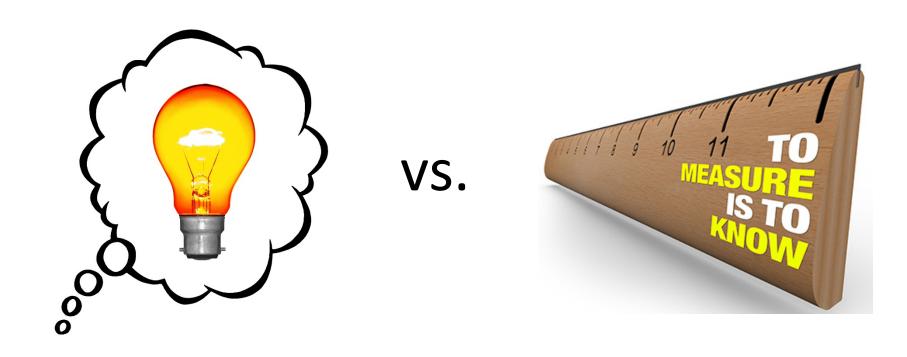
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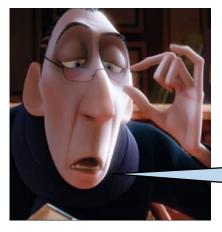




Microsoft Research United States

#### #2: Brilliant Idea vs. Solid Evidence





# Where is the evidence?

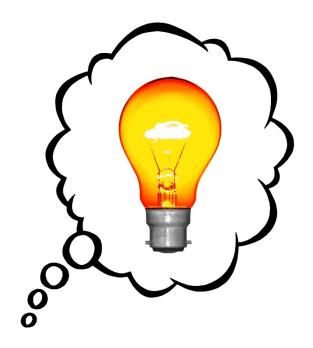


VS.



#### Not novel!





VS.





#### Not novel!

Where is the evidence?





VS.



issues: arouse interest, deliver solid evidence, ...



#### Not novel!

# Where is the evidence?



2015 IEEE/ACM 37th IEEE International Conference on Software Engineering

# Views on Internal and External Validity in Empirical Software Engineering

Janet Siegmund, Norbert Siegmund, and Sven Apel University of Passau, Germany

Abstract—Empirical methods have grown common in software engineering, but there is no consensus on how to apply them properly. Is practical relevance key? Do internally valid studies have any value? Should we replicate more to address the tradeoff between internal and external validity? We asked the community how empirical research should take place in software engineering, with a focus on the tradeoff between internal and external validity and replication, complemented with a literature review about the status of empirical research in software engineering. We found that the opinions differ considerably, and that there is no consensus in the community when to focus on internal or external validity and how to conduct and review replications.

#### I. Introduction

Empirical research in software engineering came a long way. From being received as a niche science, the awareness of its importance has increased. In 2005, empirical studies were found in about 2% of papers of major venues and conferences [31], while in recent years, almost all papers of ICSE, ESEC/FSE, and EMSE reported some kind of empirical evaluation (see Section III). Thus, the amount of empirically investigated claims has increased considerably.

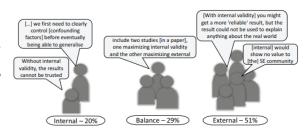


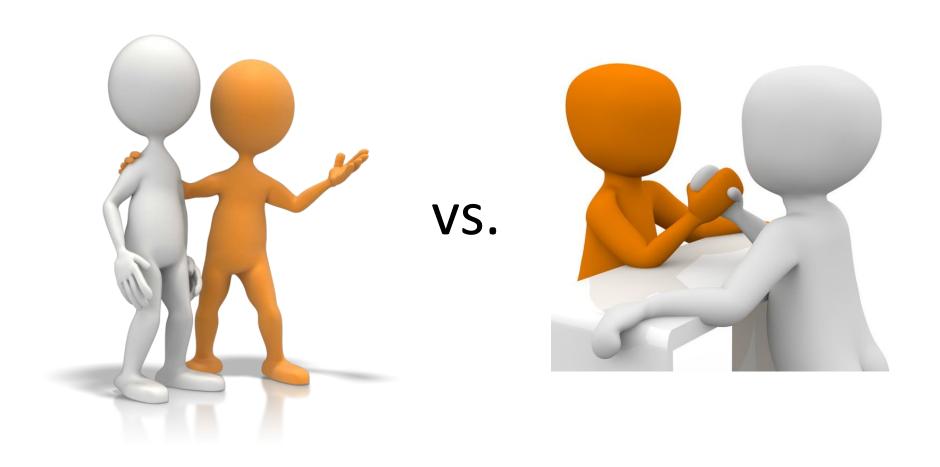
Fig. 1. Preferences for internal vs. external validity among program-committee and editorial-board members.

but at the cost of not being able to unambiguously understand why the new tool affects the work flow—maybe it is just because it is new.

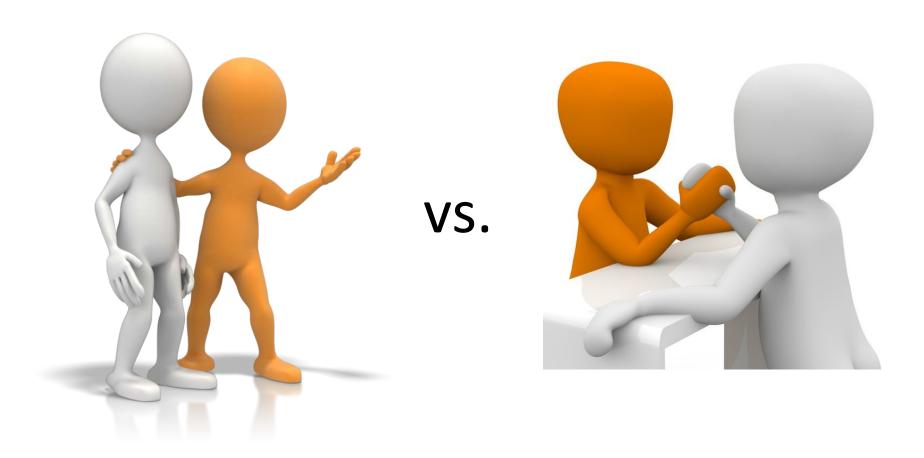
There is an inherent tradeoff in empirical research: Do we want observations that we can fully explain, but with a limited generalizability, or do we want results that are applicable to a variety of circumstances, but where we cannot reliably



# #3: Being Inclusive vs. Exclusive



## #3: Being Inclusive vs. Exclusive



issues: competition, join forces, avoid free riding, bibliometrics...

#### #3: Being Inclusive vs. Exclusive

"He/she has always many co-authors."

"He/she was never the sole author."

"He/she is a free rider."

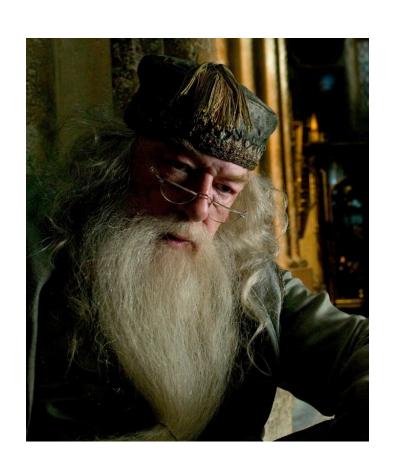
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issues: competition, join forces, avoid free riding, bibliometrics...

#### #4: Being a Student vs. Advising Students



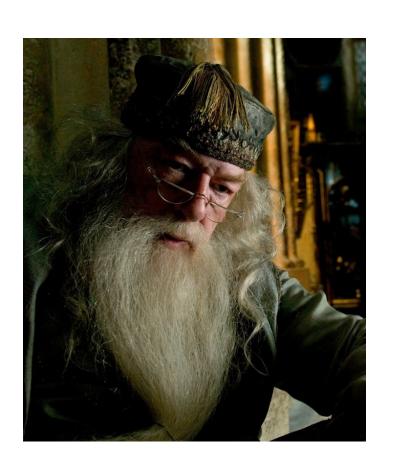
VS.



#### #4: Being a Student vs. Advising Students



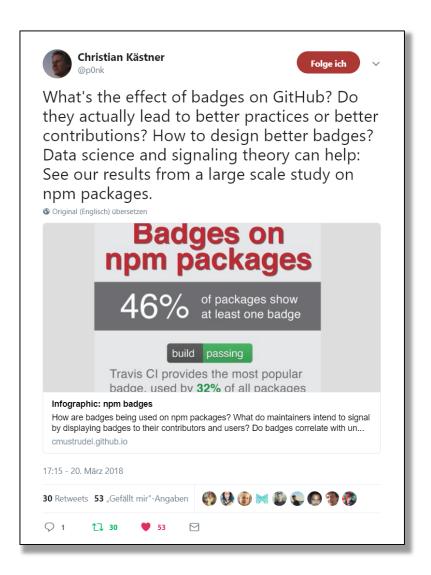
VS.



issues: practice, early feedback, taste of success, ...

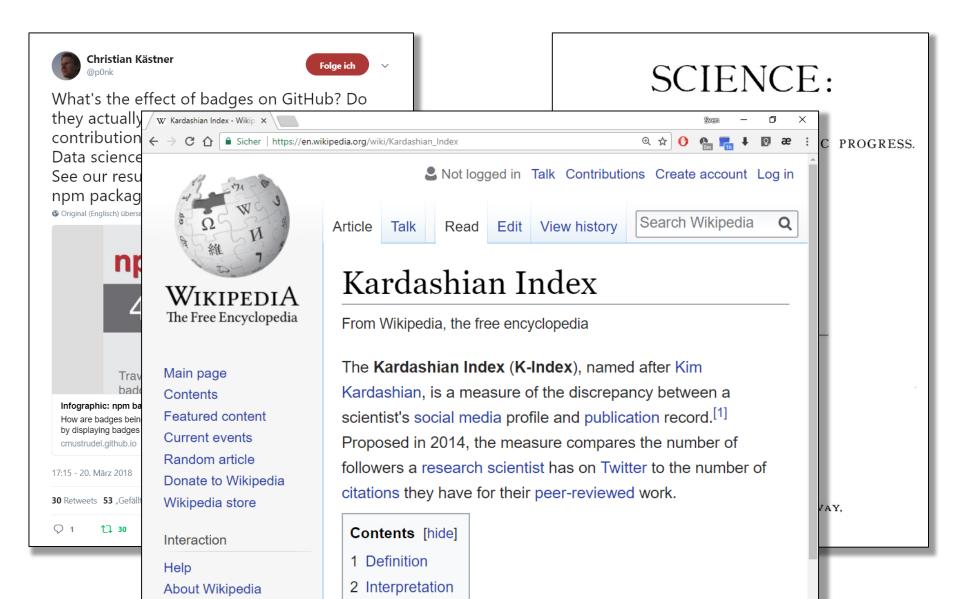
#### #5: Social Media vs. Traditional Publishing

VS.



SCIENCE: A WEEKLY RECORD OF SCIENTIFIC PROGRESS. ILLUSTRATED. VOLUME I JULY TO DECEMBER. EDITED BY JOHN MICHELS. ---PUBLISHED AT 229 BROADWAY, NEW YORK: ı 88o.

#### #5: Social Media vs. Traditional Publishing



Pro tip: try to get into program committees, grant and award panels, editorial boards, ...



#### The Free Rider

The Deadliner

The Skeptic (bad cop)

The Enthusiast (good cop)

The Power User

The Headless Chicken



The Free Rider

The Deadliner

The Skeptic (bad cop)

The Enthusiast (good cop)

The Power User

The Headless Chicken



The Free Rider

The Deadliner

The Skeptic (bad cop)

The Enthusiast (good cop)

The Power User

The Headless Chicken



The Free Rider

The Deadliner

The Skeptic (bad cop)

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The Skeptic (bad cop)

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The Power User

The Headless Chicken



The Free Rider

The Deadliner

The Skeptic (bad cop)

The Enthusiast (good cop)

The Power User

The Headless Chicken

. . .

**Pro tip:** keep submitting to the best venues



#### Author Order (or Reise nach Jerusalem / Musical Chairs)

Alphabetical
By contribution
By seniority
By location
First come, first serve



#### Author Order (or Reise nach Jerusalem / Musical Chairs)

Alphabetical
By contribution
By seniority
By location
First come, first serve



• • •

Different roles  $\rightarrow$  different preferences

#### Author Order (or Reise nach Jerusalem / Musical Chairs)

Alphabetical
By contribution
By seniority
By location
First come, first serve



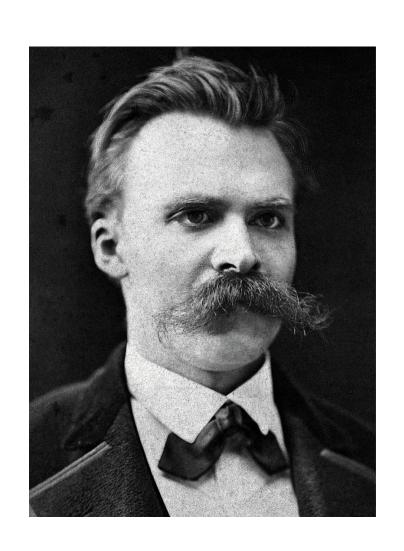
Different roles  $\rightarrow$  different preferences

Pro tip: decide as early as possible!

(Double-blind reviewing may even worsen the problem!)



## After all, do not forget...



"No winner believes in the accident!"