

Ένωση Πληροφορικών Ελλάδας



# Σύνταξη και συγγραφή επιστημονικών-τεχνικών κειμένων

Χάρης Γεωργίου (MSc, PhD)

# Ένωση Πληροφορικών Ελλάδας

Στόχοι:

- Πρώτος “καθολικός” φορέας εκπροσώπησης πτυχιούχων Πληροφορικής.
- Αρμόδιος φορέας εκπροσώπησης επαγγελματιών Πληροφορικής.
- Αρμόδιος επιστημονικός “συμβουλευτικός” φορέας για το Δημόσιο.
- Αρωγός της Εθνικής Ψηφιακής Στρατηγικής & Παιδείας της χώρας.

<https://www.epe.org.gr>



# Τομείς παρέμβασης

Ποιοι είναι οι κύριοι τομείς παρεμβάσεων της ΕΠΕ;

- 1 Εθνική Ψηφιακή Στρατηγική & Οικονομία
- 2 Εργασιακά (ΤΠΕ), Δημόσιος & ιδιωτικός τομέας
- 3 Παιδεία (Α', Β', Γ')
- 4 Έρευνα & Τεχνολογία
- 5 Έργα & υπηρεσίες ΤΠΕ
- 6 Ασφάλεια συστημάτων & δεδομένων
- 7 Ανοικτά συστήματα & πρότυπα
- 8 Χρήση ΕΛ/ΛΑΚ
- 9 Πνευματικά δικαιώματα
- 10 Κώδικας Δεοντολογίας (ΤΠΕ)
- 11 Κοινωνική μέριμνα (ICT4D)





**Harris Georgiou (MSc, PhD)** – <https://github.com/xgeorgio/info>

- R&D: Associate post-doc researcher and lecturer with the University Athens (NKUA) and University of Piraeus (UniPi)
- Consultant in Medical Imaging, Machine Learning, Data Analytics, Signal Processing, Process Optimization, Dynamic Systems, Complexity & Emergent A.I., Game Theory
- HRTA member since 2009, LEAR / scientific advisor
- HRTA field operator (USAR, scuba diver)
- Wilderness first aid, paediatric (child/infant)
- Humanitarian aid & disaster relief in Ghana, Lesvos, Piraeus
- Support of unaccomp. minors, teacher in community schools
- Streetwork training, psychological first aid & victim support
- 2+4 books, 170+ scientific papers/articles (and 5 marathons)

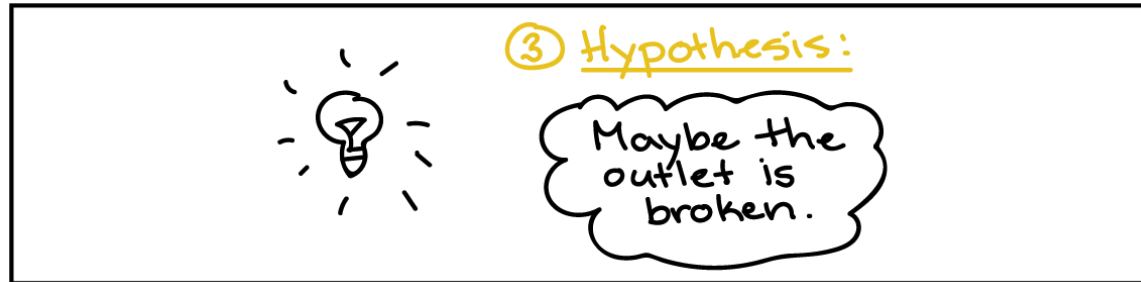
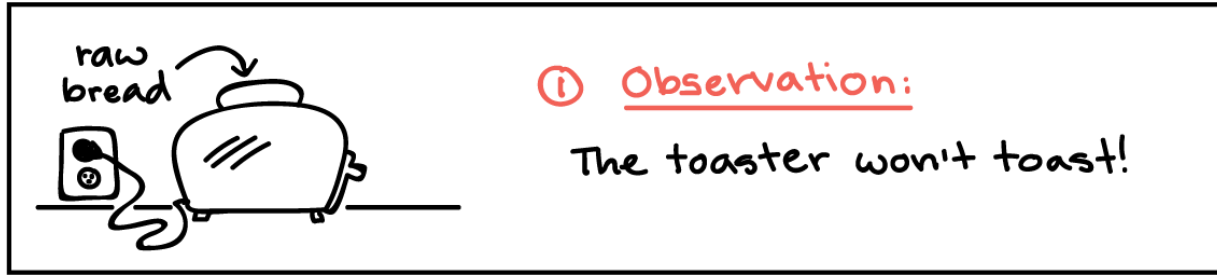
# Επισκόπηση

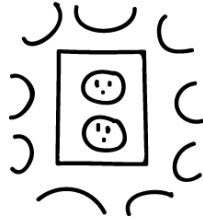
- Περιεχόμενα:
  - Τι είναι τα επιστημονικά-τεχνικά κείμενα;
  - Γιατί είναι σημαντική η οργάνωση και η τεκμηρίωση;
  - Τι είναι το peer-review και ποια είναι τα προβλήματα-περιορισμοί στην εφαρμογή του;
  - Επιστημονικές μελέτες και δημοσιεύσεις:
    - Conferences, magazines, journals, open-access repositories.
- Αναφορές:
  - «Εισαγωγή στη Μηχανική Μάθηση και στην Αναλυτική Δεδομένων», Χ. Γεωργίου, Α΄ κύκλος ανοικτών μαθημάτων ΕΠΕ – <https://youtu.be/mlU4SvyfRqA>
  - «Εφαρμογές της Τεχνητής Νοημοσύνης στον πραγματικό κόσμο», Χ. Γεωργίου, Α΄ κύκλος ανοικτών μαθημάτων ΕΠΕ – <https://youtu.be/d2HnlWyQse4>
  - «Particle Swarm Optimization and RBF Neural Networks for public transport arrival time prediction using GTFS data», Ε. Chondrodima, Η. Georgiou, Ν. Pelekis, Υ. Theodoridis. [\*International Journal of Information Management Data Insights \(IJIMDI\)\*, Vol. 2, Issue 2, Nov. 2022, 100086 \(doi: 10.1016/j.jjime.2022.100086\)](#)

# Μέρος I: Οργάνωση & Έρευνα

1. Τι είναι η Επιστημονική Μεθοδολογία;
2. Γιατί είναι σημαντική;
3. Τι είναι το πειραματικό πρωτόκολλο;
4. Πως οργανώνουμε τη μελέτη;

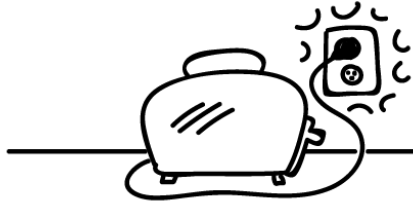






④ Prediction:

If I plug the toaster into a different outlet, then it will toast the bread.



⑤ Test of prediction:

Plug the toaster into a different outlet & try again.



And the result is...



My bread toasts!

Hypothesis is supported.



My bread still won't toast.

Hypothesis is not supported.

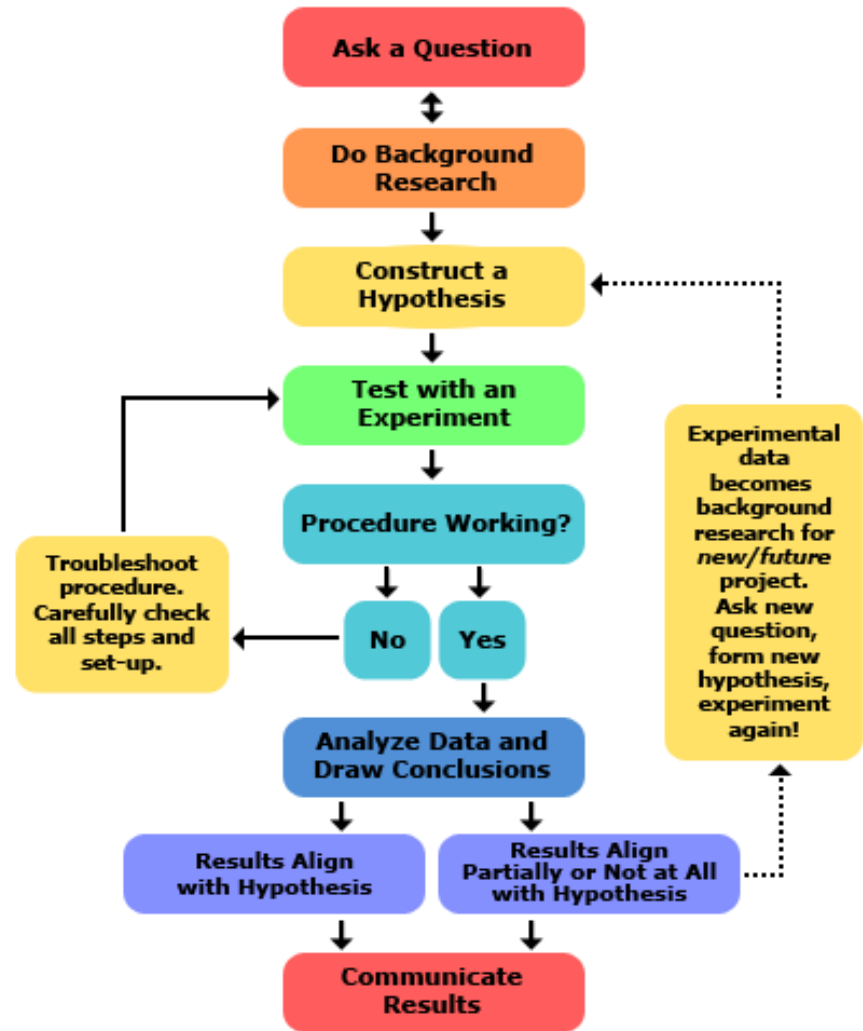
⑥ Iteration time!

But what is actually wrong with that outlet?

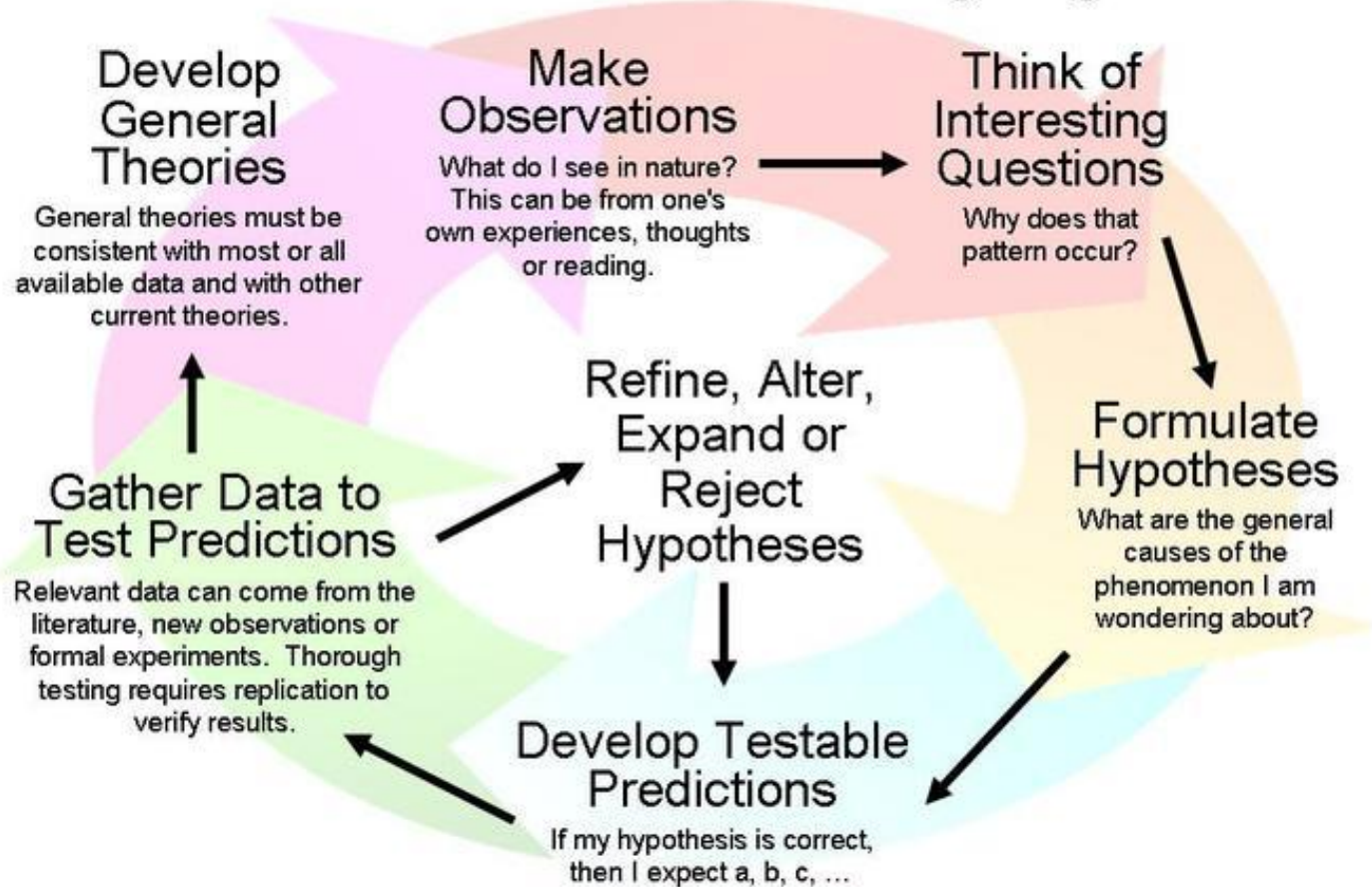
Hmm... maybe there is a broken wire in the toaster.

## Summary:

1. Observation
2. Question
3. Hypothesis
4. Prediction (Model)
5. Verification (Test)
6. Iteration (Extend)



# The Scientific Method as an Ongoing Process



# A STANDERD PROTOCOL

This is the simple version of a complex protocol

Created by Name [@br3@unL.ac.uk](#) on October 2, 2017  
Edited by John Smith [@br3@unL.ac.uk](#) on October 3, 2017  
[v0.001](#) [v0.001](#)

## PROTOCOL

Step 1 [Time required 20 minutes]

Lorem ipsum dolor sit amet, consectetur

- Take one of x and then
- Then do the next thing
- Then do the next thing
- Then do the next thing

Step 2 [Time required 35 minutes]

Pellentesque habitant morbi tristique senectus

- Then do the next thing
- Then do the next thing
- Then do the next thing

Step 3 [Time required 40 minutes]

habitant morbi tristique senectus

- Then do the next thing
- Then do the next thing

Step 4 [Time required 25 minutes]

Ut quis orci lacinia, efficitur sem vitae

- Do this using the method in the bib file (Einstein 1905)
- Then do the next thing

Step 5 [Time required 30 minutes]

orbi tristique senectus

- Then do the next thing
- Then do the next thing
- Then do the next thing

Step 6 [Time required 15 minutes]

ipsum dolor sit amet

- Then do the next thing as done by Einstein 1905
- Then do the next thing
- Then do the next thing
- Then do the next thing

# L<sup>A</sup>T<sub>E</sub>X

Protocol purpose:  
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam porta dui a fermentum varius. Aliquam curus orci sit amet semm volutatis, vel pellentesque taptis imperdiet. Aenean lectus magna, rhoncus vel.

## EQUIPMENT

petri dishes  Some things  Stuff

other  more  used before (would do)

tweezers

## CHEMICALS

100% H<sub>2</sub>O  25% H<sub>2</sub>O

Some chemicals  Some H<sub>2</sub>SO<sub>4</sub>

## DANGERS

Chemicals      
Physical      
Environmental

## PROTECTIVE GEAR

Laboratory Coat  Gloves  boots

## SOURCES

### References

- Knuth, Donald (n.d.). Knuth: Computers and Typesetting. URL: [http://www-cs-faculty.stanford.edu/~uno/abcde.html](http://www.cs-faculty.stanford.edu/~uno/abcde.html).
- Dirac, Paul Adrien Maurice (1981). The Principles of Quantum Mechanics. International series of monographs on physics. Clarendon Press. ISBN: 9780198520115.
- Knuth, Donald E. (1973). "Fundamental Algorithms". In: Addison-Wesley. Chap. 1.2.
- Einstein, Albert (1905). "Zur Elektrodynamik bewegter Körper. [German] [On the electrodynamics of moving bodies]". In: Annalen der Physik 322.10, pp. 891-921. DOI: <http://dx.doi.org/10.1002/andp.19053221004>.

## WARNINGS

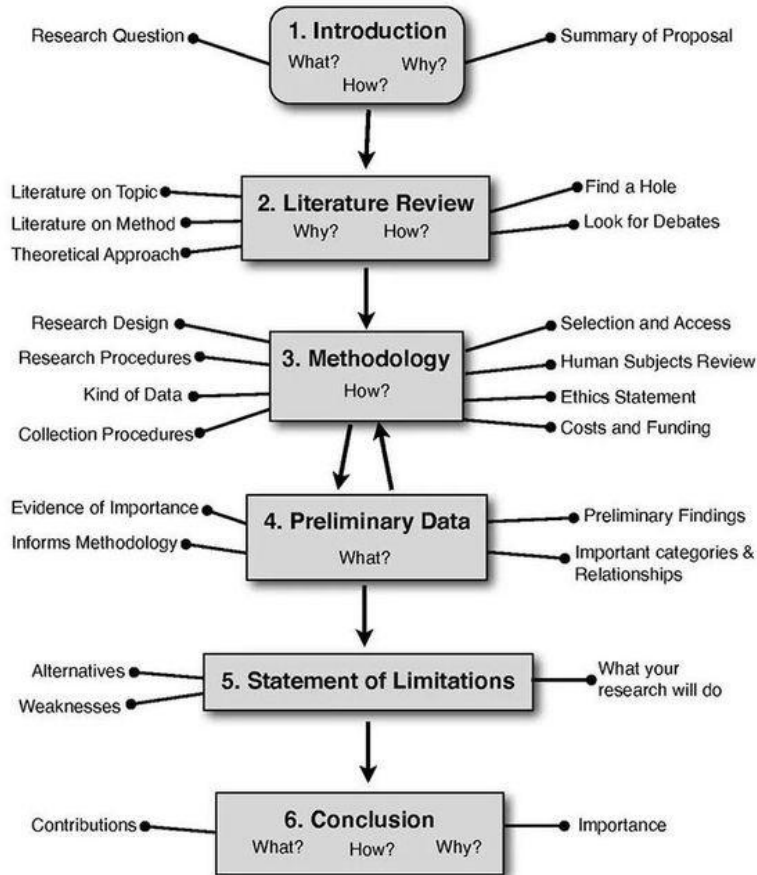
- Chemical  
The H<sub>2</sub>SO<sub>4</sub> is bad for you
- Bugs  
The bugs will be attracted to the H<sub>2</sub>O

## NOTES

## PEOPLE TO CONTACT

Jane and Sam (about chemicals)

## Research Proposal Flow Chart



## Συνήθης οργάνωση συγγραφής μελέτης:

1. Ολοκλήρωση πειραματικού πρωτοκόλλου, επιβεβαίωση αποτελεσμάτων, επισήμανση σημαντικών συμπερασμάτων.
2. Επιλογή μέσου δημοσίευσης (+deadlines)
3. Προσαρμογή template (.docx/.tex)
4. Κατανομή έκτασης ανά section (%)
5. Ενημέρωση βιβλιογραφίας (.bib)
6. Μεθοδολογία + Πειράματα/Αποτελέσματα
7. “Related Work” + “Problem Statement”
8. Εισαγωγή + Συμπεράσματα + Abstract + Τίτλος
9. Tables/Figures/Artwork
10. Εσωτερικό review (2 ή 3 κύκλοι)



# 17 Equations That Changed the World

by Ian Stewart

- |                                  |   |                            |
|----------------------------------|---|----------------------------|
| 1. Pythagoras's Theorem          | $a^2 + b^2 = c^2$   | Pythagoras, 530 BC         |
| 2. Logarithms                    | $\log xy = \log x + \log y$   | John Napier, 1610          |
| 3. Calculus                      | $\frac{df}{dt} = \lim_{h \rightarrow 0} \frac{f(t+h) - f(t)}{h}$  | Newton, 1668               |
| 4. Law of Gravity                | $F = G \frac{m_1 m_2}{r^2}$   | Newton, 1687               |
| 5. The Square Root of Minus One  | $i^2 = -1$  | Euler, 1750                |
| 6. Euler's Formula for Polyhedra | $V - E + F = 2$   | Euler, 1751                |
| 7. Normal Distribution           | $\Phi(x) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$  | C.F. Gauss, 1810           |
| 8. Wave Equation                 | $\frac{\partial^2 u}{\partial t^2} = c^2 \frac{\partial^2 u}{\partial x^2}$   | J. d'Almbert, 1746         |
| 9. Fourier Transform             | $f(\omega) = \int_{-\infty}^{\infty} f(x)e^{-2\pi i x \omega} dx$   | J. Fourier, 1822           |
| 10. Navier-Stokes Equation       | $\rho \left( \frac{\partial \mathbf{v}}{\partial t} + \mathbf{v} \cdot \nabla \mathbf{v} \right) = -\nabla p + \nabla \cdot \mathbf{T} + \mathbf{f}$  | C. Navier, G. Stokes, 1845 |
| 11. Maxwell's Equations          | $\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0}$<br>$\nabla \times \mathbf{E} = -\frac{1}{c} \frac{\partial \mathbf{H}}{\partial t}$<br>$\nabla \cdot \mathbf{H} = 0$<br>$\nabla \times \mathbf{H} = \frac{1}{c} \frac{\partial \mathbf{E}}{\partial t}$ | J.C. Maxwell, 1865         |
| 12. Second Law of Thermodynamics | $dS \geq 0$   | L. Boltzmann, 1874         |
| 13. Relativity                   | $E = mc^2$  | Einstein, 1905             |
| 14. Schrodinger's Equation       | $i\hbar \frac{\partial}{\partial t} \Psi = H\Psi$   | E. Schrodinger, 1927       |
| 15. Information Theory           | $H = -\sum p(x) \log p(x)$  | C. Shannon, 1949           |
| 16. Chaos Theory                 | $x_{t+1} = kx_t(1 - x_t)$   | Robert May, 1975           |
| 17. Black-Scholes Equation       | $\frac{1}{2}\sigma^2 S^2 \frac{\partial^2 V}{\partial S^2} + rS \frac{\partial V}{\partial S} + \frac{\partial V}{\partial t} - rV = 0$   | F. Black, M. Scholes, 1990 |

equipment, and to Dr. G. E. R. Deacon and the captain and officers of H.R.S. *Discovery II* for their part in making the observations.

- \*Young, F. B., Gerrard, H., and Jevons, W., *Phil. Mag.*, **40**, 149 (1920).  
 \*Langmuir-Elgin, M. S., *Mon. Not. Roy. Astr. Soc., Geophys. Supp.*, **5**, 283 (1949).  
 \*Van Aarts, W. S., Woods Hole Papers in Phys. Oceanogr. Meteor., **11** (3) (1950).  
 \*Ejima, Y. W., *Akita Mat. Astron. Phys. (Sendai)*, **2**(11) (1955).

## MOLECULAR STRUCTURE OF NUCLEIC ACIDS

### A Structure for Deoxyribose Nucleic Acid

WE wish to suggest a structure for the salt of deoxyribose nucleic acid (D.N.A.). This structure has novel features which are of considerable biological interest.

A structure for nucleic acid has already been proposed by Pauling and Corey<sup>1</sup>. They kindly made their manuscript available to us in advance of publication. Their model consists of three inter-twined chains, with the phosphates near the fibre axis, and the bases on the outside. In our opinion, this structure is unsatisfactory for two reasons: (1) We believe that the material which gives the X-ray diagrams is the salt, not the free acid. Without the acidic hydrogen atoms it is not clear what forces would hold the structure together, especially as the negatively-charged phosphates near the axis will repel each other. (2) Some of the van der Waals distances appear to be too small.

Another three-chain structure has also been suggested by Prasser (in the press). In his model the phosphates are on the outside and the bases on the inside, linked together by hydrogen bonds. This structure as described is rather ill-defined, and for this reason we shall not comment on it.

We wish to put forward a radically different structure for the salt of deoxyribose nucleic acid. This structure has two helical chains each coiled round the same axis (see diagram). We have made the usual chemical assumptions, namely, that each chain consists of phosphate di-ester groups joining  $\beta$ -D-deoxy-ribofuranose residues with 3',5' linkages. The two chains (but not their bases) are related by a dyad perpendicular to the fibre axis. Both chains follow right-handed helices, but owing to the dyad the sequences of the atoms in the two chains run in opposite directions. Each chain loosely resembles Furberg's model No. 1; that is, the bases are on the inside of the helix and the phosphates on the outside. The configuration of the sugar and the atoms near it is close to Furberg's 'standard configuration', the sugar being roughly perpendicular to the attached base. There



This figure is purely diagrammatic. The two ribbons simulate the two phosphate-sugar chains, and the horizontal rods the pairs of bases holding the chains together. The vertical line marks the fibre axis.

is a residue on each chain every 3.4 Å in the z-direction. We have assumed an angle of 36° between adjacent residues in the same chain, so that the structure repeats after 10 residues on each chain, that is, after 34 Å. The distance of a phosphorus atom from the fibre axis is 10 Å. As the phosphates are on the outside, cations have easy access to them.

The structure is an open one, and its water content is rather high. At lower water contents we would expect the bases to tilt so that the structure could become more compact.

The novel feature of the structure is the manner in which the two chains are held together by the purine and pyrimidine bases. The planes of the bases are perpendicular to the fibre axis. They are joined together in pairs, a single base from one chain being hydrogen-bonded to a single base from the other chain, so that the two lie side by side with identical z-co-ordinates. One of the pair must be a purine and the other a pyrimidine for bonding to occur. The hydrogen bonds are made as follows: purine position 1 to pyrimidine position 1; purine position 6 to pyrimidine position 6.

If it is assumed that the bases only occur in the structure in the most plausible tautomeric forms (that is, with the keto rather than the enol configurations) it is found that only specific pairs of bases can bond together. These pairs are: adenine (purine) with thymine (pyrimidine), and guanine (purine) with cytosine (pyrimidine).

In other words, if an adenine forms one member of a pair, on either chain, then on these assumptions the other member must be thymine; similarly for guanine and cytosine. The sequence of bases on a single chain does not appear to be restricted in any way. However, if only specific pairs of bases can be formed, it follows that if the sequence of bases on one chain is given, then the sequence on the other chain is automatically determined.

It has been found experimentally<sup>2,3</sup> that the ratio of the amounts of adenine to thymine, and the ratio of guanine to cytosine, are always very close to unity for deoxyribose nucleic acid.

It is probably impossible to build this structure with a ribose sugar in place of the deoxyribose, as the extra oxygen atom would make too close a van der Waals contact.

The previously published X-ray data<sup>4</sup> on deoxyribose nucleic acid are insufficient for a rigorous test of our structure. So far as we can tell, it is roughly compatible with the experimental data, but it must be regarded as improved until it has been checked against more exact results. Some of these are given in the following communications. We were not aware of the details of the results presented there when we devised our structure, which rests mainly though not entirely on published experimental data and stereochemical arguments.

It has not escaped our notice that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material. Full details of the structure, including the conditions assumed in building it, together with a set of co-ordinates for the atoms, will be published elsewhere.

We are much indebted to Dr. Jerry Donohue for constant advice and criticism, especially on interatomic distances. We have also been stimulated by a knowledge of the general nature of the unpublished experimental results and ideas of Dr. M. H. F. Wilkins, Dr. R. E. Franklin and their co-workers at

Οι επιστημονικές δημοσιεύσεις δεν είναι πάντα μεγάλες οι σύνθετες...

COUNTEREXAMPLE TO EULER'S CONJECTURE  
ON SUMS OF LIKE POWERS

BY L. J. LANDER AND T. R. PARKIN

Communicated by J. D. Swift, June 27, 1966

A direct search on the CDC 6600 yielded

$$27^5 + 84^5 + 110^5 + 133^5 = 144^5$$

as the smallest instance in which four fifth powers sum to a fifth power. This is a counterexample to a conjecture by Euler [1] that at least  $n$   $n$ th powers are required to sum to an  $n$ th power,  $n > 2$ .

REFERENCE

1. L. E. Dickson, *History of the theory of numbers*, Vol. 2, Chelsea, New York, 1952, p. 648.

## Journal Impact Factor Calculation

$$\begin{array}{l} 2017 \\ \text{Journal} \\ \text{Impact} \\ \text{Factor} \end{array} = \frac{357}{124} = 2.879$$

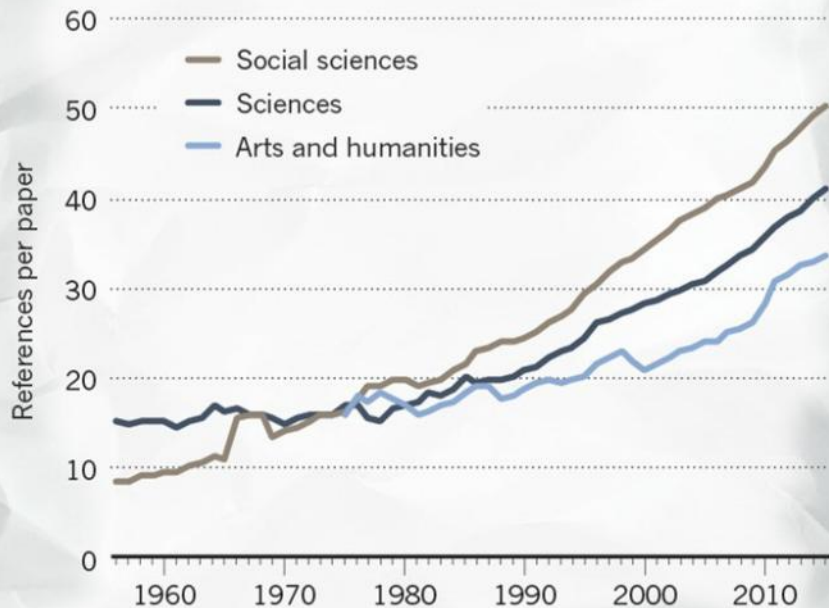
How is Journal Impact Factor Calculated?

$$\text{JIF} = \frac{\begin{array}{l} \text{Citations in 2017 to} \\ \text{items published in} \\ \mathbf{2015 (197) + 2016} \\ \mathbf{(160)} \end{array}}{\begin{array}{l} \text{Number of citable} \\ \text{items in } \mathbf{2015 (55) +} \\ \mathbf{2016 (69)} \end{array}} = \frac{357}{124}$$



## References on the rise

The number of references in papers has steadily risen over time, with papers in the sciences now including more than 40 on average.



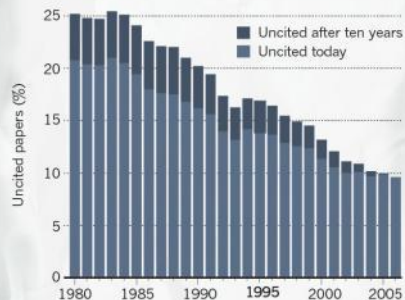
©nature

## UNCITED SCIENCE

Data from the Web of Science give an incomplete picture of how much science is never cited; many papers it records as having no citations have actually been cited somewhere.

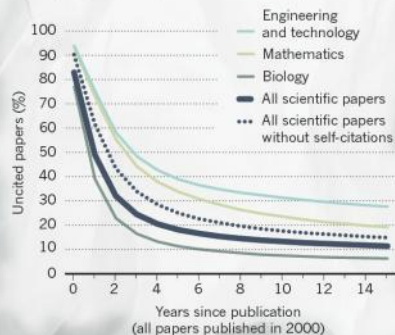
### Downward trend

The share of scientific articles recorded as 'uncited' in each year is falling.



### Disciplinary differences

The share of uncited papers from any year falls as time goes by, but at differing rates in different disciplines.



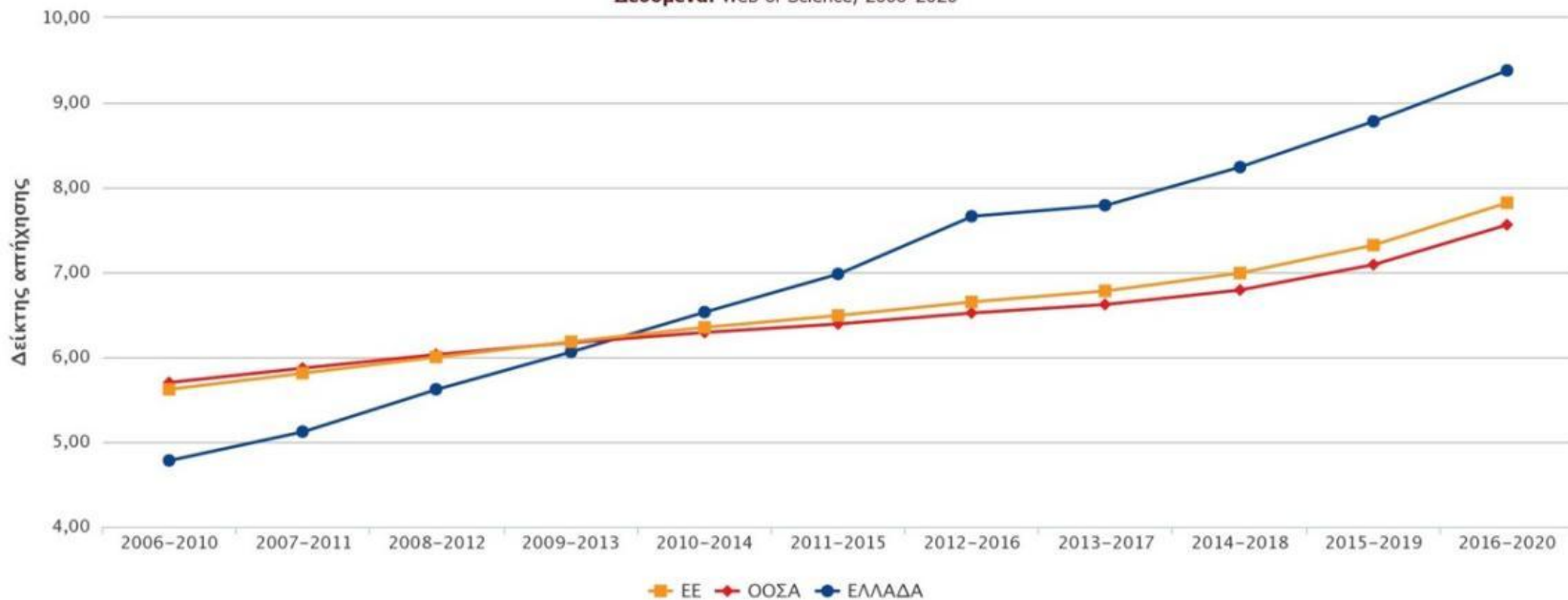
©nature

## Αριθμός δημοσιεύσεων ελληνικών φορέων, ανά έτος, για την περίοδο 2006-2020



### Δείκτης απήχησης των δημοσιεύσεων της Ελλάδας, των χωρών μελών της ΕΕ και των χωρών του ΟΟΣΑ, ανά πενταετία, για την περίοδο 2006-2020





Δεδομένα: Web of Science, 2006-2020



ΠΗΓΗ: EKT, Επιστημονικές Δημοσιεύσεις Ελληνικών Φορέων 2006-2020: Βιβλιομετρική ανάλυση δημοσιεύσεων σε διεθνή επιστημονικά περιοδικά - Web of Science, <http://report09.metrics.ekt.gr>



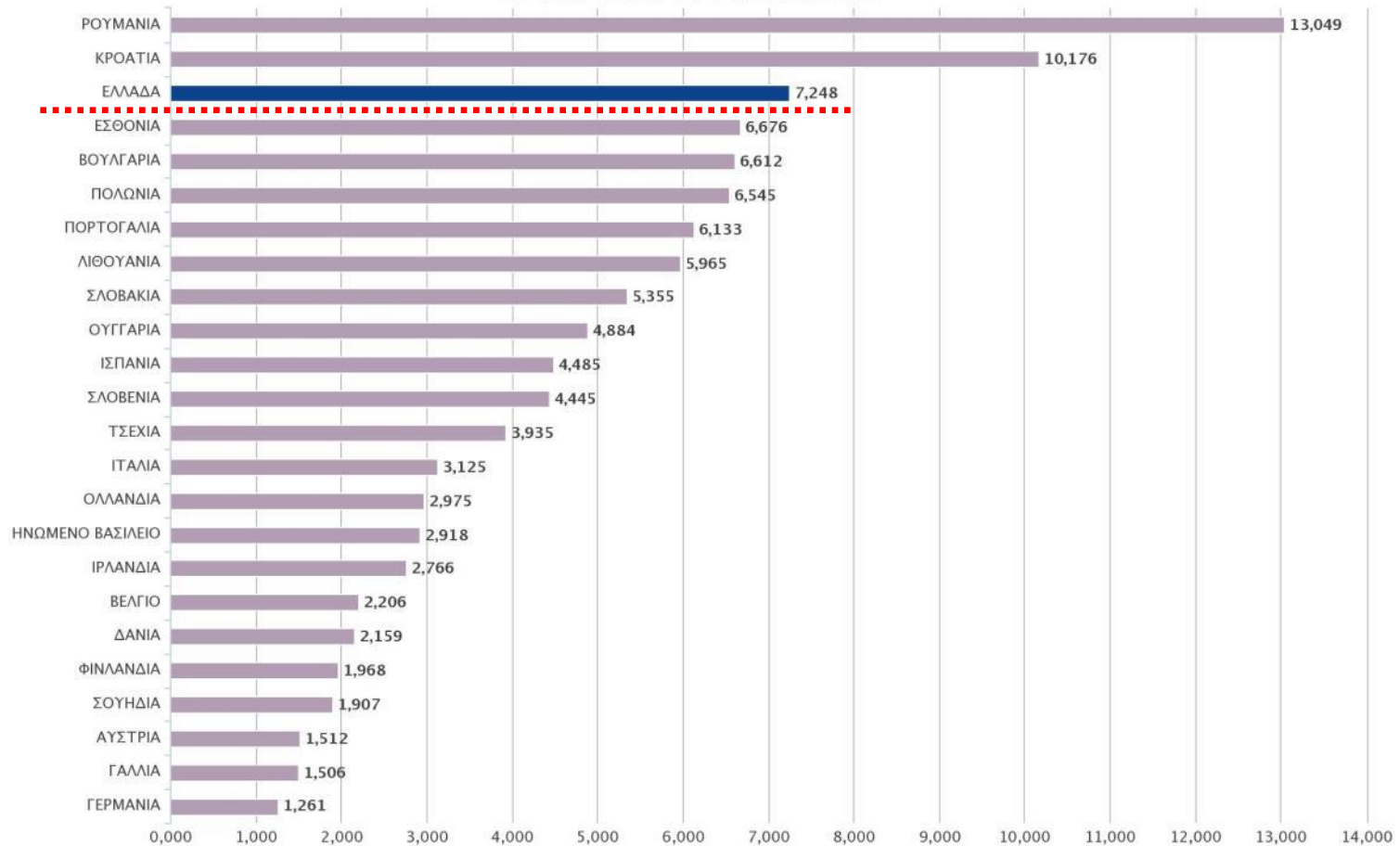
## Η Ελλάδα στον «Ορίζοντα Ευρώπη»(Horizon Europe)

	 ΕΛΛΑΔΑ	 ΣΥΝΟΛΟ ΕΕ27	 ΜΕΡΙΔΙΟ (%) ΕΛΛΑΔΑΣ ΣΤΗΝ ΕΕ 27	 ΘΕΣΗ ΕΛΛΑΔΑΣ ΣΤΗΝ ΚΑΤΑΤΑΞΗ ΕΕ 27
Αριθμός εγκεκριμένων έργων	829	5.019	16,5%	7n
Αριθμός εγκεκριμένων έργων με συντονιστικό ρόλο	204	4.833	4,2%	8n
Αριθμός συμμετοχών σε έργα	1.716	32.193	5,3%	7n
Αριθμός μοναδικών φορέων σε έργα	505	11.306	4,5%	7n
Εγκεκριμένη χρηματοδότηση ΕΕ (εκατ. €)	644,72	14.431,85	4,5%	7n

ΠΗΓΗ: ΕΚΤ, Η ερευνητική δραστηριότητα των ελληνικών φορέων σε χρηματοδοτούμενα έργα, Πρόγραμμα «Ορίζοντας Ευρώπη», 2021-2022

## Αριθμός δημοσιεύσεων ανά εκατ. δαπανών για Έρευνα & Ανάπτυξη στις χώρες της ΕΕ για το έτος 2014

Δεδομένα: Eurostat, Web of Science, 2000-2014



## Do You Want to Become an IEEE Author?

Suppose you want to publish something that is as simple as

$$1 + 1 = 2$$

(1)

This is not a very impressive. If you want your article to be accepted by IEEE reviewers, you have to be more abstract. So, you could complicate the left hand side of the expression by using

$$1 = \ln(e) \text{ and } 1 = \sin^2 x + \cos^2 x$$

The right hand side can be stated as

$$2 = \sum_{n=0}^{\infty} \frac{1}{2^n}$$

Therefore, Eq. (1) can be expressed more “scientifically” as:

$$\ln(e) + (\sin^2 x + \cos^2 x) = \sum_{n=0}^{\infty} \frac{1}{x^n} \quad (2)$$

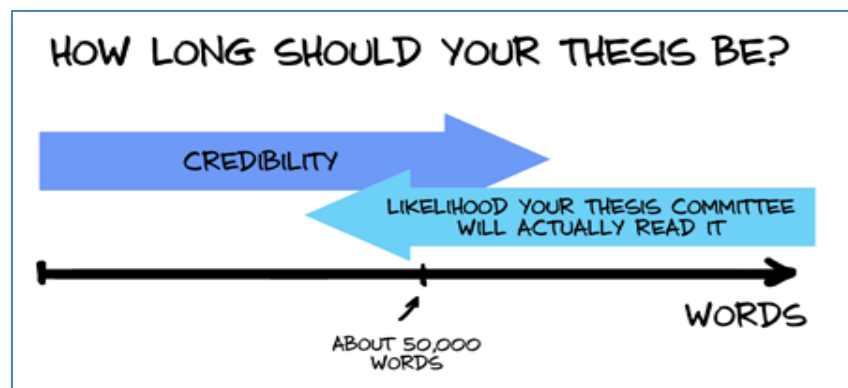
which is far more impressive. However, you should not stop here. The expression can be further complicated by using

$$1 = \cosh(y)\sqrt{1 - \tanh^2(y)} \text{ and } e = \lim_{z \rightarrow 0} \left(1 + \frac{1}{z}\right)^z$$

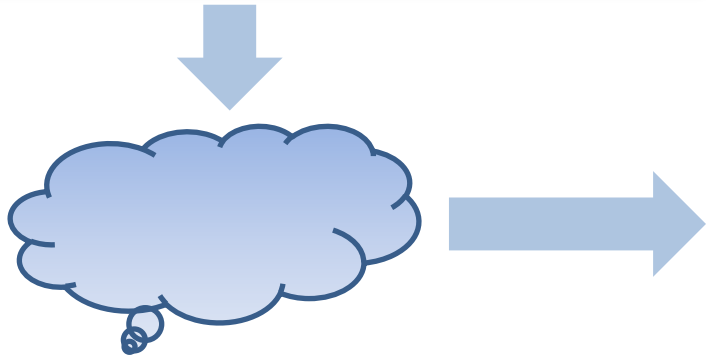
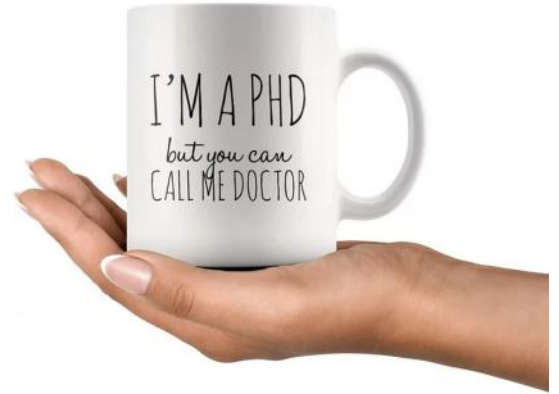
Eq. (2) may therefore be written as

$$\ln \left[ \lim_{z \rightarrow 0} \left(1 + \frac{1}{z}\right)^z \right] + (\sin^2 x + \cos^2 x) = \sum_{n=0}^{\infty} \frac{\cosh \left( y \sqrt{1 - \tanh^2 y} \right)}{2^n} \quad (3)$$

Note: Other methods of a similar nature could also be used to enhance your prestige, once you grasp the underlying principles.







## Μέρος II: Τεκμηρίωση & Δημοσίευση

1. Τι είναι η διαδικασία του peer-review;
2. Ποια είναι τα προβλήματα-περιορισμοί του;
3. Πως δημοσιεύουμε τα αποτελέσματα;
4. Υπάρχουν διαθέσιμα εργαλεία online;

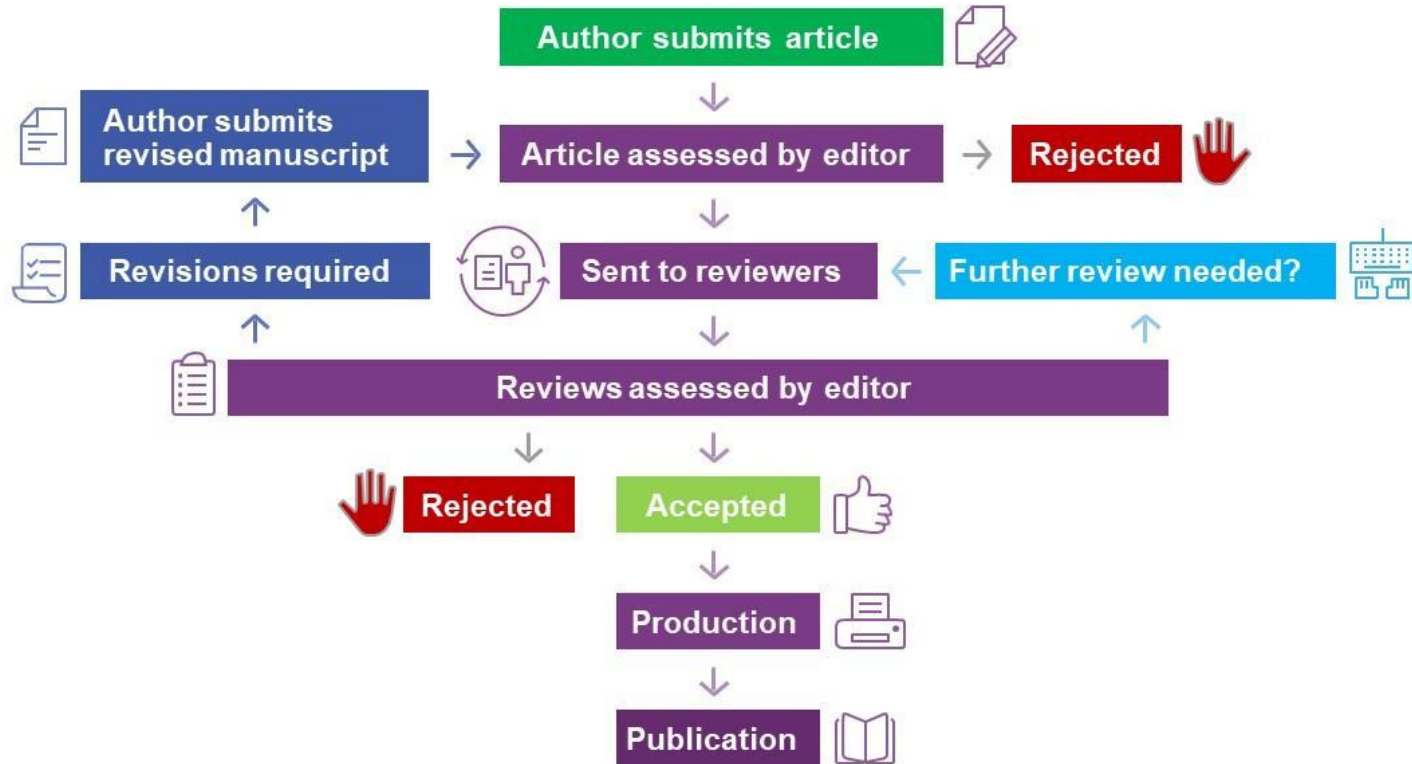




# PEER REVIEW CRITERIA GUIDE



# Peer Review Process





MIT CSAIL  @MIT\_CSAIL · 17h



19 years ago today MIT researchers got a computer-generated gibberish paper accepted to a predatory journal: [bit.ly/SCIgenStory](https://bit.ly/SCIgenStory)

Generate your own here: [bit.ly/SCIgenCS](https://bit.ly/SCIgenCS)

## Router: A Methodology for the Typical Unification of Access Points and Redundancy

Jeremy Stribling, Daniel Aguayo and Maxwell Krohn

### ABSTRACT

Many physicists would agree that, had it not been for congestion control, the evaluation of web browsers might never have occurred. In fact, few hackers worldwide would disagree with the essential unification of voice-over-IP and public-private key pair. In order to solve this riddle, we confirm that SMPs can be made stochastic, cacheable, and interposable.

### I. INTRODUCTION

Many scholars would agree that, had it not been for active networks, the simulation of Lamport clocks might never have occurred. The notion that end-users synchronize with the investigation of Markov models is rarely outdated. A theoretical grand challenge in theory is the important unification of virtual machines and real-time theory. To what extent can web browsers be constructed to achieve this purpose?

Certainly, the usual methods for the emulation of Smalltalk that paved the way for the investigation of rasterization do not apply in this area. In the opinions of many, despite the fact that conventional wisdom states that this grand challenge is continuously answered by the study of access points, we

The rest of this paper is organized as follows. For starters, we motivate the need for fiber-optic cables. We place our work in context with the prior work in this area. To address this obstacle, we disprove that even though the much-touted autonomous algorithm for the construction of digital-to-analog converters by Jones [10] is NP-complete, object-oriented languages can be made signed, decentralized, and signed. Along these same lines, to accomplish this mission, we concentrate our efforts on showing that the famous ubiquitous algorithm for the exploration of robots by Sato et al. runs in  $\Omega((n + \log n))$  time [22]. In the end, we conclude.

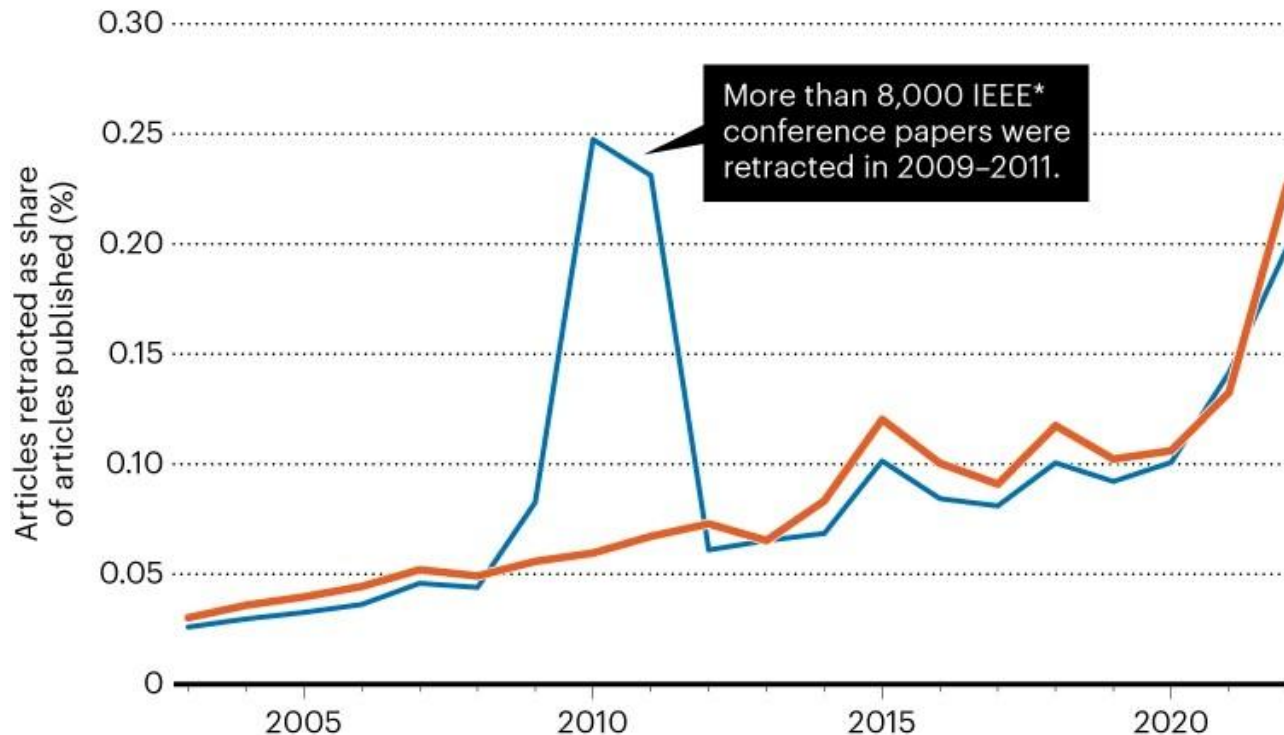
### II. ARCHITECTURE

Our research is principled. Consider the early methodology by Martin and Smith; our model is similar, but will actually overcome this grand challenge. Despite the fact that such a claim at first glance seems unexpected, it is buffeted by previous work in the field. Any significant development of secure theory will clearly require that the acclaimed real-time algorithm for the refinement of write-ahead logging by Edward Feigenbaum et al. [15] is impossible; our application is no different. This may or may not actually hold in reality.

## RISING RETRACTION RATES

The ratio of retracted papers to articles published has risen to above 0.2%.

— Including conference papers — Excluding conference papers

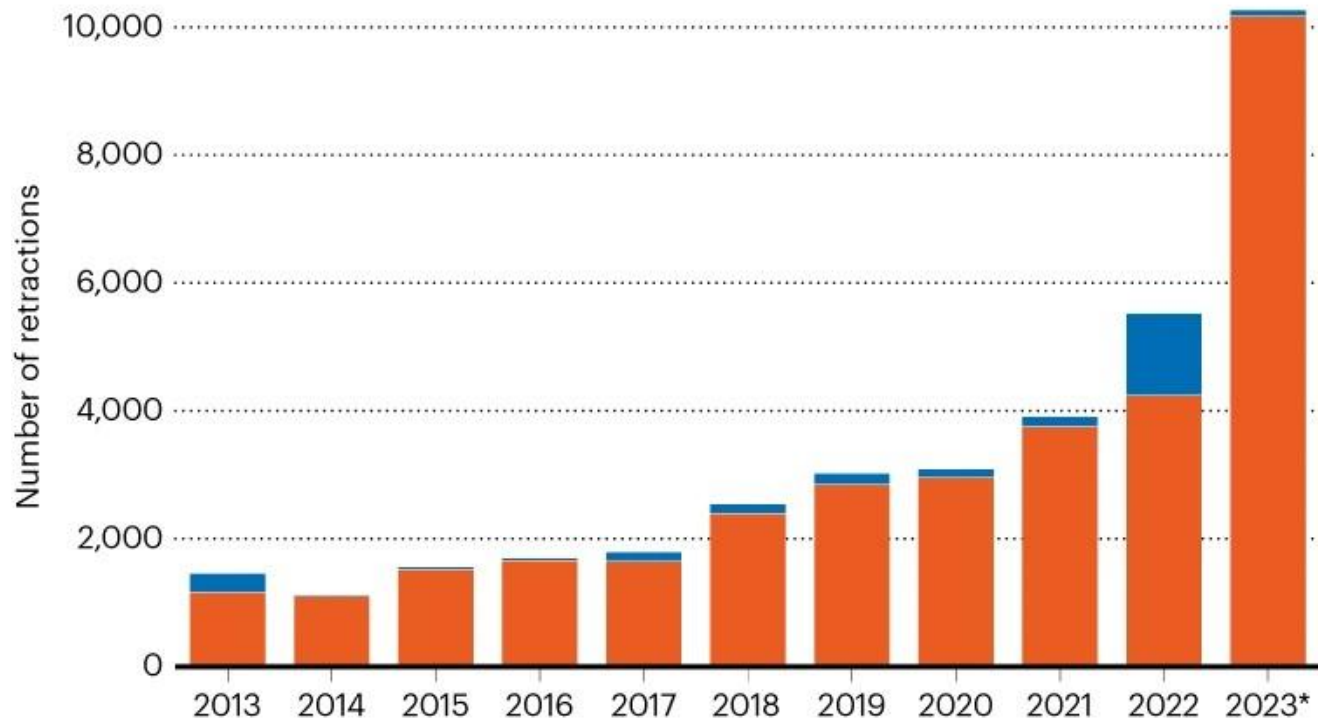


\*Institute of Electrical and Electronics Engineers

# A BUMPER YEAR FOR RETRACTIONS

Retraction notices in 2023 have passed 10,000, largely because of more than 8,000 retractions by Hindawi.

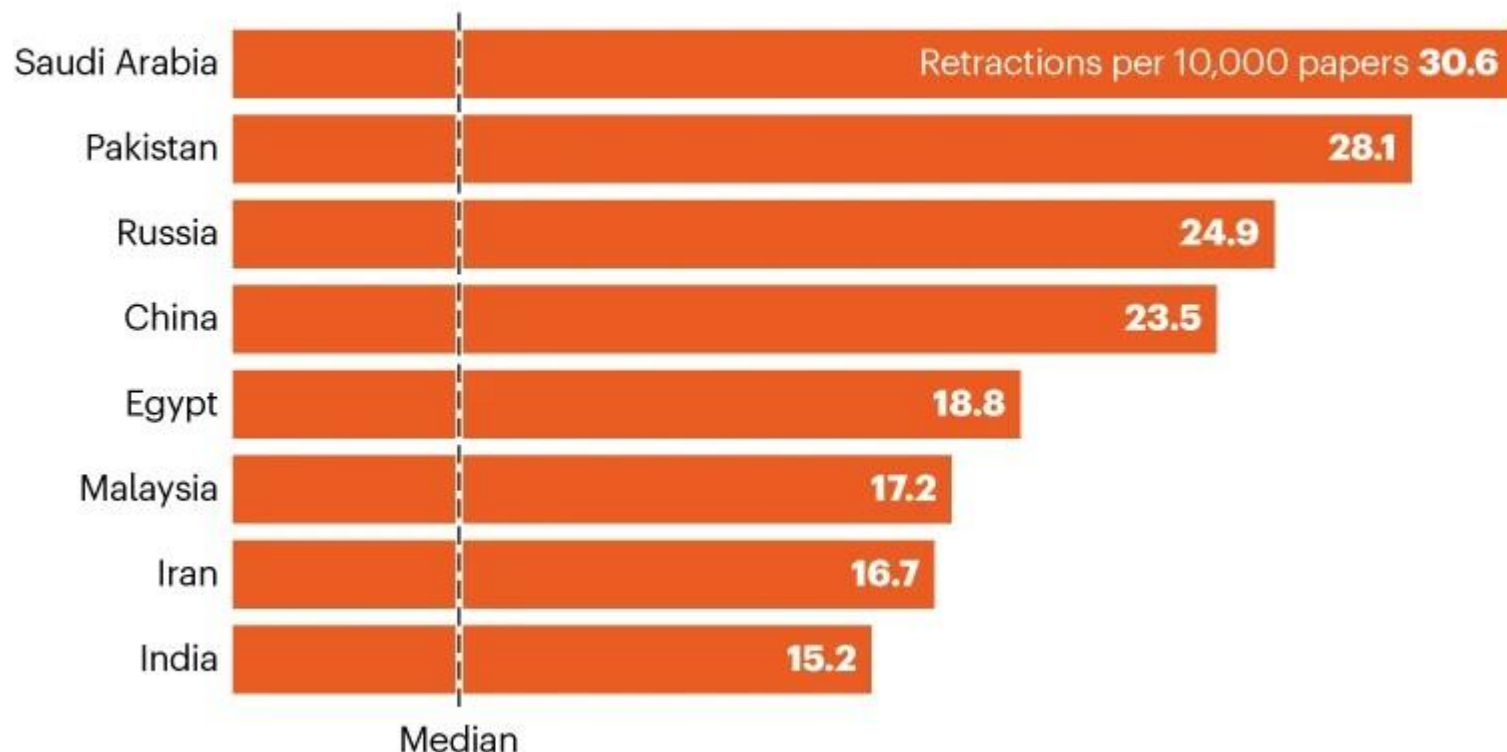
■ Journal articles ■ Conference papers



\*As of 8 December 2023

## COUNTRIES WITH HIGHEST RETRACTION RATES

Saudi Arabia, Pakistan, Russia and China have the highest retraction rates among countries with >100,000 papers\* published over the past two decades.



\*Total number of research papers according to Scopus: articles and reviews. Analysis excludes conference papers (and their retractions)



# Online repository: Zenodo

[Communities](#)[My dashboard](#)[Log in](#)[Sign up](#)

Published July 28, 2023 | Version 1.0

Conference paper

Open

## Lessons from recent disaster events and new technologies for future USAR missions

Harris Georgiou<sup>1</sup> ; Alexios Vlachopoulos<sup>1</sup>; Aspasia Tzeletopoulou<sup>1</sup>; Anastasia Andriopoulou<sup>1</sup>

Show affiliations

### ABSTRACT

On October 17th-21th, 2022, Hellenic Rescue Team of Attica (HRTA) participated in the 2nd Pilot in Marseille (France), in the context of the INTREPID project (EU H2020). The purpose was to test new technologies developed in the INTREPID project, especially the individual improvements and modules integration during the last 12 months of that period. INTREPID aims to make the first hours of emergency and natural disaster for First Responders safer and more efficient by developing technologies that accelerate operational risk assessment capability by creating a unique platform. This paper presents a brief overview of these activities, under the scope of recent USAR mission deployments of our team that highlighted the importance and operational need for such technologies.

**Keywords:** Rescue, field tests, crisis management, security and safety, first responders.

### Notes

2023 SafeAttica: New technologies for Civil Protection services (SafeGreece 2023), 25-27 Sept 2023 @ Greece.

40  
VIEWS

31  
DOWNLOADS

Show more details

### Versions

Version 1.0

Jul 28, 2023

10.5281/zenodo.8192264

**Cite all versions?** You can cite all versions by using the DOI [10.5281/zenodo.8192263](https://doi.org/10.5281/zenodo.8192263). This DOI represents all versions, and will always resolve to the latest one. [Read more.](#)

External resources

Indexed in

# Online repository: arXiv



We gratefully acknowledge support from the Simons Foundation, [member institutions](#), and all contributors. [Donate](#)

arXiv > cs > arXiv:1410.7100

All fields

Search

[Help](#) | [Advanced Search](#)

Computer Science > Artificial Intelligence

[Submitted on 27 Oct 2014]

## Estimating the intrinsic dimension in fMRI space via dataset fractal analysis - Counting the 'cpu cores' of the human brain

Harris V. Georgiou

Functional Magnetic Resonance Imaging (fMRI) is a powerful non-invasive tool for localizing and analyzing brain activity. This study focuses on one very important aspect of the functional properties of human brain, specifically the estimation of the level of parallelism when performing complex cognitive tasks. Using fMRI as the main modality, the human brain activity is investigated through a purely data-driven signal processing and dimensionality analysis approach. Specifically, the fMRI signal is treated as a multi-dimensional data space and its intrinsic 'complexity' is studied via dataset fractal analysis and blind-source separation (BSS) methods. One simulated and two real fMRI datasets are used in combination with Independent Component Analysis (ICA) and fractal analysis for estimating the intrinsic (true) dimensionality, in order to provide data-driven experimental evidence on the number of independent brain processes that run in parallel when visual or visuo-motor tasks are performed. Although this number is can not be defined as a strict threshold but rather as a continuous range, when a specific activation level is defined, a corresponding number of parallel processes or the casual equivalent of 'cpu cores' can be detected in normal human brain activity.

Comments: 27 pages, 10 figures, 2 tables, 47 references

Subjects: **Artificial Intelligence (cs.AI)**; Computer Vision and Pattern Recognition (cs.CV); Neurons and Cognition (q-bio.NC); Machine Learning (stat.ML)

Report number: HG/AI.1014.27v1 (draft/preprint)

Cite as: [arXiv:1410.7100](#) [cs.AI]

(or [arXiv:1410.7100v1](#) [cs.AI] for this version)

### Access Paper:

- [View PDF](#)
- [TeX Source](#)
- [Other Formats](#)

[view license](#)

Current browse context:  
cs.AI

< prev | next >  
[new](#) | [recent](#) | [1410](#)

Change to browse by:

cs  
cs.CV  
q-bio  
q-bio.NC  
stat  
stat.ML

### References & Citations

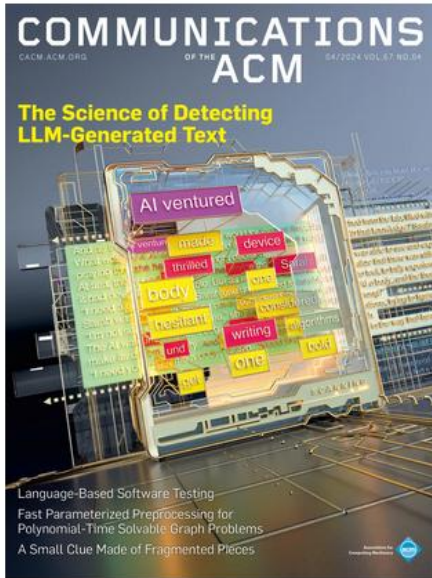
- [NASA ADS](#)
- [Google Scholar](#)
- [Semantic Scholar](#)

[1 blog link](#) (what is this?)

[DBLP - CS Bibliography](#)  
[listing LibTeX](#)

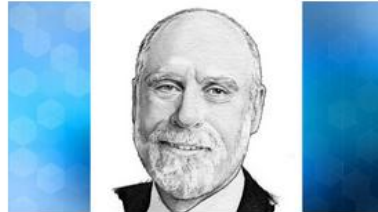


# Scientific magazine (peer-reviewed)



## April 2024 - Vol. 67 No. 4

### Features



[Opinion](#) Cerf's Up Mar 7 2024

### Thoughts on AI Interoperability

While the core transport protocols of the Internet are binary in character, one could imagine a more text-oriented exchange protocol for inter-ML systems.

Vinton G. Cerf

[Artificial Intelligence and Machine Learning](#)

Mar 25 2024

# Scientific journal (peer-reviewed)



## International Journal of Data Science and Analytics

Publishing model  
Hybrid

[Submit your manuscript](#)

[Editorial board](#) [Aims and scope](#) [Journal updates](#)

### Overview

The International Journal of Data Science and Analytics is a pioneering journal in data science and analytics, publishing original and applied research outcomes.

- Focuses on fundamental and applied research outcomes in data and analytics theories, technologies and applications.
- Promotes new scientific and technological approaches for strategic value creation in data-rich applications.
- Encourages transdisciplinary and cross-domain collaborations.
- Strives to bring together researchers, industry practitioners, and potential users of data science and analytics.
- Addresses challenges ranging from data capture, creation, storage, retrieval, sharing, analysis, optimization, and visualization.

**Editor-in-Chief**  
João Gama

 **Impact factor**  
2.4 (2022)

 **Submission to first decision (median)**  
18 days

 **Downloads**  
373,346 (2023)

### For authors

- [Submission guidelines](#) →
- [Language editing services](#) ↗
- [Ethics and disclosures](#) →
- [How to publish with us](#) →
- [Open Access fees and funding](#) →
- [Contact the journal](#) →
- [Collections and calls for papers](#) →

# Scientific conference (peer-reviewed)



## ISCRAM 2024 MÜNSTER, GERMANY

[HOME](#)

[CALL](#)

[COMMITTEE](#)

[FOR ATTENDEES](#)

[ABOUT](#)

[FAQ](#)


## HOME

### Welcome to ISCRAM 2024

We are delighted to inform you that the **ISCRAM 2024** conference will take place in **Münster/Germany**, from **May 25<sup>th</sup> to 29<sup>th</sup> 2024**. The conference follows a pracademic approach and will be jointly hosted by the **ERCIS Competence Center for Crisis Management (C<sup>3</sup>M)** at the **University of Münster** and the **State Fire Service Institute North Rhine-Westphalia (IdF)**.

The conference theme takes a process-centric view on crisis management: "*Embracing the Crisis Management Lifecycle*". The theme emphasizes a holistic and integrated process view of crisis management

### ISCRAM 2024 - SAVE THE DATE

 May 25th to 29th 2024

 Münster/Germany

### CENTRAL CONTACT

 [iscram2024@ercis.org](mailto:iscram2024@ercis.org)

 [+49251 83 38 000](tel:+492518338000)

# Scientific conferences – Calls of Papers (CfP)

## WikiCFP

A Wiki for Calls For Papers

Hi, xgeorgio

[Home](#)

- [Login](#)
- [Register](#)
- [Account](#)
- [Logout](#)

[Categories](#)

[CFPs](#)

- [Post a CFP](#)

[Conf Series](#)

[My List](#)

- [Timeline](#)

[My Archive](#)


[On iPhone](#)

[On Android](#)

athens


2024

Search


 Semantic Scholar

Find influential research

Search computer science papers

Powered by  Semantic Scholar

### Welcome!



WikiCFP is a [semantic wiki](#) for Calls For Papers in science and technology fields. There are more than [100,000 CFPs](#) on WikiCFP. Over [100,000](#) researchers use WikiCFP each month.

### Popular Categories

Category	CFPs
<a href="#">NLP</a>	2084
<a href="#">artificial intelligence</a>	8112
<a href="#">machine learning</a>	5190
<a href="#">computer science</a>	8112
<a href="#">computer vision</a>	1610

### Popular CFPs

Event	Users
<a href="#">ECAI 2024</a>	99
<a href="#">ACM-Ej/Scop...</a>	63
<a href="#">CTISC 2024</a>	57
<a href="#">CCVPR 2024</a>	55
<a href="#">GreeNet Sym...</a>	48

### Popular Lists

Owner	CFPs
<a href="#">sora</a>	16
<a href="#">davfof</a>	7
<a href="#">come4ad...</a>	2
<a href="#">hrsma2i</a>	3
<a href="#">Newo</a>	14

### Authors

- + Build my CFP list in minutes.
- + Search and sort by title, category, location and year.
- + Browse with graphical timeline.
- + Subscribe to RSS of lists and various [categories](#).
- + Get [email](#) and iCal reminders.

### Organizers

- + Present CFPs to thousands of researchers.
- + Broadcast CFPs to [Twitter](#) and [Facebook](#).
- + Push CFPs to targeted RSS subscribers.
- + Check numbers of views and users following my CFPs.
- + Update CFP information timely.

### Most Recent Calls For Papers

[Add to My List](#)

Event	When	Where	Deadline	Status	
<a href="#">AICIS 2024</a>	The 2024 International Conference on Automation, Intelligent Control and Information Science Jul 12, 2024 - Jul 14, 2024	Chongqing	Jun 30, 2024		<input type="checkbox"/>
<a href="#">ICCSIE 2024</a>	9th International Conference on Cyber Security and Information Engineering Sep 15, 2024 - Sep 17, 2024	Kuala Lumpur, Malaysia	Jun 15, 2024		<input type="checkbox"/>
<a href="#">ISIC-SIAW-MICCAI 2024</a>	Ninth ISIC Skin Image Analysis Workshop @ MICCAI 2024 Oct 10, 2024 - Oct 10, 2024	Marrakesh, Morocco	Jul 3, 2024		<input type="checkbox"/>
<a href="#">AASDS 2024</a>	Special Issue on Applications and Analysis of Statistics and Data Science N/A	N/A	Dec 31, 2024		<input type="checkbox"/>
<a href="#">DMM&amp;L 2024</a>	2nd International Conference on Decision Making in Medicine and Law: Opportunities and pitfalls of information technologies Nov 7, 2024 - Nov 8, 2024	Braga, Portugal	Aug 10, 2024		<input type="checkbox"/>

# Online LaTeX editor: Overleaf

Menu Upgrade OPTIMA\_conf\_LOD2021 Review Share Submit History Layout Chat

Code Editor Visual Editor Normal text B I Ω C Recompile

```
1 % This is samplepaper.tex, a sample chapter demonstrating the
2 % LLNCS macro package for Springer Computer Science proceedings;
3 % Version 2.20 of 2017/10/04
4 %
5 \documentclass[runningheads]{llncs}
6 %
7 \usepackage{graphicx}
8 % Used for displaying a sample figure. If possible, figure files
  should
9 % be included in EPS format.
10 %
11 % If you use the hyperref package, please uncomment the following
  line
12 % to display URLs in blue roman font according to Springer's eBook
  style:
13 % \renewcommand{\UrlFont}{\color{blue}\rmfamily}
14
15 \usepackage{cite}
16 \usepackage{amsmath,amssymb,amsfonts}
17 \usepackage{algorithmic}
18 \usepackage{textcomp}
19 \usepackage{xcolor}
20 \usepackage[colorlinks]{hyperref}
21 %\usepackage{colorinlistoftodos}{todonotes}
22 % \usepackage{color,soul} % used for colored highlights
23 \usepackage{nicefrac}
24
25
26 \begin{document}
```

Public Transport Arrival Time Prediction based on GTFS data

Eva Chondrodima<sup>1</sup>, Harris Georgiou<sup>1</sup>, Nikos Pelekis<sup>2</sup>, and Yannis Theodoridis<sup>1</sup>

<sup>1</sup> Dept. of Information, University of Piraeus, Piraeus, Greece  
(evachon, hgeorgiou, ytheodj)@unipi.gr

<sup>2</sup> Dept. of Statistics and Ins. Sci., University of Piraeus, Piraeus, Greece  
npelekis@unipi.gr

**Abstract.** Public transport (PT) systems are essential to human mobility. PT investments continue to grow, in order to improve PT services. Accurate PT arrival time prediction (PT-ATP) is vital for PT systems delivering an attractive service, since the waiting experience for urban residents is an urgent problem to be solved. However, accurate PT-ATP is a challenging task due to the fact that urban traffic conditions are complex and changeable. Nowadays thousands of PT agencies publish their public transportation route and timetable information with the General Transit Feed Specification (GTFS) as the standard open format. Such data provide new opportunities for using the data-driven approaches to provide effective bus information system. This paper proposes a new framework to address the PT-ATP problem by using GTFS data. Also, an overview of various ML models for PT-ATP purposes is presented, along with the insightful findings through the comparison procedure based on real GTFS datasets. The results showed that the neural network-based method outperforms its rivals in terms of prediction accuracy.

**Keywords:** estimated time of arrival - GTFS - GTFS-RT - GTFS validation - machine learning methods - mobility data mining - neural networks - public transport

## 1 Introduction

Public transport (PT) offers significant social and environmental benefits. More specifically, high quality PT services lead to: (a) a considerable improvement on the quality of citizens' life, e.g. access with access to public transportation help social inclusion, and (b) environmental benefits related to minimizing the CO<sub>2</sub> emissions of private vehicles. Public transportation goal is to provide efficient, reliable, and high quality services, in order to attract more passengers. The planning of high quality PT systems is a difficult task. PT networks are highly complex systems, due to the large number of passengers that are transported

# WatsonX (IBM)

The image displays three overlapping screenshots of the IBM Watson Studio interface, illustrating different stages of a machine learning workflow.

**Top-Left Screenshot: Join Operation Configuration**  
This screenshot shows the configuration for a 'Join' operation. The 'Left join' dropdown is selected. The 'Source' is set to 'ORDER\_DETAILS' with a suffix of '.x'. The 'Data set to be joined' is 'ORDER\_M...' with a suffix of '.y'. The 'JOIN KEYS' section shows 'ORDER\_DETAILS' joined to 'ORDER\_HEAD...' and 'ORDER\_DETAIL\_CO...' joined to 'ORDER\_NUM...'. An 'Add Join Key' button is visible at the bottom.

**Middle Screenshot: Search Nodes**  
This screenshot shows the 'Search Nodes' interface. A search bar is at the top. Below it, a list of nodes is displayed with expandable dropdown menus for each: Input, Activation, Convolution, Core, Metric, Loss, Normalization, Embedding, Recurrent, and Optimizer. A blue arrow points from the 'Flatt' node in the middle screenshot to the 'Convolution' node in this one.

**Bottom-Right Screenshot: Evaluation Events and Last Evaluation Result**  
This screenshot shows the 'NYC Learning Multiple Attr' model's evaluation page. The 'Evaluation Events' section features a line graph of accuracy over time. The accuracy starts at approximately 0.6, dips to 0.3, and then stabilizes around 0.6. The 'Last Evaluation Result' table provides the following data:

Version	90697ee3-99cc-45b5-91f1-a54af74eb075
Phase	monitoring
Accuracy	0.633
WeightedFMeasure	0.66
WeightedRecall	0.633
WeightedPrecision	0.693

The 'Performance Monitoring' section at the bottom includes an 'Edit configuration' link.

# Weka (ML)

**Weka Explorer**

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Open file... | Open URL... | Open DB... | Generate... | Undo | Edit... | Save...

**Filter**  
Choose: None

**Current relation**  
Relation: breast-cancer | Instances: 286  
Attributes: 10 | Sum of weights: 286

**Attributes**  
All | None | Invert | Pattern

No.	Name
1	<input checked="" type="checkbox"/> age
2	<input type="checkbox"/> menopause
3	<input type="checkbox"/> tumor-size
4	<input type="checkbox"/> inv-nodes
5	<input type="checkbox"/> node-caps
6	<input type="checkbox"/> deg-malig
7	<input type="checkbox"/> breast
8	<input type="checkbox"/> breast-quad
9	<input type="checkbox"/> irradiat

Remove

**Status**  
OK

**Weka Explorer**

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

**Classifier**  
Choose: `Logistic -R 1.0E-8 -M -1 -num-decimal-places 4`

**Test options**  
 Use training set  
 Supplied test set (Set...)  
 Cross-validation (Folds: 10)  
 Percentage split (%: 66)  
More options...

(Nom) class

Start | Stop

**Result list (right-click for options)**  
11:01:54 - functions.Logistic

**Classifier output**

```
Correctly Classified Instances      601      78.2552 %
Incorrectly Classified Instances    167      21.7448 %
Kappa statistic                    0.4966
Mean absolute error                 0.3063
Root mean squared error             0.3908
Relative absolute error             67.3928 %
Root relative squared error         81.9907 %
Total Number of Instances          768
```

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC
0	0.890	0.418	0.799	0.890	0.842	0.504
1	0.582	0.110	0.739	0.582	0.651	0.504
Weighted Avg.	0.783	0.310	0.778	0.783	0.775	0.504

=== Confusion Matrix ===

```
 a  b  <-- classified as
445 55 | a = tested_negative
112 156 | b = tested_positive
```

**Status**  
OK | Log | x 0



```
In [1]: # setup the matplotlib graphics library and configure it to show
# figures inline in the notebook
%matplotlib inline
import matplotlib.pyplot as plt
import numpy as np
```

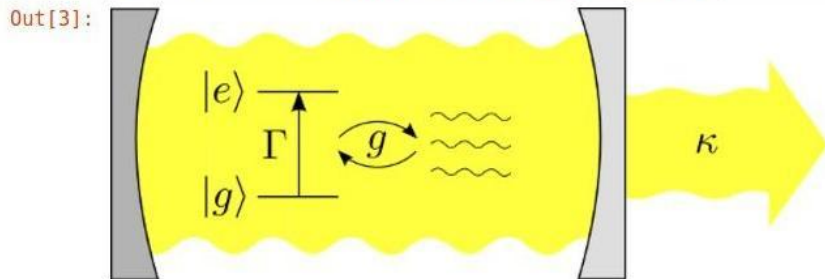
```
In [2]: # make qutip available in the rest of the notebook
from qutip import *

from IPython.display import Image
```

## Introduction and model

Consider a single atom coupled to a single cavity mode, as illustrated in the figure below. If there atom excitation rate  $\Gamma$  exceeds the relaxation rate, a population inversion can occur in the atom, and if coupled to the cavity the atom can then act as a photon pump on the cavity.

```
In [3]: Image(filename='images/schematic-lasing-model.png')
```





**In Depth: Linear Regression**

Just as naive Bayes (discussed earlier in [In Depth: Naive Bayes Classification](#)) is a good starting point for classification tasks, linear regression models are a good starting point for regression tasks. Such models are popular because they can be fit very quickly, and are very interpretable. You are probably familiar with the simplest form of a linear regression model (i.e., fitting a straight line to data) but such models can be extended to model more complicated data behavior.

In this section we will start with a quick intuitive walk-through of the mathematics behind this well-known problem, before seeing how before moving on to see how linear models can be generalized to account for more complicated patterns in data.

We begin with

```

import numpy as np
import matplotlib.pyplot as plt
import random

# Generate data
x = np.linspace(0, 1, 100)
y = 2 * x + 1 + random.randn(100)

```

Simple

Advanced Tools

Console

Julia

Seattle Weather: 2012-2015

```

import pylab
from numpy import cos, linspace, pi, sin, random
from scipy.interpolate import splprep, splev

# Generate data
N = 100
x = linspace(0, 1.75 * 2 * pi, 100)
y = 2 * x + 1 + random.randn(N)

# Perform calculations
spl = splprep([x, y], s=0.1)
splev = splev(x, spl)

# Plot the data
plt.plot(x, y, 'o')
plt.plot(x, splev[0], 'r-')
plt.show()

```

- [001] Ν. Ανδρεαδάκης, Μ. Βαμβούκας, Οδηγός για τη σύνταξη γραπτής ερευνητικής εργασίας (Ατραπός: 2005).
- [002] Α. Τσιπλητάρης, Θ. Μπαμπάλης, Δέκα παραδείγματα μεθοδολογίας επιστημονικής έρευνας (Ατραπός: 2006).
- [003] Σ. Θεοφανίδης, Μεθοδολογία της επιστημονικής σκέψης και έρευνας (Μπένος: 2002).
- [004] Ι. Παρασκευόπουλος, Μεθοδολογία επιστημονικής έρευνας, τόμος-Ι (Παρασκευόπουλος: 1993).
- [005] Ι. Παρασκευόπουλος, Μεθοδολογία επιστημονικής έρευνας, τόμος-ΙΙ (Παρασκευόπουλος: 1993).
- [006] Μ. Ψαρρός, Κ. Ζαφειρόπουλος, Επιστημονική έρευνα (Τυπωθήτω: 2001).
- [007] Κ. Howard, J. Sharp, Η επιστημονική έρευνα (Gutenberg: 1996).
- [008] A. Walford, Guide to reference material, 3rd/ed. (Library Assoc., London: 1975).

# Σύνοψη

- Περιεχόμενα:
  - Τι είναι τα επιστημονικά-τεχνικά κείμενα
  - Γιατί είναι σημαντική η οργάνωση και η τεκμηρίωση.
  - Τι είναι το peer-review και ποια είναι τα προβλήματα-περιορισμοί στην εφαρμογή του.
  - Επιστημονικές μελέτες και δημοσιεύσεις:
    - Conferences, magazines, journals, open-access repositories.
- Αναφορές:
  - «Εισαγωγή στη Μηχανική Μάθηση και στην Αναλυτική Δεδομένων», Χ. Γεωργίου, Α΄ κύκλος ανοικτών μαθημάτων ΕΠΕ – <https://youtu.be/mlU4SvyfRqA>
  - «Εφαρμογές της Τεχνητής Νοημοσύνης στον πραγματικό κόσμο», Χ. Γεωργίου, Α΄ κύκλος ανοικτών μαθημάτων ΕΠΕ – <https://youtu.be/d2HnlWyQse4>
  - «Particle Swarm Optimization and RBF Neural Networks for public transport arrival time prediction using GTFS data», Ε. Chondrodima, Η. Georgiou, Ν. Pelekis, Υ. Theodoridis. [\*International Journal of Information Management Data Insights \(IJIMDI\)\*, Vol. 2, Issue 2, Nov. 2022, 100086 \(doi: 10.1016/j.jjime.2022.100086\)](#)

```

MOVE 1 TO DATA-C(N-T).
ADD 1 TO N-CHANGED.
GO TO LOOP-SCAN.
SELECT-CL2.
ADD DATA-X(N-T) TO SUM2-X.
ADD DATA-Y(N-T) TO SUM2-Y.
ADD 1 TO N-CL2.
IF DATA-C(N-T) EQUAL 2 GO TO LOOP-SCAN.
MOVE 2 TO DATA-C(N-T).
ADD 1 TO N-CHANGED.

```

```

91 id : Integer := 0; -- target ID (counter)
92 det : Integer := 0; -- detection slots in sequence
93 pur : Integer := 0; -- rel. power of detection
94 pur0 : Integer := detLimit; -- rel. power baseline (adapt
95 disp : Boolean := False; -- target reporting (flag)
96
97 begin
98 -- process the FOV slots --
99 for p in 1..(seekerData'length)-1 loop
100 -- rel. power is current detection 'step'
101 pur := abs(seekerData(p+1)-seekerData(p));
102 if pur >= detLimit then
103 -- detection valid, continue analysis
104 if pur > pur0+detLimit then
105 -- strong new 'step' from baseline (new target)
106 pur0 := pur; -- update the baseline
107 det := 0; -- reset the run-length
108 disp := False; -- enable target reporting
109 end if;
110
111 det := det + 1;
112
113 if
114
115 d:
116 p:
117 d:

```

**Ανάλυση Ιατρικής Εικόνας μέσω Η/Υ**

- Εικόνα (2-D): Επικλυτόμενες δομές ιστών
- Τομογραφία (3-D): Όγκος πληροφοριών
- Διαφορετικές τεχνολογίες απεικόνισης
- Διαφορετικά διαγνωστικά χαρακτηριστικά
- Η διαγνωστική πληροφορία συνήθως δεν είναι καλώς ορισμένη (θόρυβος, ασάφειες δομών)
- Η διαγνωστική διαδικασία είναι συνήθως ασαφής, πολύπλοκη και βασίζεται στην εμπειρία (ιατρός)

⇒ Η χρήση Η/Υ επιτρέπει την αυτόματη επεξεργασία και ενοποίηση (τομογραφία) μεγάλου όγκου δεδομένων απεικόνισης

⇒ ...αλλά εξακολουθεί να έχει σημαντικούς περιορισμούς ως προς τη σημασιολογική ερμηνεία τους (διαγνωστική πληροφορία)

Παράδειγμα τριβασικής αναστοχαστικής μαγνητικής τομογραφίας (γυναικα) - Wikipedia.org

- Hamming (7,4) error correction codes in **R**
- Kmeans clustering in **COBOL**
- Bi-directional Associative Memory (BAM) in **Arduino/C**
- Linear Regression in **SQL, Matlab**
- ...

YouTube:

**@ApneaCoding**



<https://www.youtube.com/@apneacoding>

<https://www.facebook.com/apneacoding>

Github:

**@xgeorgio**



<https://github.com/xgeorgio>

<http://apneacoding.eu>

# Ένας ψηφιακός κόσμος γεμάτος γνώση για όλους

Σύμφωνα με το Καταστατικό της Ένωσης Πληροφορικών Ελλάδας, ένας από τους βασικούς σκοπούς της λειτουργίας της είναι η προώθηση της γνώσης και χρήσης των πληροφορικών αγαθών από το κοινωνικό σύνολο και η εξάλειψη της τεχνοφοβίας και του "αναλφαριθμισμού" στην Πληροφορική.



<https://courses.epe.org.gr>

Σχετικά με τα ανοικτά μαθήματα της Ένωσης Πληροφορικών Ελλάδας:

- ✓ Τα μαθήματα πραγματοποιούνται εξ ολοκλήρου διαδικτυακά, ζωντανά μέσω της πλατφόρμας Zoom.
- ✓ Η συμμετοχή σε όλα τα μαθήματα είναι ελεύθερη για οποιονδήποτε από οπουδήποτε στην Ελλάδα ή στο εξωτερικό.
- ✓ Δεν υπάρχει οικονομικό κόστος ή άλλες προϋποθέσεις συμμετοχής.
- ✓ Οι Εισηγητές είναι μέλη της Ένωσης Πληροφορικών Ελλάδας και πραγματοποιούν τα μαθήματα εθελοντικά.
- ✓ Τα μαθήματα μαγνητοσκοπούνται και παραμένουν διαθέσιμα για σύγχρονη παρακολούθηση στο Αρχείο Μαθημάτων.
- ✓ Η εκπαίδευση που παρέχεται μέσω των ανοικτών διαδικτυακών μαθημάτων είναι άτυπη και δεν παρέχονται βεβαιώσεις παρακολούθησης στους συμμετέχοντες.



# Ερωτήσεις



**Χάρης Γεωργίου (MSc,PhD)**

<https://www.linkedin.com/in/xgeorgio/>

[https://twitter.com/xgeorgio\\_gr](https://twitter.com/xgeorgio_gr)