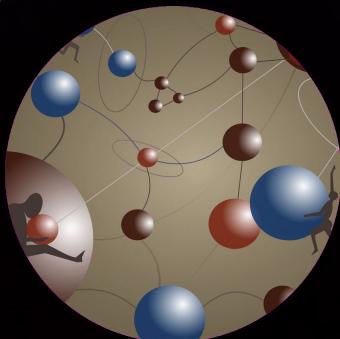


# Lecturers without borders



Athanasia Nikolaou  
Arab Science Week, 19.08.2020

# How it all started?



Nepal, 2017

# LeWiBo NGO

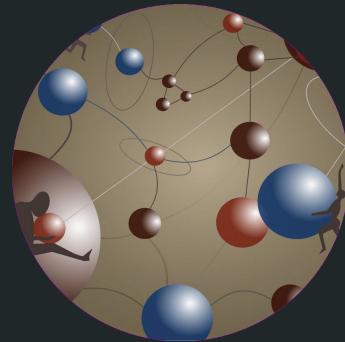


Dr. Liubov Tupikina, **mathematician**, Bell Labs, Paris, France  
Dr. Delphine Zemp, **climatologist**, University of Göttingen, Germany  
Mikhail Kotyakhov, **maths teacher**, Lyceum Munich, Germany  
Dr. Athanasia Nikolaou, **physicist**, Sapienza University of Rome, Italy

All four co-founders have never physically met simultaneously at the same place.

# Outline

- Science and society then and today:
  - The stereotypic scientist
  - The modern scientist
- Mobility of scientists
- Why a shift in science paradigm?
- LeWiBo
- Pre /Post covid-19 activities



# Science and society -then and today-



Traditional perception/stereotype:

- Isolated
- Personal effort
- Findings are too complex
- Devoid of social character

Galileo Galilei  
(1564-1642)

# Science and society -then-

1927



5th Solvay conference on Electrons and Photons  
“Copenhagen conference” 1927

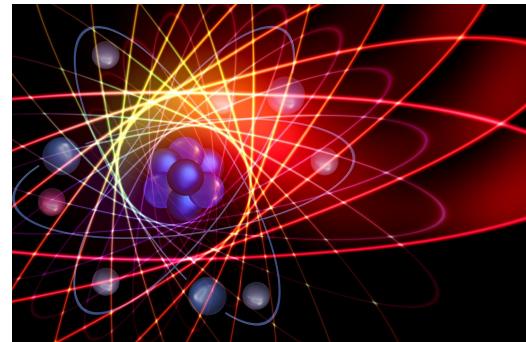
# Science and society

## -then-



Copenhagen conference 1927

According to the Copenhagen interpretation, physical systems generally do not have definite properties prior to being measured, and quantum mechanics can only predict the probability distribution of a given measurement's possible results.



# Science and society

## -then-



Principles of **quantum mechanics**.

The views took very long to propagate to the general public. (Invitation only conference)

# Science and society - today -

## Modern science and mobility



\*Anonymous data collected in scientific hubs

Work travels per year	2 - 5	50% of researchers*
Total travels per year	> 5	40% of researchers*

# Why do we need a shift in paradigm ?



# Why do we need a shift in paradigm ?

- Travels of scientists are an untapped opportunity to share knowledge with local communities.
  - Knowledge of experts is a societal good and should be shared.
  - Science is not elitist.
  - Science helps people be more aware of the changes around them.
-

# Why do we need a shift in paradigm ?

- Travels of scientists are an untapped opportunity to share knowledge with local communities.
- Knowledge of experts is a societal good and should be shared.
- Science is not elitist.
- Science helps people be more aware of the global changes around them.
- Sustainability in travel.

The logo for the journal Science, featuring the word "Science" in a large, bold, red serif font.

## NextGen Voices: Science-inspired sustainable behavior

Brijesh Kumar, Mark Martin Jensen, Wadim Strielkowski, Juliet Tegan Johnston, M. Shehata, Michelle Micarelli Struett, Athanasia Nikolaou, David W. Szymanski, Varzinczak, Bilal Ersen Kerman, Patrick Kobina Arthur, Fernanda Suemi Oda, W. Tyner, E. Joseph Jordan and Colin Murphy

Science 364 (6443), 822-824.  
DOI: 10.1126/science.aax8945

# Science and society -today-

## Lecturers without borders

Connecting traveling scientists with schools and universities worldwide

[www.sciednetwork.org](http://www.sciednetwork.org)





**Share travel plans with us**

Share with us **your travel plans:**  
approximate time and place per email, slack



**Make lecture / seminar**

We connect you to local coordinator and help you to come to school/university



**We find schools**

We find you **local schools/universities,** to make lecture/seminar

**We connect you**

We match you with the local organiser and help with connecting to lecture place

# LeWiBo data

The most popular places where  
scientists visit\*

\*Project with Open humans Foundation,  
compliant with GDPR laws policy

OPEN HUMANS

Add data Explore & share Create My account ▾

About Mobility data of researchers

As research gets more and more global [1,2] new countries and institutions are getting involved in the research activities around the world. There is an increasing need of understanding these complex mobility patterns. Researchers form a distributed open network around the world. In this project we would like to study the untapped opportunity of the network of scientists traveling around the globe. This could help us to understand how we are doing research and how we could contribute to local communities. The examples of projects, where such analysis could be applied are project for scientists and educators, who use their travel opportunities and connect to local educational projects and local communities [2]. There are various projects, which could benefit from the study (e.g. ecological or science communication ones).

1. A. Mannocci et al. <http://oro.open.ac.uk/id/eprint/54310> (2018)  
2. L.Tupikina, et al. NetSci Proceed. (2018)

Info Data

Project membership

Joined: Oct. 23, 2019  
Project member ID: 85935634  
Membership status: Visible  
Project data status: Private

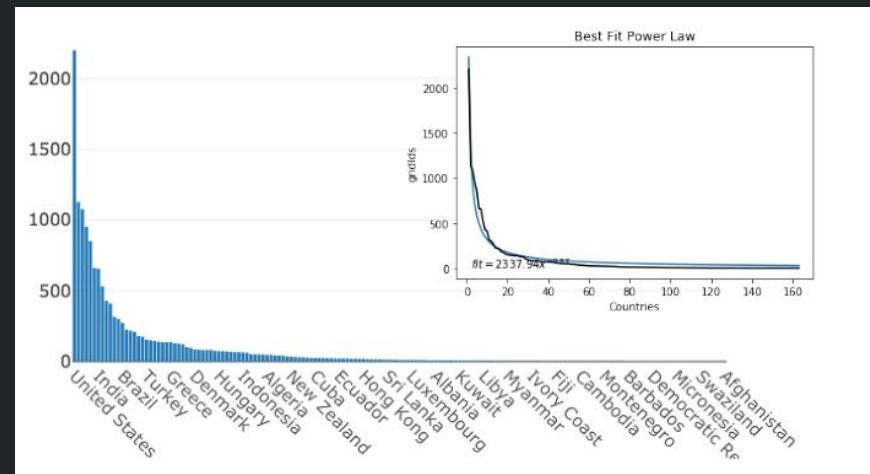
Recent Members

Echarles, Ely, Tatiana Stoica, BenC, Link

See all members...

Message project Send a message to project coordinators.

Project information

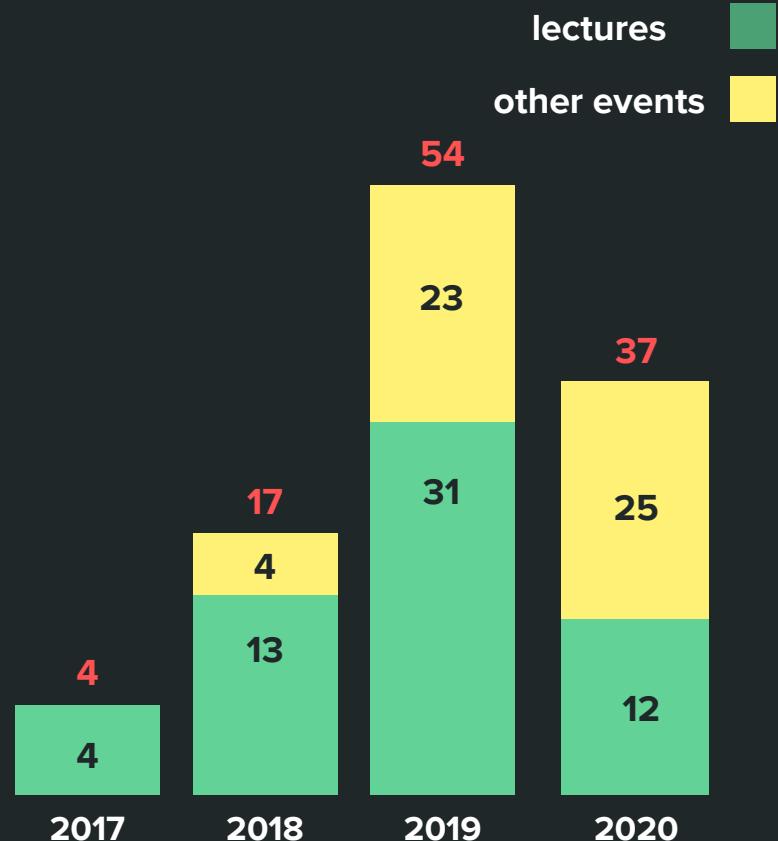


# LeWiBo

## data

Number of lectures organised  
Statistics from slack

*Data visualisation on github*



# Overview of LeWIBo educational network

**Asia:** Indonesia, India, Nepal, Sri Lanka

**Europe:** France, Germany, Estonia, Latvia, Lithuania, Romania, Hungary, Serbia, Bulgaria, Greece, Poland

**CIS region:** Russia, Belarus, Armenia, Georgia, Uzbekistan

**Africa:** Senegal, Madagascar, Kenya, Sierra Leone, The Gambia, Rwanda, Nigeria

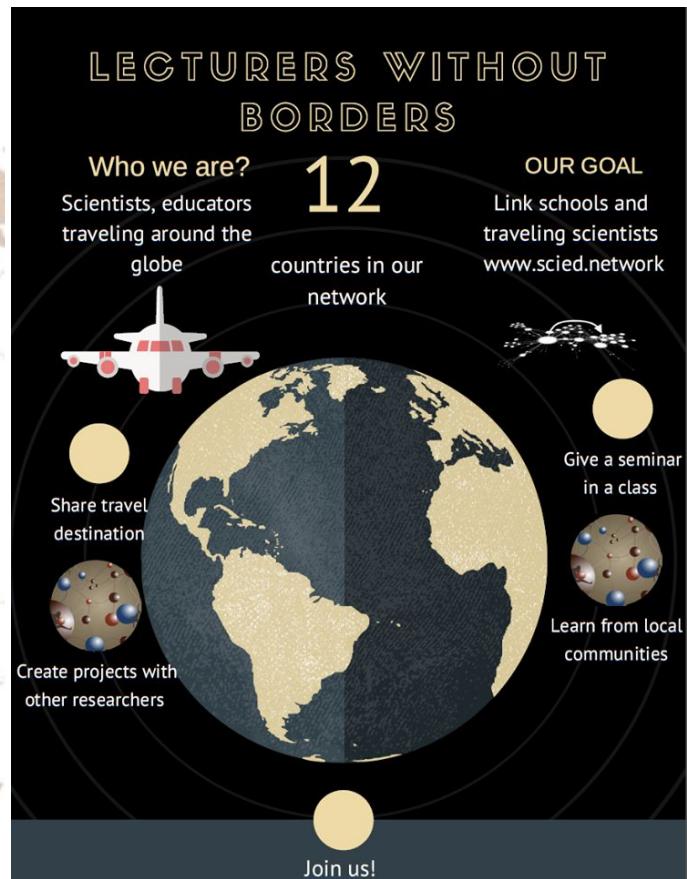
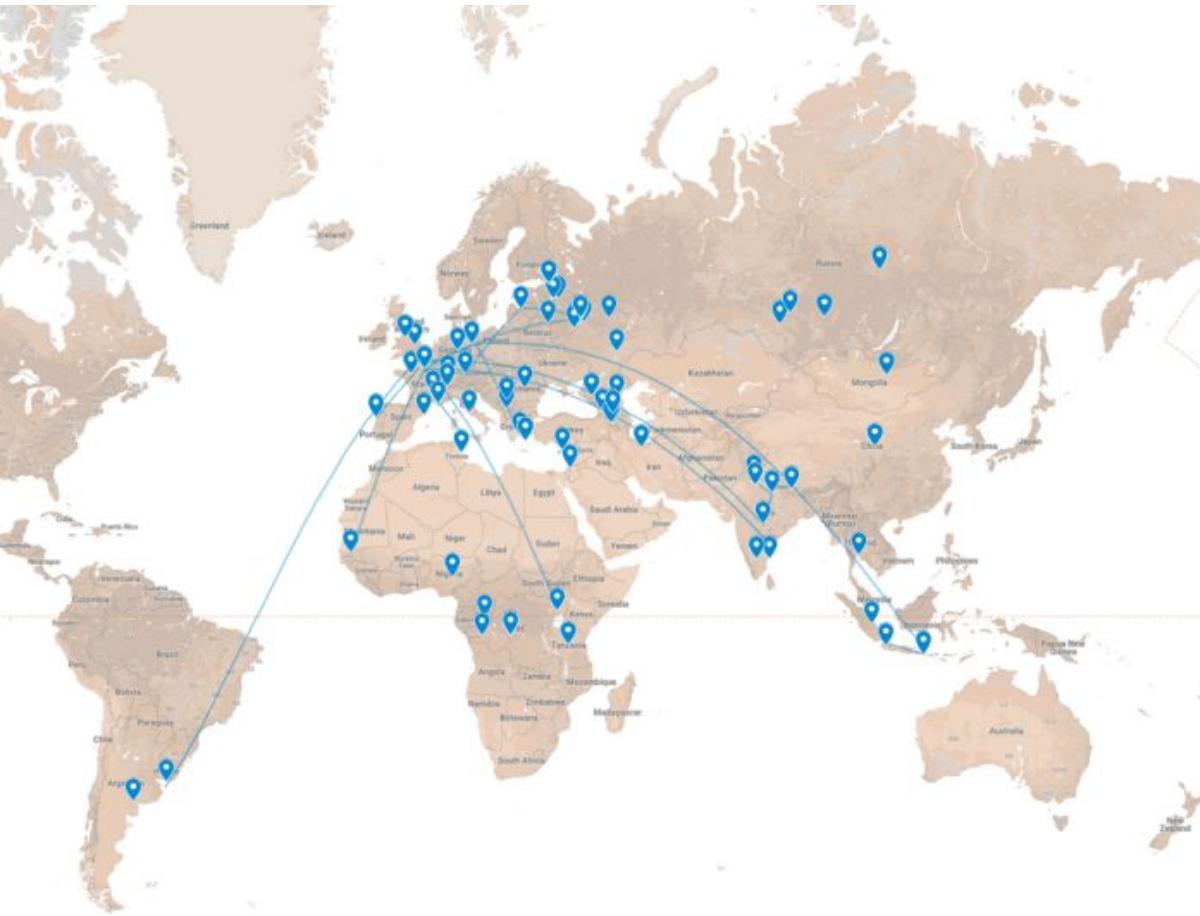
**North America:** -

**South America:** Guatemala, Argentina, Colombia

**Middle East:** Iran



# Pre Covid-19 LeWiBo principle of operation

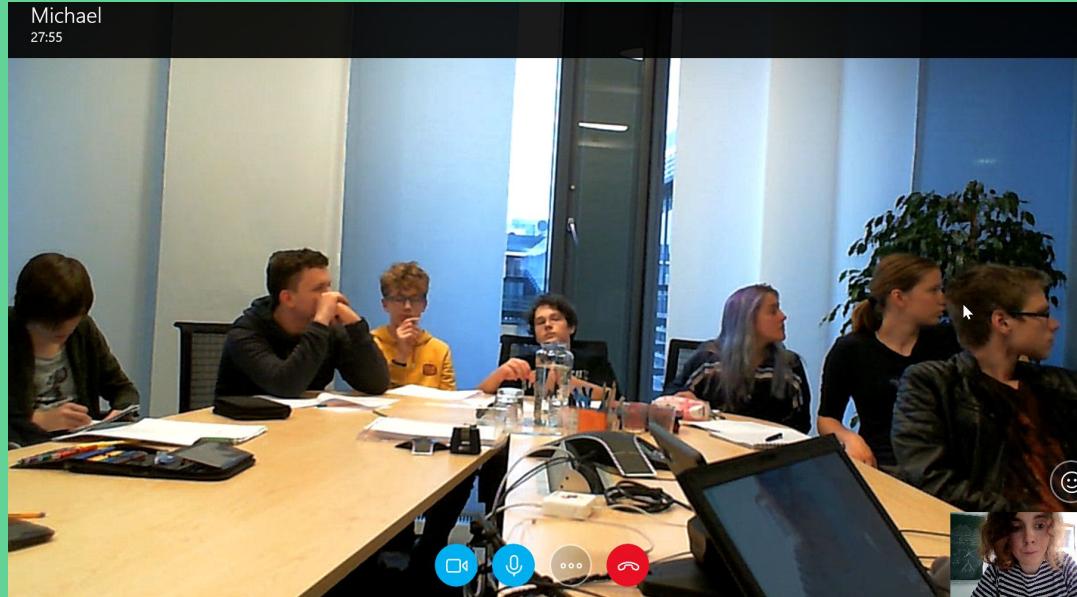


# Pre covid-19: “The last ones to travel?”

Ana Faustino,  
Julian Ferreras,  
Stephanie Okeyo  
Kenya, March 11th 2020



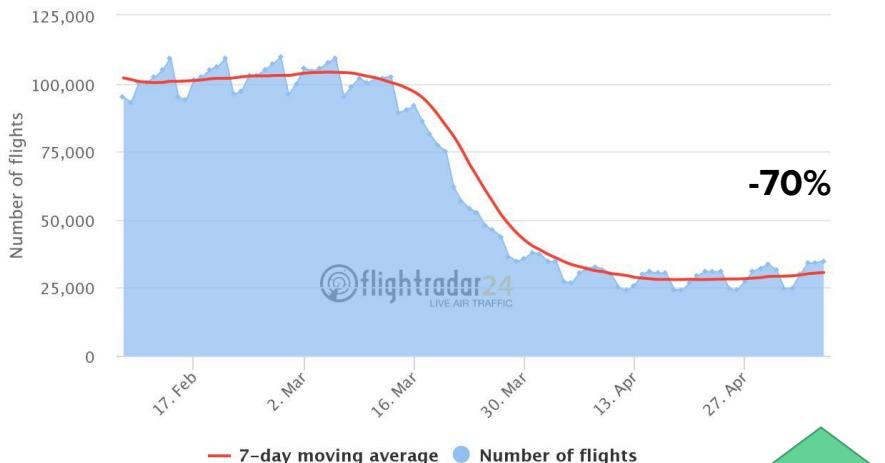
# Post covid-19:



How do we take it from here?

# Shifts in mobility

Number of commercial flights tracked by Flightradar24, per day (UTC time), last 90 days



6. May

## Relative mobility changes

(google anonymous data relative to a baseline\* location frequency of users)

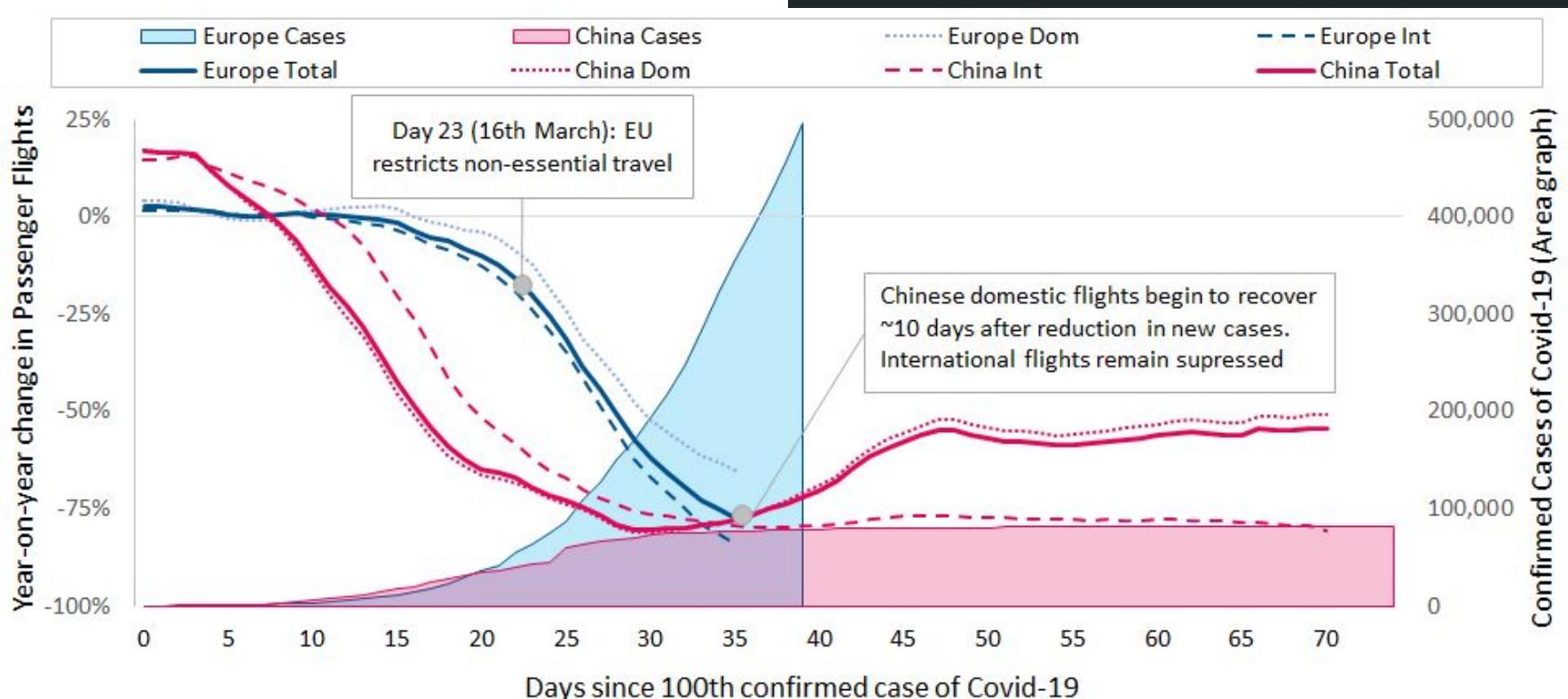
	Transit Stations	Residence
Italy	-87%	+24%
Germany	-68%	+11%
France	-87%	+18%
India	-71%	+22%
Indonesia	-54%	+15%

\*Jan 3–Feb 6, 2020



# Shifts in mobility

Projections for resuming flights  
-by analogy to China-



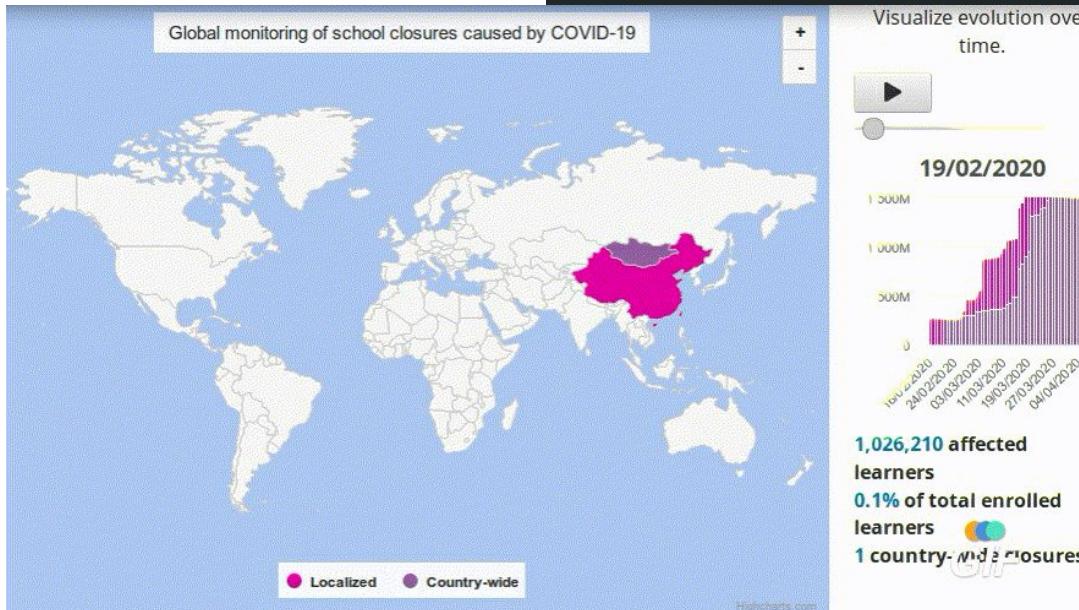
(source: ICM aviation consultancy)

Uncertain, effect of policy factors.

# COVID-19 educational disruption and response

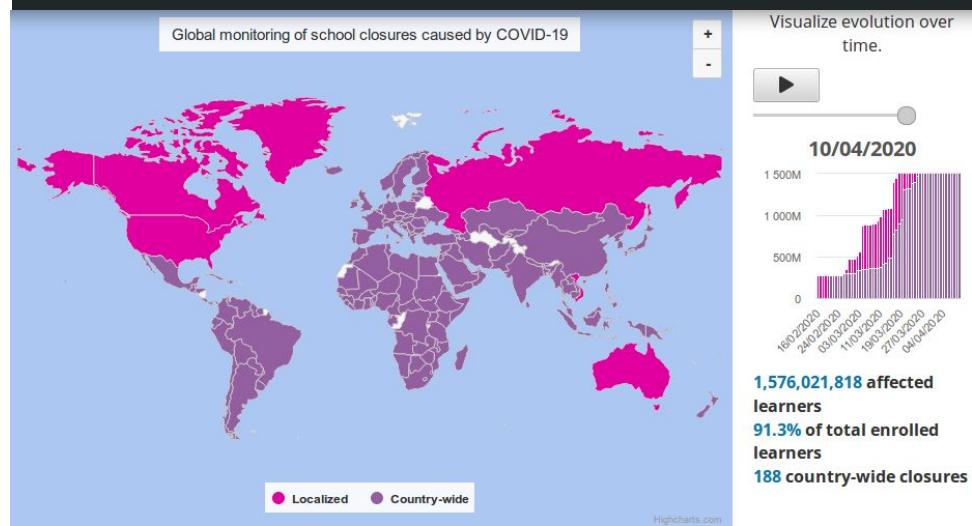
(19.02 - 10.04.2020,

Source: Unesco)



# COVID-19 educational disruption and response

> Online education increases <



(19.02 - 10.04.2020, source: Unesco)

**Daniel Gonzalez Rosas, 17, (...) “Most are under the impression that school is optional given the circumstances we are in,” he said.**

08.04.2020 David Walter Banks

for *The New York Times*

# COVID-19 educational disruption and response

> Online education increases <



LA Johnson/NPR

Low motivation of students

Contemporary issues

 Versatility of LeWiBo researchers  
(mathematics, physics,  
neuroscience, linguistics, etc)

# COVID-19 educational disruption and response

Science addresses real  
life problems:

 Seminars on virology basics for  
students >12 years by our  
researcher Eugenia Covernton

## Hablemos de virus y retorno seguro a clases

### FECHA

28 de julio de 2020

### HORA

10:00 a.m.

### DIRIGIDO A

Instituciones educativas, estudiantes de  
10 – 11 y padres de familia

### VÍA ZOOM



Eugenia Coverton

Científica  
Ph.D. de Institut Pasteur París  
Comunicación científica  
Coordinación de actividades educativas  
Lecturas Without Borders

### Hablemos de virus y enfermedades virales

- ¿Qué son los virus?
- ¿Las diferentes familias de virus?
- ¿Cómo infectan humanos (y otros animales)?
- Enfermedades virales (y diferencia entre  
infección y enfermedad viral)
- ¿Cómo podemos tratar y prevenir infecciones y  
enfermedades virales?
- Vacunas y medicación antiviral
- Conceptos generales de epidemiología y salud  
pública en enfermedades virales

Martín Alonso Ruiz Orozco

Médico y cirujano  
Magíster en salud Ocupacional  
Docente Universidad del Cauca  
Coordinador laboratorio de plastificación

Lineamientos para el retorno seguro a clases,  
enfocando en el autocuidado

- Lineamientos para la prestación del servicio de  
educación en casa y en presencial bajo el  
esquema de alternancia y la implementación de  
prácticas de biosseguridad en la comunidad  
educativa. Ministerios de Salud y de Educación  
de Colombia.
- Higienización permanente de manos
- Uso adecuado del tapabocas
- Cómo entrar de regreso a casa



We welcome  
requests

# COVID-19 educational disruption and response

Offer students a peek into how modern science is done.



Bring school classes to participate in a planetary science conference (virtually) for the first time.



# Overview of LeWIBo educational network

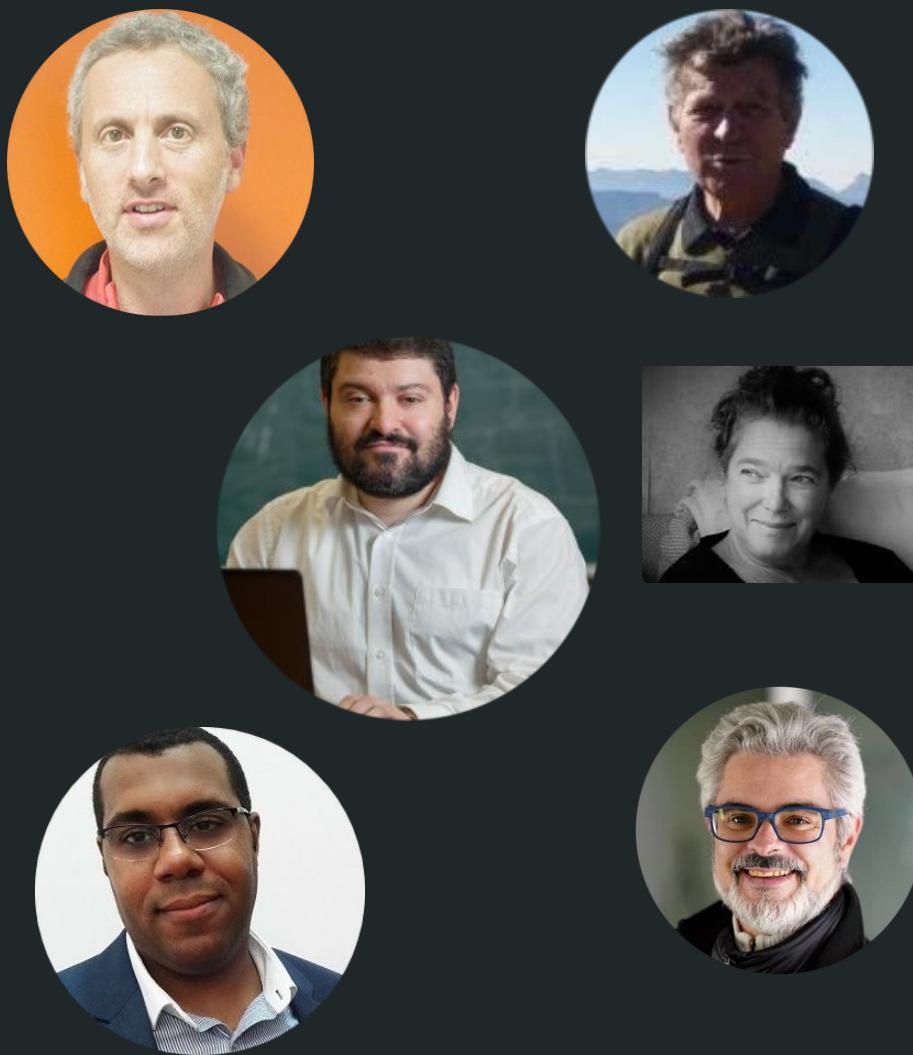
Example Country	Schools/ country	Languages	Ages of kids
France	4	English, French	14-17
...	...	...	...



# LeWiBo advisory board

Pr. Ariel Lindner, Pr. Andrej Rajgorodsky, Pr. Cristina Masoller,  
Pr. Hossam Zawbaa, Pr. Christian Duhamel, Dr. Gaell Mainguy

<https://scied.network/who-we-are/>



# LeWiBo

## NGO based in Paris, France



- Volunteer work
- Seminars free of charge for schools/institutes
- Network of researchers matched with network of schools.
- Versatility of lecturers' background
- Network with the community of researchers.
- Network of local community.

# Summary

- Volunteer work by researchers.
- Seminars free of charge for schools/institutes.
- Network of researchers matched with network of schools.
- Versatility of lecturers' background and specialization.
- Network of local community.
- Contemporary science topics.
- International activity.
- International partners.



# Thank you!

We are open to collaborate.  
All of our supporters, friends,  
colleagues, partners, collaborators.

Want to get in contact with us?

Website: [www.scied.network/page](http://www.scied.network/page)

Twitter: @networkscied

Email: networkscied@gmail.com



fondation  
**BOTNAR**

**native**  
**scientist**



Extra slides

## Links to data presented:

- Google Data on covid relative mobility:  
<https://www.google.com/covid19/mobility/>
- ICS aviation consultancy comparison EU/China:  
<https://www.flightradar24.com/blog/learning-from-the-curve-chinese-aviation-may-offer-early-signs-of-a-covid-19-recovery/>
- United Nations COVID global education response:  
<https://en.unesco.org/covid19/educationresponse>
- NY Times article on online school attendance:  
<https://www.nytimes.com/2020/04/06/us/coronavirus-schools-attendance-absent.html>

# How to stay in touch with us?

- Slack - write to us!
- Webpage [www.scied.network](http://www.scied.network)
- Volunteers [www.scied.network/page](http://www.scied.network/page)
- Twitter [@NetworkScied](https://twitter.com/NetworkScied)
- Github [www.github.com/](https://www.github.com/)

[lecturers-without-borders/](#)

- Facebook <https://www.facebook.com/Lecturerswithoutborders>
- Gmail [networkscied@gmail.com](mailto:networkscied@gmail.com)

