

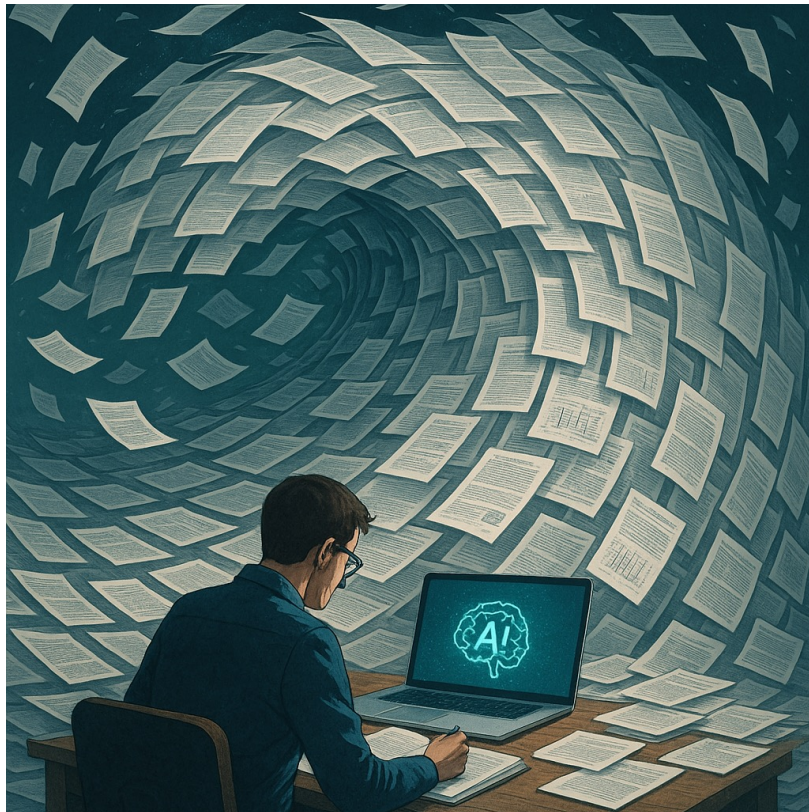
# Outcomes of Dagstuhl Seminar 24462



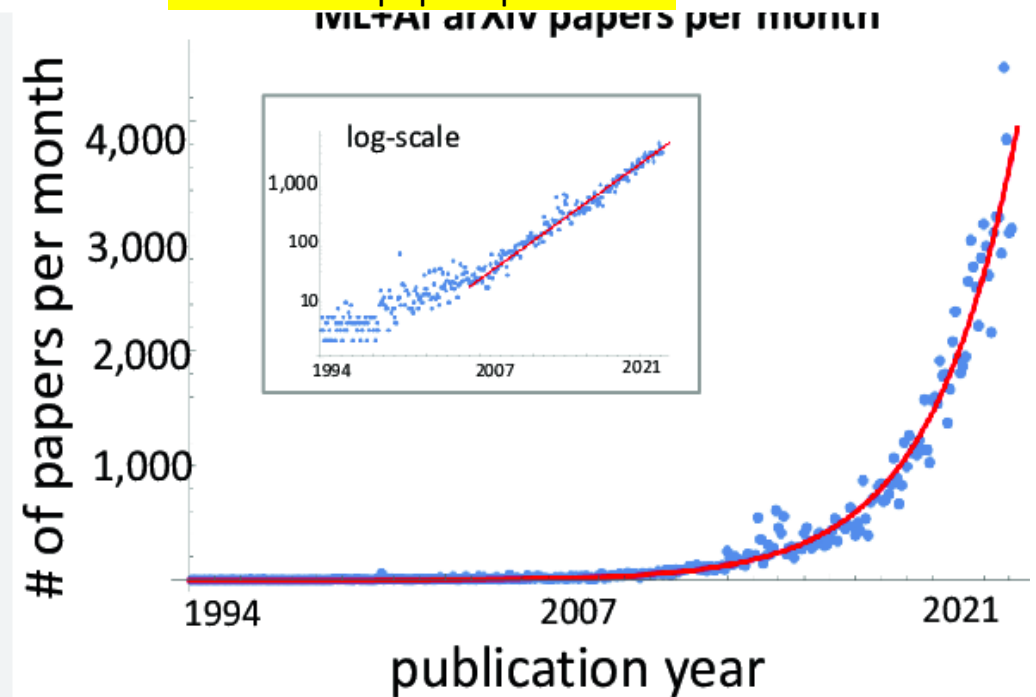
Serge Fdida  
Sorbonne Université

Berlin 6G Conference 2025  
Large-Scale Facilities

# The deluge of publications




ML+AI arXiv papers per month



Number of papers published per months in the arXiv categories of AI... |  
Download Scientific Diagram

# Why Most Published Research Findings Are False

John P.A. Ioannidis

 PLoS Medicine | [www.plosmedicine.org](http://www.plosmedicine.org)

0696

August 2005 | Volume 2 | Issue 8 | e124

## Summary

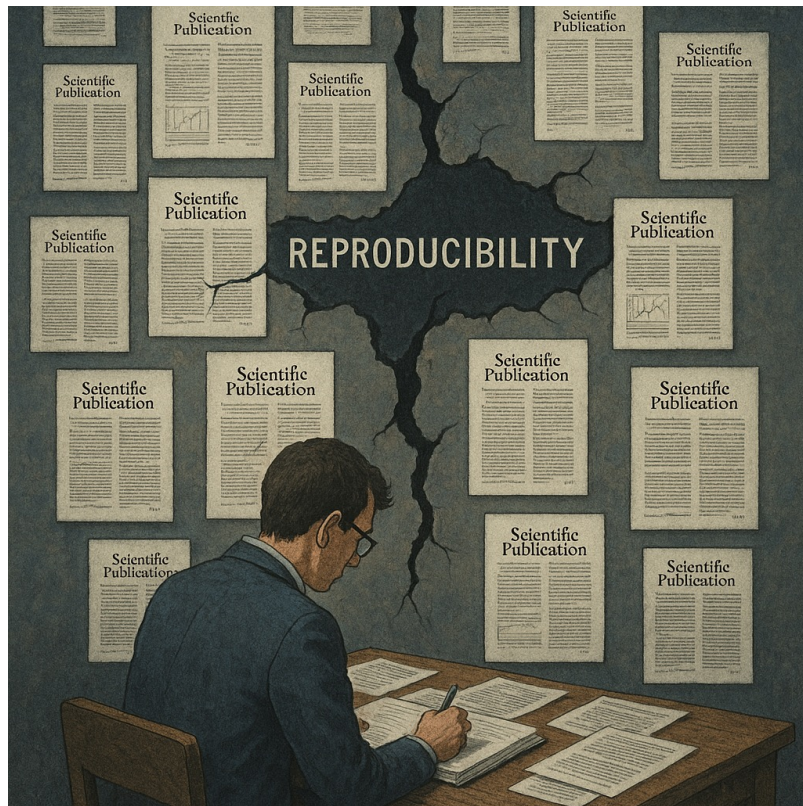
There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding

Risk  
For trust in Science



slicesRI

# Hard and Harmful to reproduce



DOI:10.1145/2812803

**To encourage repeatable research, fund  
repeatability engineering and reward  
commitments to sharing research artifacts.**

**BY CHRISTIAN COLLBERG AND TODD A. PROEBSTING**

## **Repeatability in Computer Systems Research**

*CACM, Vol 59, Issue 3*

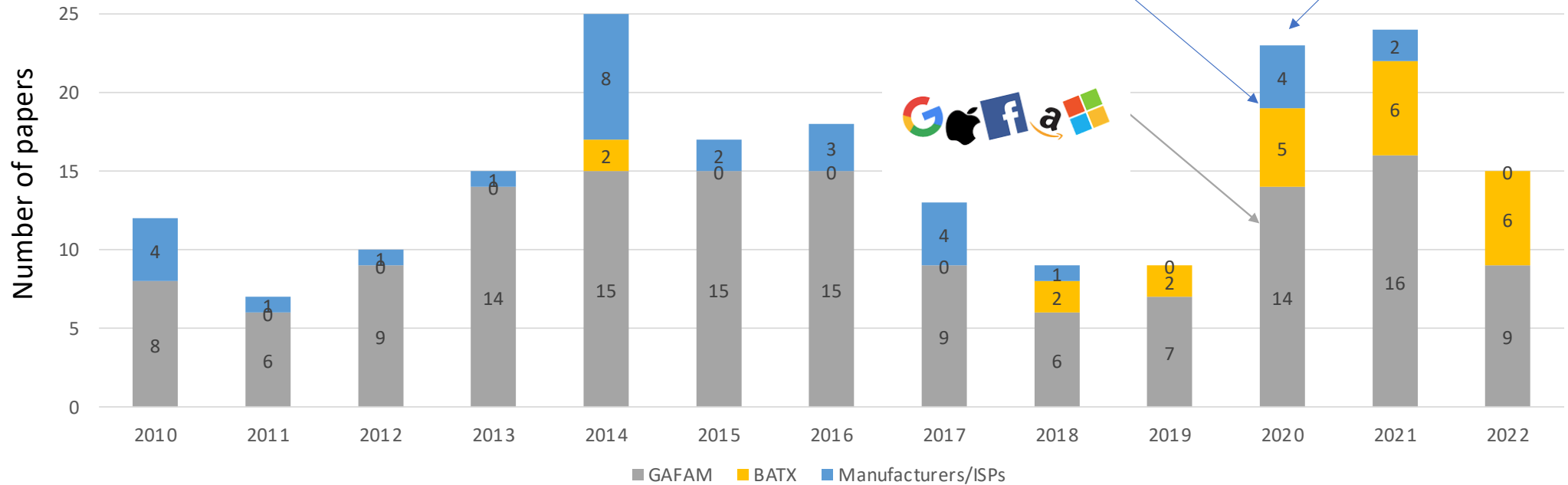


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Risk  
For academia

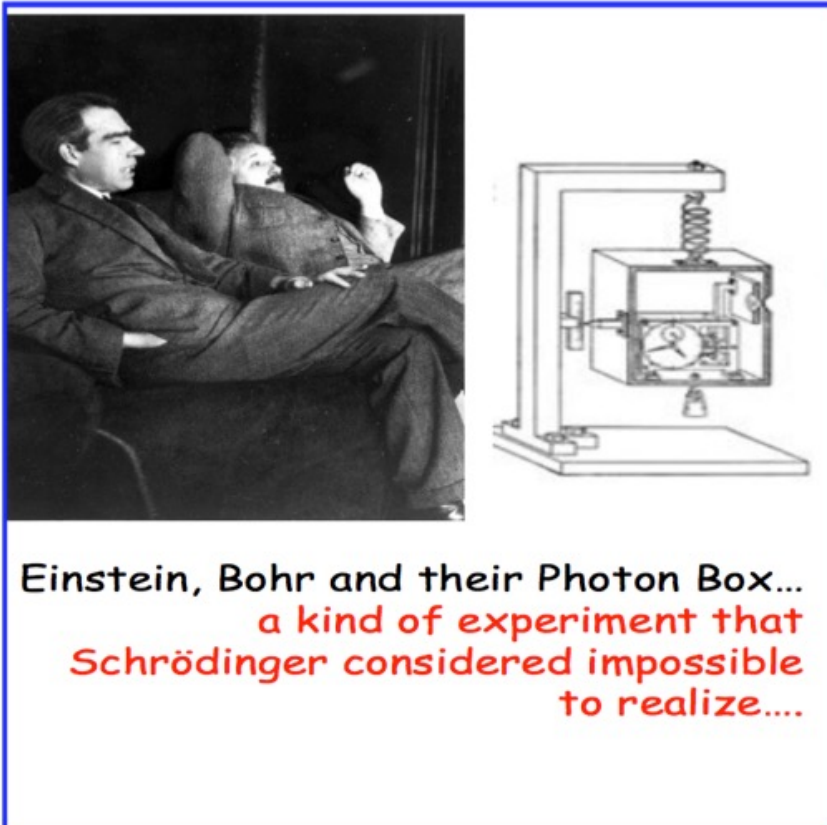
## ACM SIGCOMM Papers



ACM Sigcomm Edition (year)



# Thought experiments



THE  
NOBEL  
PRIZE

## Nobel Price in Physics 2022

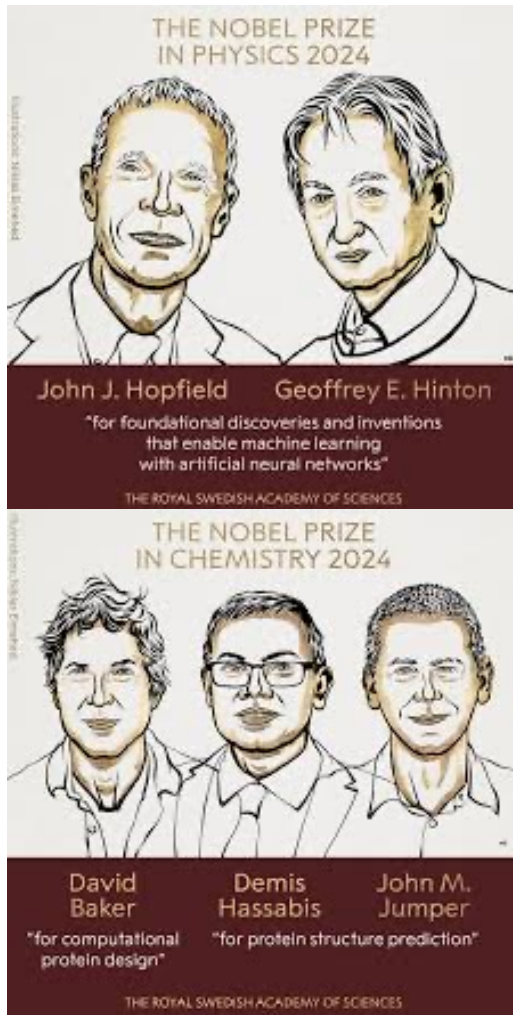
*For groundbreaking **experiments** using entangled quantum states, where two particles behave like a single unit even when they are separated*

## Nobel Price in Physics 2023

*for **experimental** methods that generate attosecond pulses of light for the study of electron dynamics in matter*

# The rise of AI/ML

THE  
NOBEL  
PRIZE



## Nobel Price in Physics 2024

*"for foundational discoveries and inventions that  
enable machine learning with artificial neural  
networks"*

## Nobel Price in Chemistry 2024

*"for computational protein design"  
"for protein structure prediction"*



Serge Fdida

Berlin 6G Conference, July 2, 2025



# *Research Infrastructures as a Scientific Instrument*





# Sustainability of Research Infrastructures



# Déjà vu!



Thanks for your attention

Questions?

For more information, please contact:

Serge Fdida

[serge.fdida@sorbonne-universite.fr](mailto:serge.fdida@sorbonne-universite.fr)



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