Tahrir Square Math Club

Agenda

Welcoming word by prof. Wafik Lotfallah

Math clubs organizers

Vision

Goals

Challenges

Proposal

Welcoming Word

Prof. Wafik Lotfallah

Vision

Towards an economic prosperity through useless progress

Faculty of Arts Lecturer
Cairo Uni
Egyptian University History

Common Observation

CS   Why Statistics?   LLM

Eng   Why Numerical Methods?   PIM

Math   Why..?   Career Shift

Quick Success

Consumer not innovator

Use ChatGPT, NOT Compete with it

Dan Roberts

I am a Research Scientist at OpenAI, working on *[redacted]*, and also a Visiting Scientist at the Center for Theoretical Physics at MIT. Previously, my research focused on the ways in which tools and perspectives from theoretical physics can be applied to AI.

I am a co-author of The Principles of Deep Learning Theory, co-authored with Sho Yaida, and based on research in collaboration with Boris Hanin. You can buy a copy in print from Amazon, directly from Cambridge University Press, or download a free draft from the arXiv!

If that sounds interesting, but perhaps also a bit much, you could instead check out my essays, Black Holes and the Intelligence Explosion and Why is AI hard and Physics simple?, or listen to to my podcast interview, What Physics Can Teach Us About AI.
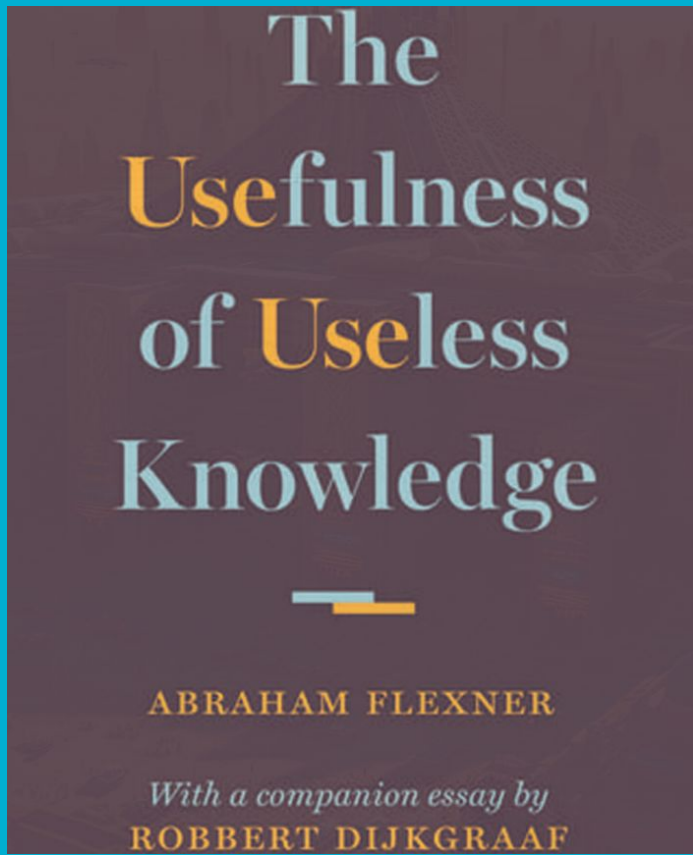
I'm also a member of the advisory committee for the AIMO Prize, and I'm very excited about the development of AI models that can reason, mathematically or otherwise.

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(just redirects back here)

Only a theoretical physicist can do it

Maryam Mirzakhani

The beauty of mathematics only shows itself to more patient followers

First women to be awarded Fields Medal

The
Usefulness
of Useless
Knowledge

ABRAHAM FLEXNER

With a companion essay by
ROBBERT DIJKGRAAF

Institute of Advanced Study

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FORUM INSTITUTIONAL

Here's why we need to fund fundamental
scientific research

Jan 19, 2023

World Economic Forum

Economic growth

Why Basic Science Matters for
Economic Growth

Public investment in basic research will pay for itself.

Philip Barrett, Niels-Jakob Hansen, Jean-Marc Natal, Diaa Noureldin

October 6, 2021

Listen with Speechify
0:00   4:10

International Monetary Fund

Quote

"We find that basic scientific research affects more sectors, in more countries and for a longer time than applied research (commercially oriented R&D by firms)"

EPFL

⌂ / About ⊙ / Facts ⊙ / Data stories archive / Basic science research is also a source of new talents for society.

Basic science research is also a source of new talents for society.

Quote: Contrary to popular belief, not all scientists trained at EPFL follow an academic career .. source of highly skilled labour for Switzerland.

Conclusion

- Individual Skill

- Social talent attraction

- Nations Economy

Situation

- Individuals do not believe in Math -> Quick success
- Best talents travel abroad -> No community
- Economy degraded -> No innovation

Goals

- Assisting individuals
- Building a community, not dependent on a single entity
- Cooperation with the government

Yao's Class

YAO CLASS
Home > Undergraduate > Yao Class

- Students are awarded MIT, Stanford and other prestigious universities scholarships.
- China's endeavor to cultivate innovative talents.

Aspirations

- Abroad scholarships for individuals.
- Communication circle with Egyptians abroad.
- Internal fund by the government or external by others.

Activity

Regardless of the activity, like Competition, Workshop, Undergraduate Research, ..etc, What matters is the outcome not the approach.

Tools

Halls

Ewart Memorial Hall

Falaki Mainstage Theater

Oriental Hall

AUC Tahrir Square Venues

Tools

Dates

mm/dd/yyyy, --:-- --	📅

mm/dd/yyyy, --:-- --	📅

Add Date	Remove Date

Top Dates Submissions

Date	Count
6 February 2025 - 6:00 PM	187
2 February 2025 - 6:00 PM	22
4 February 2025 - 6:00 PM	16

Collectivae

Tools

Dr. Ahmed El-Refaie

Challenges

Transportation Outside Big Cairo

Government

Minority Respecting Mechanism

Adel Sobhy, MSA

Decide 4 workshops

User-base Preference

100 - Python

20 - Statistics

5 - Algebraic Geometry

2 - Homotopy Theory

Majority

$100/127 = 0.8$

3 workshops -> Python

Decide 4 workshops

Minority Respecting

1 workshop -> Python

1 workshop -> Statistics

1 workshop -> Algebraic Geometry

1 workshop -> Homotopy Theory

Voting Power

Jumana   Python   Time-series Analytics   1

Tameem   Python   Recommendation Engine   1

Rashid   Python   Recommendation Engine   1

Layla   Algebra Representation Theory   3

2 Workshops: Rep Th. (3), Rec. Eng (1+1).

How?

Algebra power = Python power

$$\sum_i \text{power of vote } i = \sum_i \text{power of vote } i$$

System of Linear Equations

Instructor-student gap

Discussion