

Opening Science

hacking

Warsaw Hackerspace

board member

science

former student of
University of Warsaw



Paweł Chojnacki

<http://alxd.org>

**software
engineering**

at 10Clouds

startup

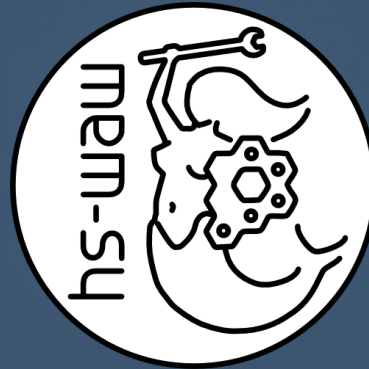
Human Tech Art

regular guest

My projects



OpenBCI



Hackerspace
Warsaw



Investigating
neurostimulators

What is open source?



the idea of sharing isn't new

it just had to be respecified



The Four Freedoms

- 0. to run the program for any purpose
- 1. to study how the program works, and change it
- 2. to redistribute copies
- 3. improve the program and release improvements



Open Source



Creative Commons



Open Hardware



Open Access

Scientific publication process

competition

**not cooperation
driven**

**scarcity of
resources**

grant funds

authority-based

replication, not
continuing research:
insufficient know-how

individual propositions
often reviewed based on
researcher's standing

migration between
research centers almost
inexistent

By contrast:

open source world

**meritocratic on issue
basis**

**authorities only
arbitrary**

ability to fork

very mobile

unlimited resources

Open access



Green access

self-archiving



arXiv

PubMed Central

SSRN

RePEc

often only preprint

no peer review

not all journals agree

Journal classification:

White

no self-archiving

Yellow

only pre-print

Gold

already open

Blue

only post-print

Green

post- and pre- print

Gold access

normal publication

PLOS journals

BMC journals



PLOS
**Open for
Discovery**

free to read



**expensive
to publish**

PeerJ

Revolution in open research?

PeerJ Preprints

sea of knowledge for everyone

PeerJ

peer-reviewed and chosen
based on quality, not impact

\$199

2 articles/year

\$299

unlimited

\$99

for life

1 article/year

per researcher

Who reviews the articles?

everyone!

Open review process

Researcher's github



How can we publish openly?

quality

impact

access

prestige

Suggestion:

**mandatory green
archiving?**

Suggestion:

bonus points

for

**Open Access publications
when awarding grants**

**How to open the
research itself?**

Open tools, open methods:



Let others replicate!

Publication is only a summary.

Why not share your **results**?

Open Notebook Science

Let's make it a standard!

Crowdfunding research

When there are no grants...

kickstart the research!

Who?

Science
enthusiasts

Groups of
interest

Foundations

Why?

Curiosity

Personal
interests

Will to help

How?

[IndieGoGo](#)

[Experiment](#)

I am a little mouse and I want to live longer!

Story

Updates 10

Comments 91

Funders 219

Gallery 1



Email



Embed



Link



Following

\$22,258 USD

RAISED OF \$15,000 GOAL

148%

0 time left

This campaign started on Sep 06 and closed on October 20, 2013 (11:59pm PT).

Verified Nonprofit

Flexible Funding

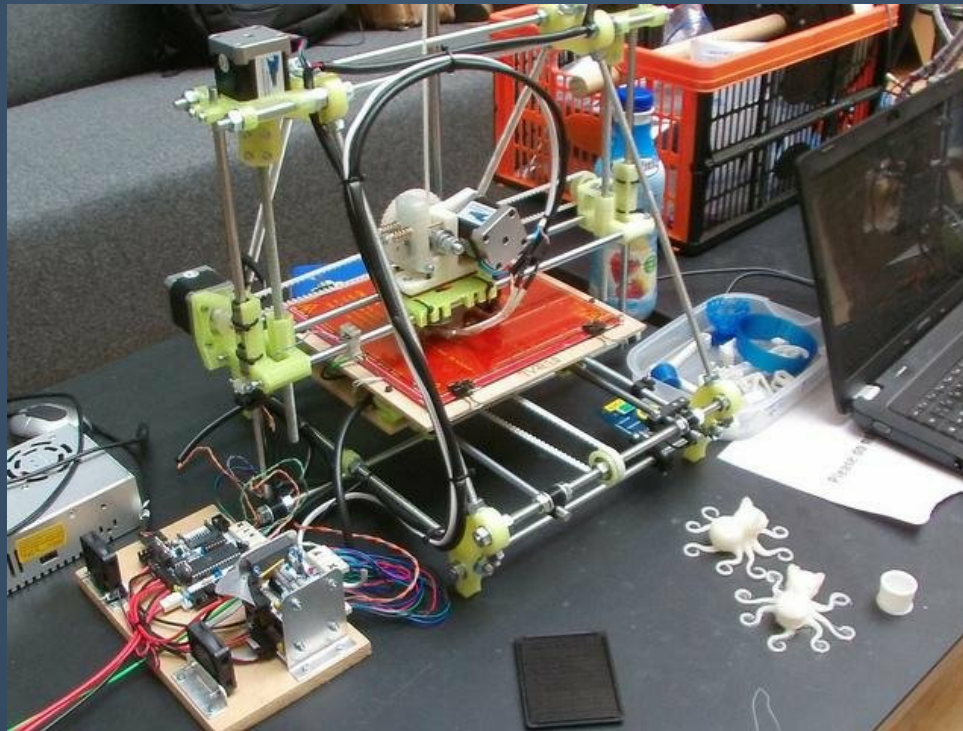
CAMPAIGN CLOSED

This campaign ended on October 20, 2013

SELECT A PERK

**Where does the research
happen?**

Research in a Do-It-Yourself world



hacker & makerspaces

natural refugee from the
stiff rules of the Academy

trying, hacking, breaking,
making

only for the passionate

experts in their fields,
even without formal education

you don't pay them
you have to interest them

short attention span
and cryptic culture

experts, not associates

Out- and opensourcing

many possibilities



Biohackerspaces









What's next?

Humanities?