Kyiv, Covid, Climate Change and Crowdsourcing

DPNC Seminar, UNIGE
2 March 2022

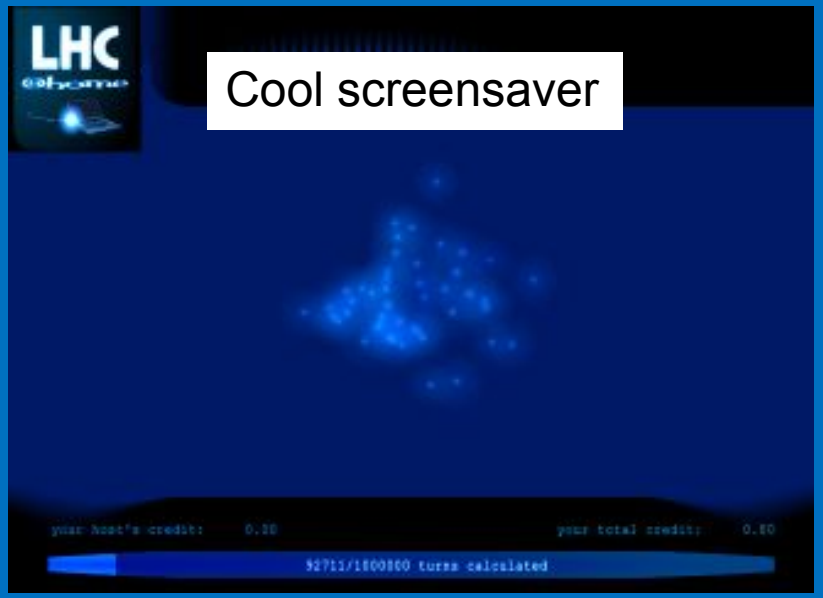
François Grey
Citizen Cyberlab, CUI
Crowd4SDG

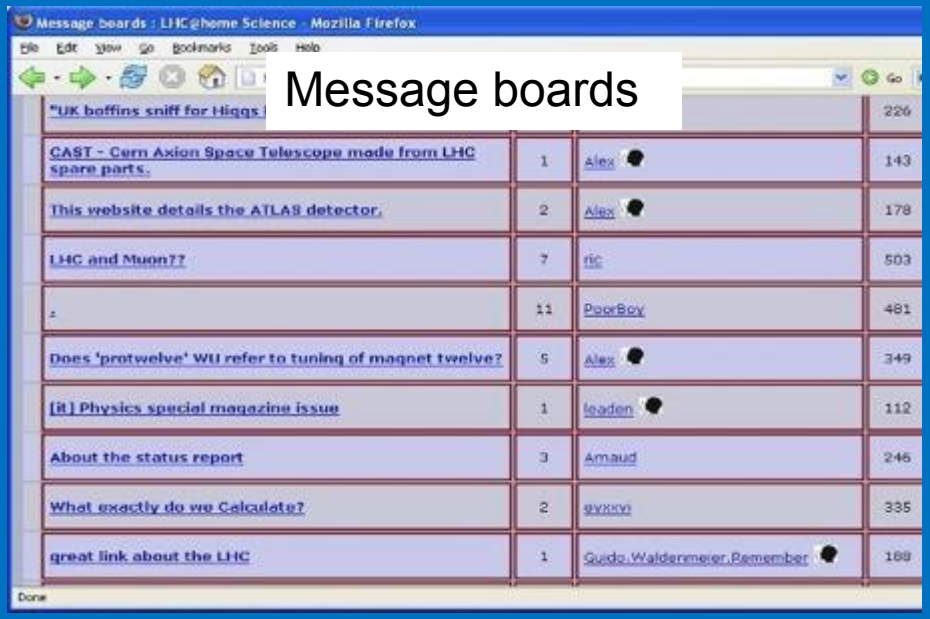
Prologue

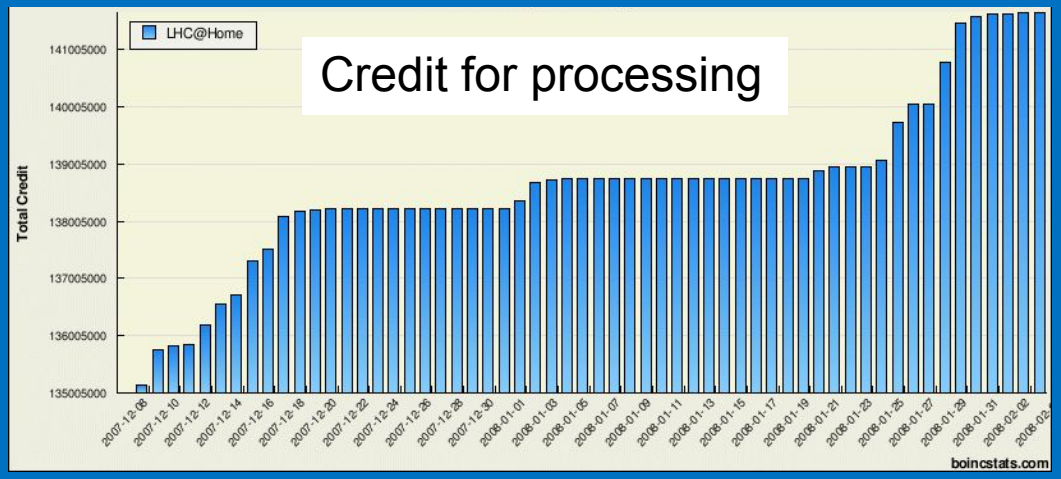
1999: SETI@home

2004: LHC@home “Sixtrack” built on BOINC

Why did volunteers participate?







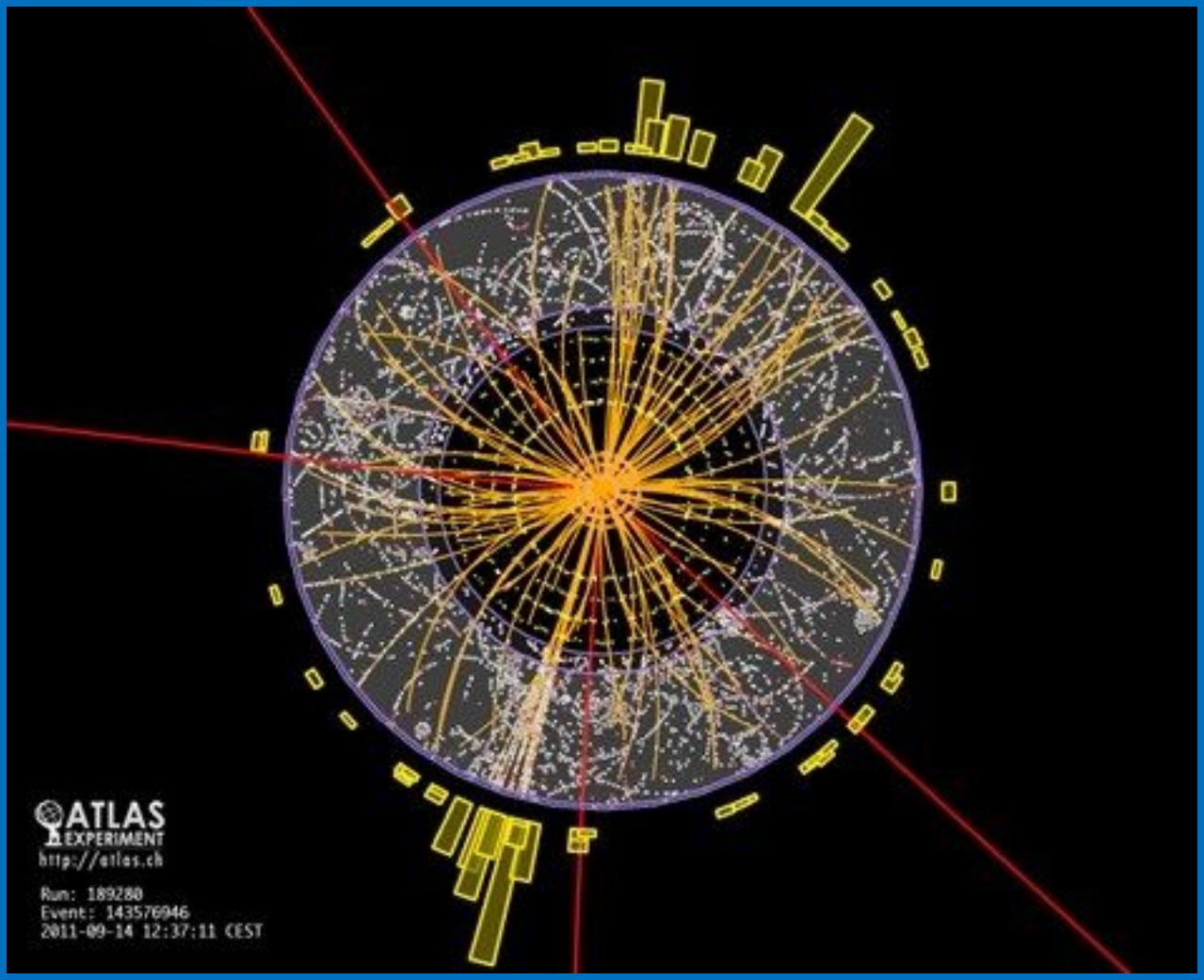
Comment by a volunteer

Thanks for this extremely interesting thread!

I am new to T4T and BOINC and I really appreciate the learning potential of such projects. However, from my perspective what is the most motivating aspect of T4T is that it allows non-experts to contribute to high-level science project like testing the Standard Model. It is amazing how it allows the public to become actively involved in the research and become a part of scientific community.

Recent Technological Evolution

2011: LHC@home “Test4Theory”



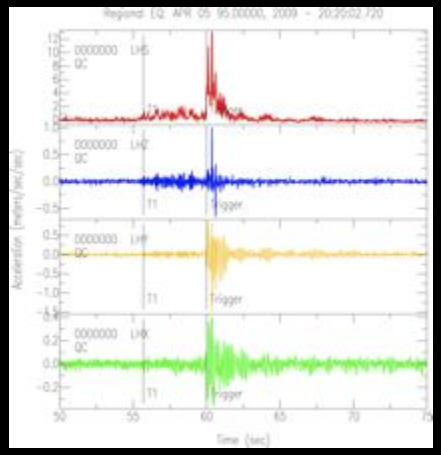
2021: 50-200k BOINC jobs (increasingly backfilled jobs)

Courtesy Laurence Field, CERN IT Dept.

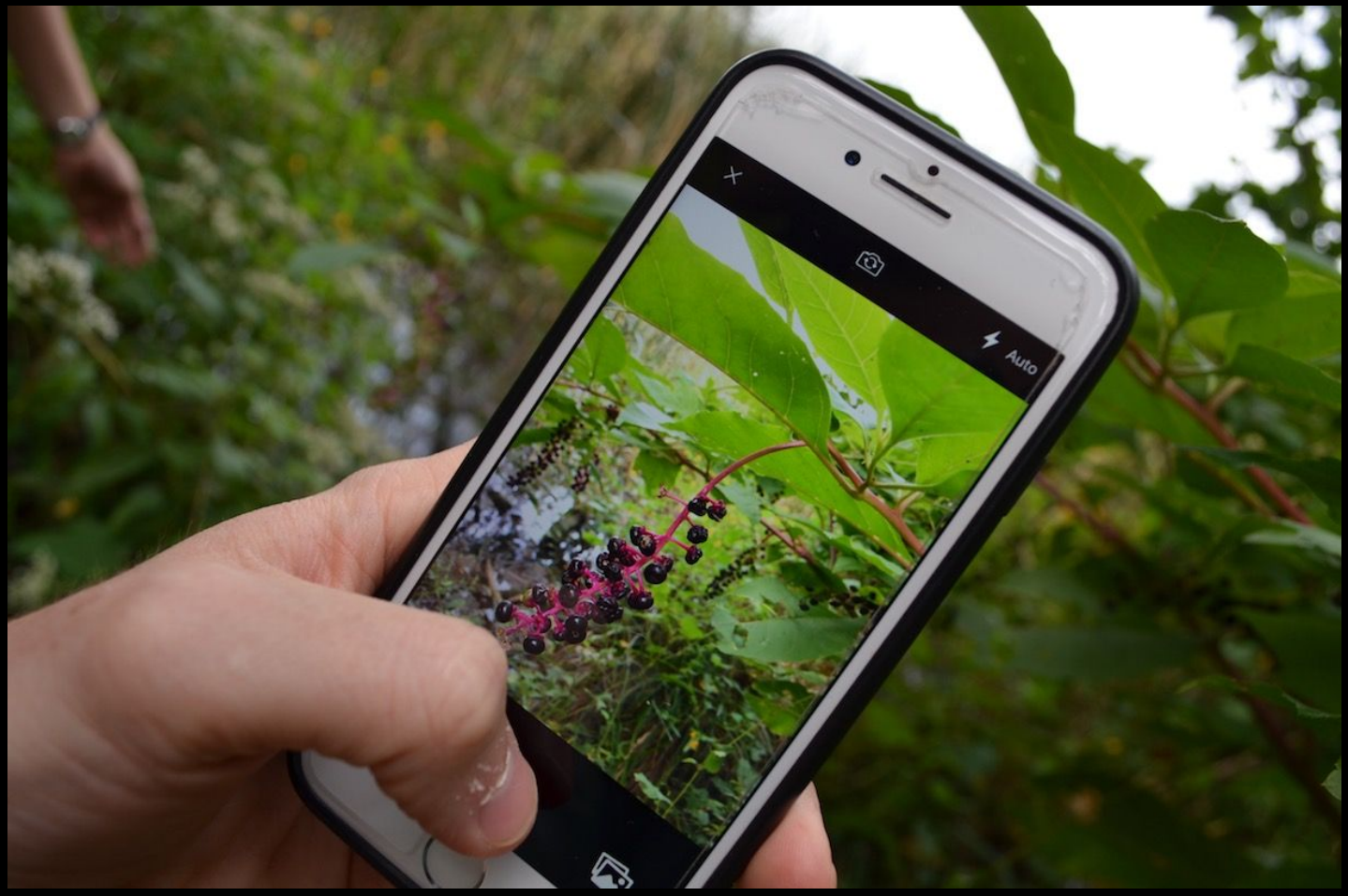
GalaxyZoo (2007)
Volunteer galaxy classification
now part of Zooniverse

Foldit (2008)
volunteer protein folding

Quake Catcher Network (2008) volunteer seismic detection



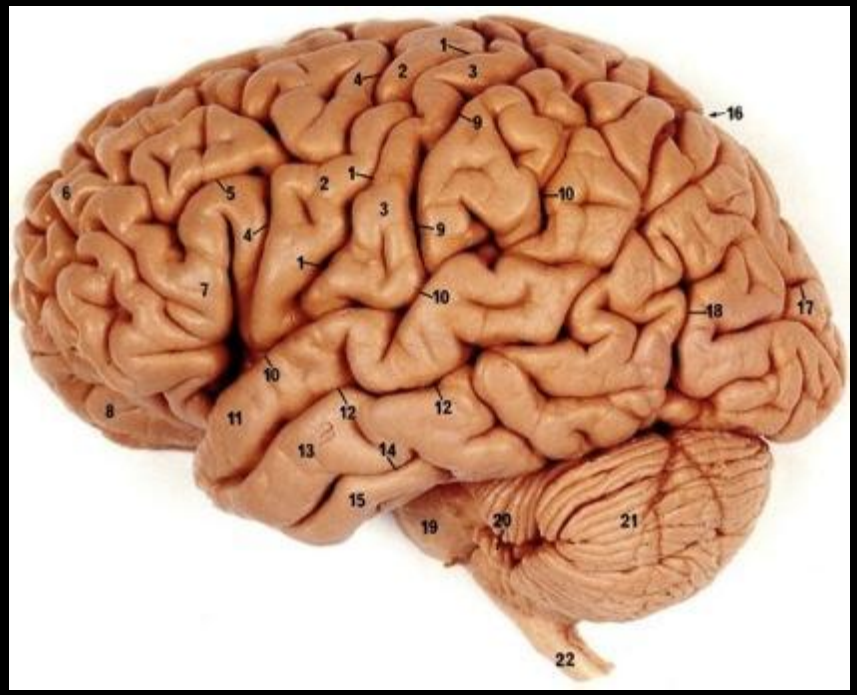
iNaturalist on smartphone (2013) volunteer biodiversity monitoring



Crowdsourcing for Science

Volunteer Computing

Volunteer Sensing



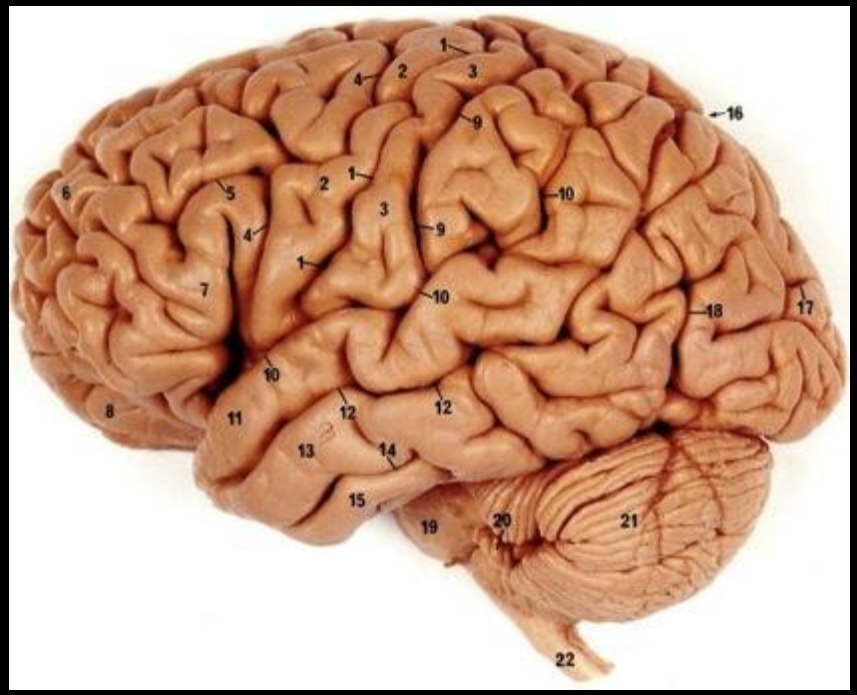
Volunteer Thinking

Crowdsourcing for Science

The largest scientific resource on the planet?

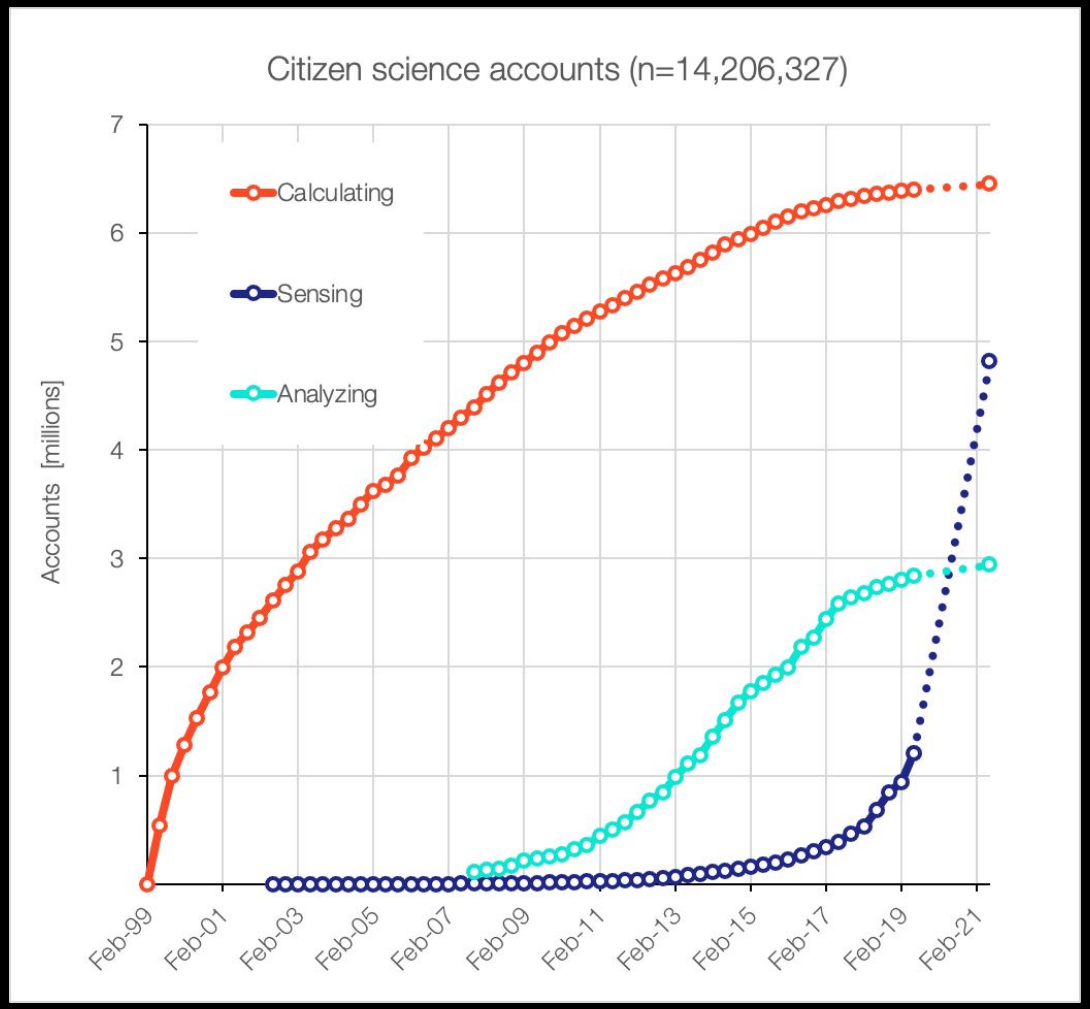
2bn

6bn



8bn

Evolution of number of users



Courtesy Bruno Strasser et al. UNIGE

since 2009:
University of Geneva
UN Institute for Training and Research
European Organization for Nuclear Research

“Rethinking Public Participation”

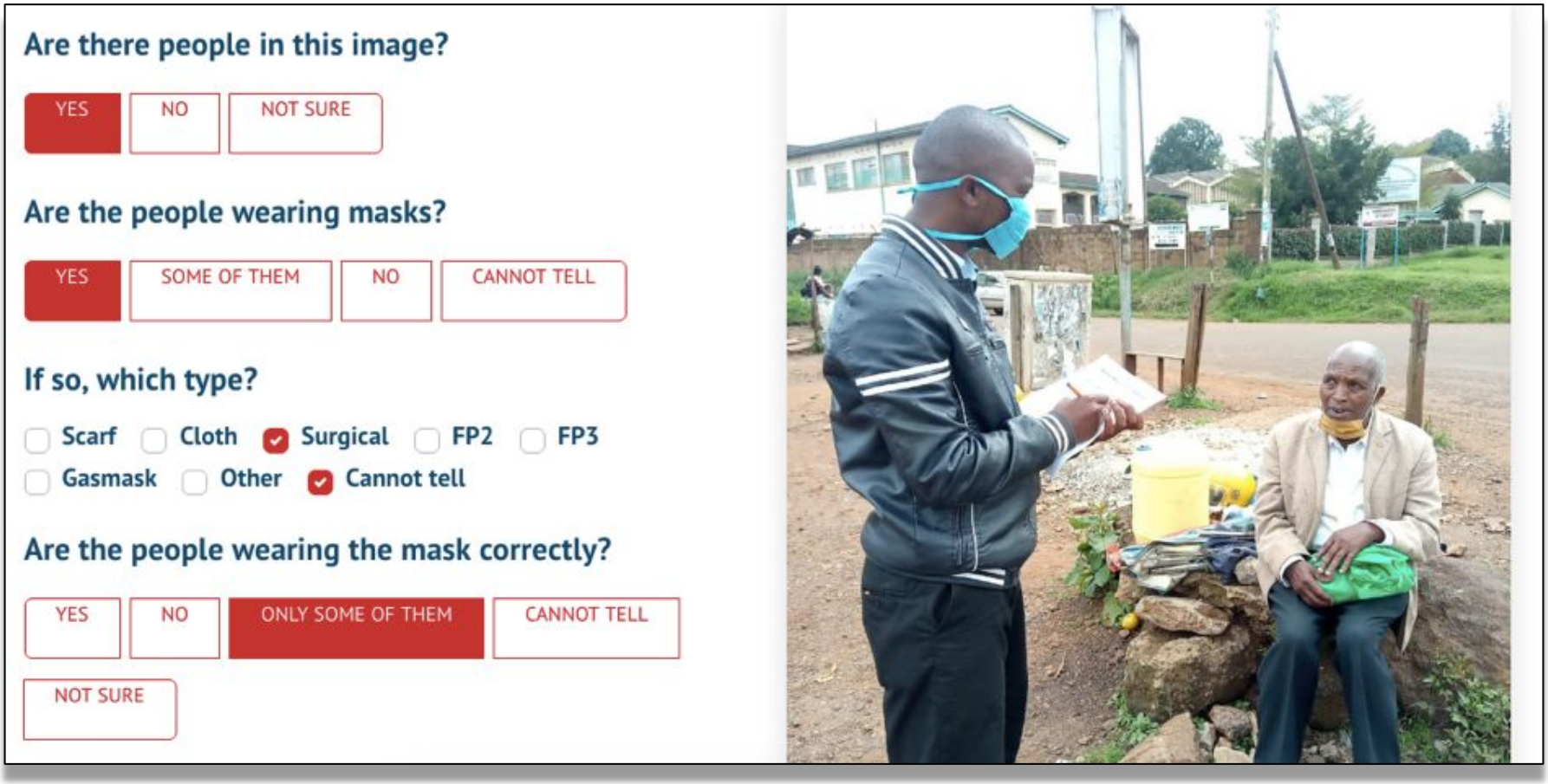
Crowd4SDG

The aim of the Crowd4SDG project is to explore and assess whether, to what degree and according to which scientific standards **citizen science** can contribute to the twin tasks of:

- **tracking progress** towards the SDGs
- generating **grassroots innovation** that enable such progress

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872944

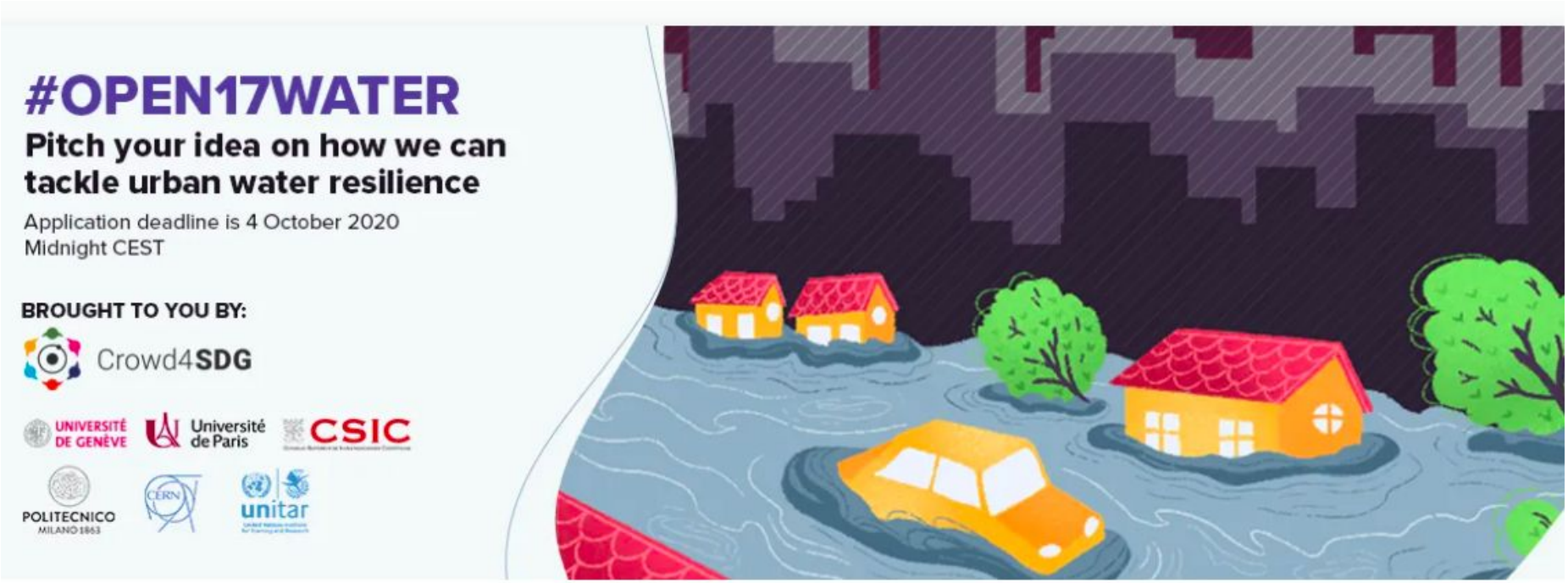
Project Research: AI + crowdsourcing



Negri, V., Scuratti, D., Agresti, S., Rooein, D., Scalia, G., Shankar, A.R., Marquez, J.L.F., Carman, M.J. and Pernici, B., 2021, May. **Image-based social sensing: combining AI and the crowd to mine policy-adherence indicators from Twitter.** In *2021 IEEE/ACM 43rd International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)* (pp. 92-101). IEEE.

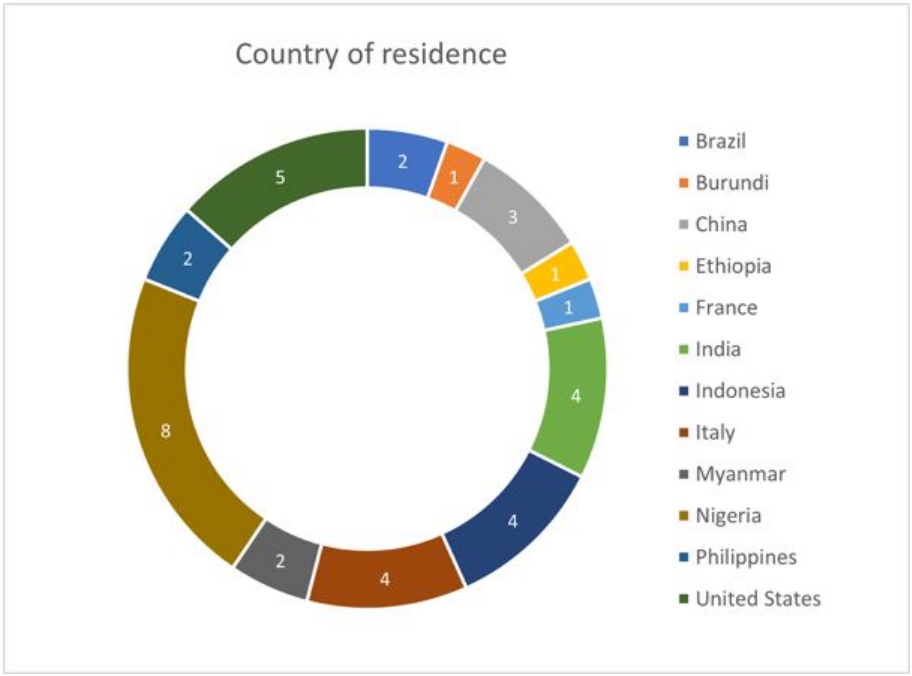
Project Participants (The Crowd)

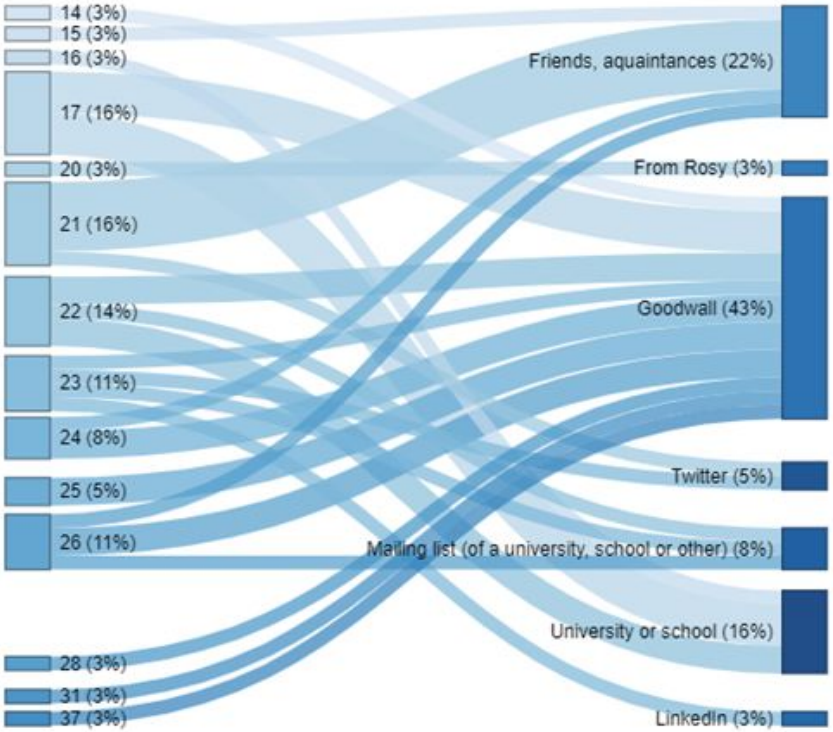
Project Innovation: Youth Challenges



in collaboration with Omar & Taha Bawa
Co-founders **Goodwall**
https://www.goodwall.io/

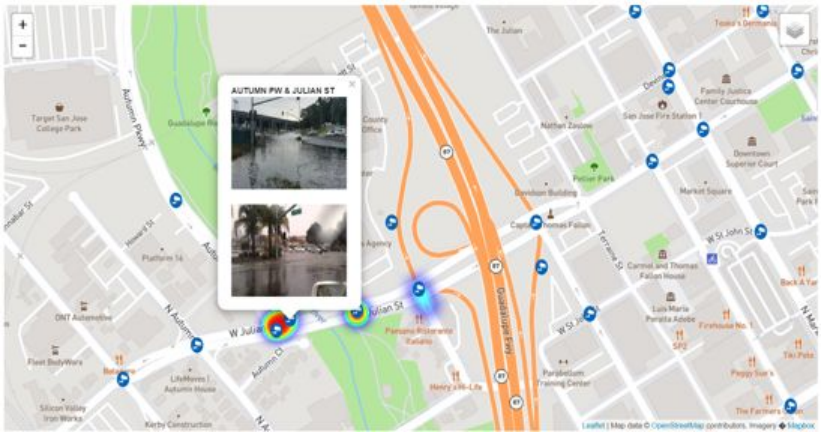
Results: Engaging with Global Youth





Results: Creating SDG Entrepreneurs

Project Flood Finder
Student project from Crowd4SDG
Based on crowdsourcing and AI



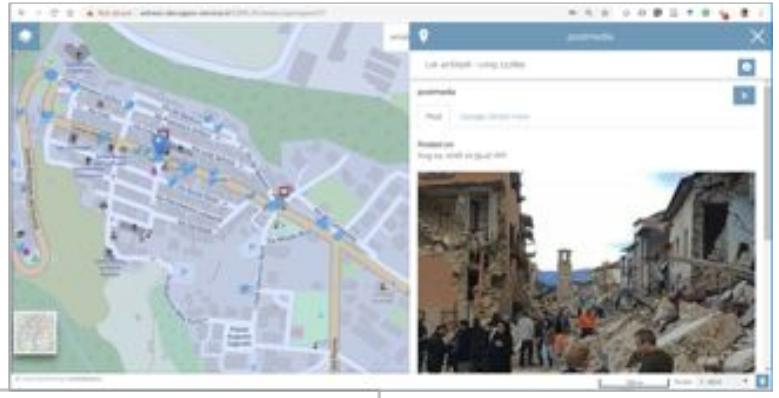
Deeya Vadia
16 year-old highschool student
Led the Flood Finder team

Deeya is first author on a poster about her project accepted at ISCRAM 2021
Flood Finder won competition to join social incubator run by Code for America

E2mC: Crowdsourced Emergency Services for the Copernicus Programme

Social Media

Witness Component



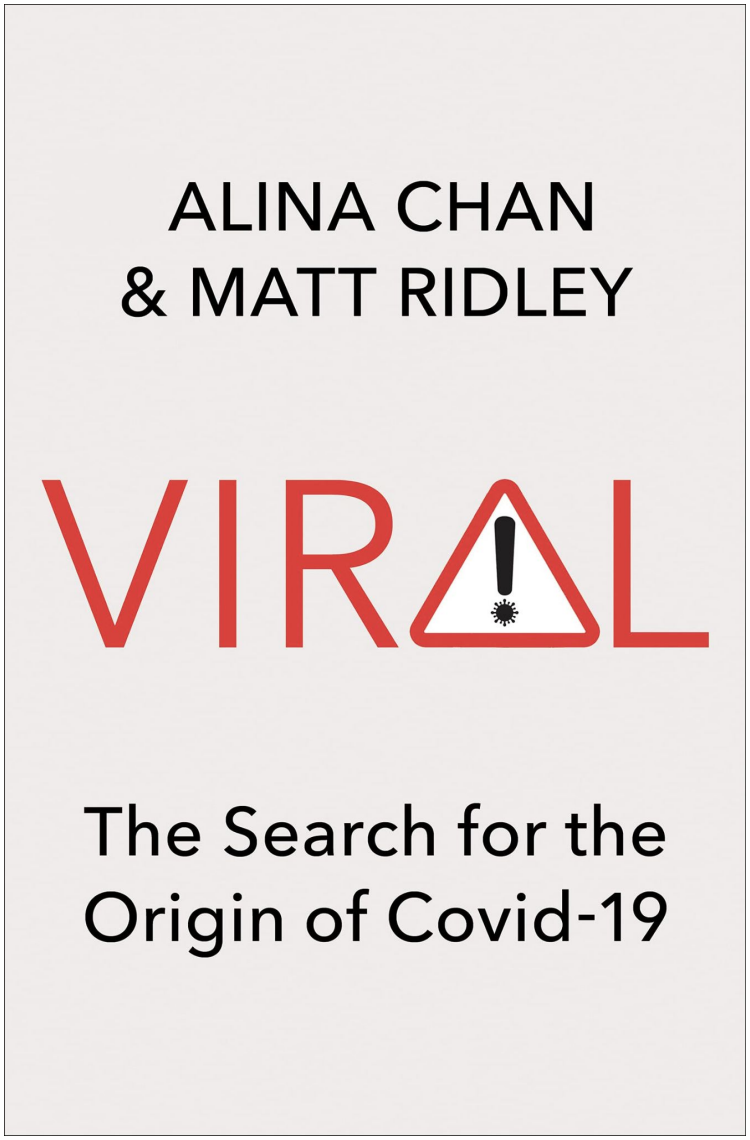
Crowd4EMS

Relevance

Geolocation

in collaboration with Einar Bjorgo
UNOSAT programme, UNITAR

Crowdsourcing and Crises



Crowdsourcing and Crises

Crowdsourcing and Crises

TIME

WORLD • UKRAINE

How Open Source Intelligence Became the World's Window Into the Ukraine Invasion

BY BILLY PERRIGO FEBRUARY 24, 2022 11:59 AM EST

In a grainy cell-phone video shared widely on Twitter early on Thursday morning, plumes of black smoke billow out of a burning vehicle on the tarmac of what appears to be a military airstrip. The heavy breathing of the man holding the camera is audible over the sounds of broken glass and rubble crunching underfoot.

The video, which was originally shared on a Ukrainian Telegram channel, was verified and uploaded to Twitter by Thomas van Linge, a 25 year-old based in Amsterdam. The video, van Linge wrote online, depicted "utter destruction" after an explosion at the military airfield in Lutsk, western Ukraine, just 90 kilometers away from the border with Poland. It appeared to be some of the

Q&A

www.crowd4sdg.eu