



# GENEVA TSINGHUA INITIATIVE

CBI at IdeaSquare  
14 September 2017  
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# Outline

- 1) What are **the SDGs**?
- 2) What is **challenge-based learning**?
- 3) Brief history of **Geneva Tsinghua Initiative**
- 4) Vision and Mission **Geneva Tsinghua Initiative**

# The SDGs



= Global Goals  
= Agenda 2030

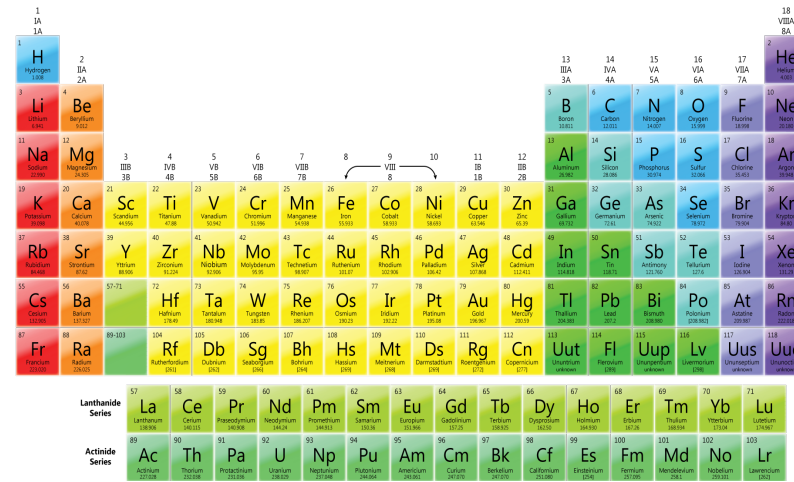
# The MDGs



# SDGs as organizing principle



Standard Model



Periodic Table



Global Goals

# SDGs as quantitative framework



17 Goals

**3.1** By 2030,  
reduce the global  
maternal mortality  
ratio to less than  
70 per 100k live  
births.

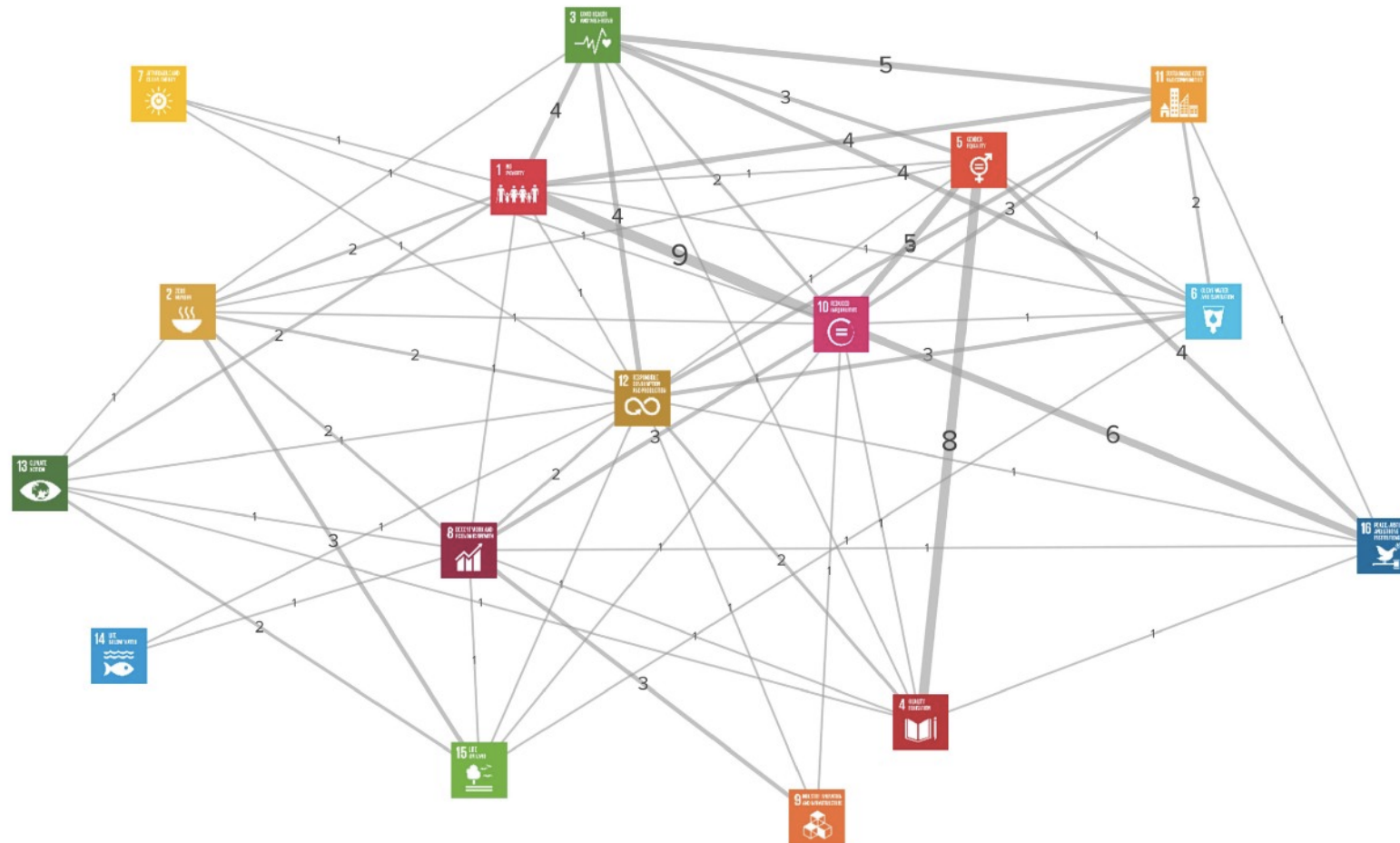
169 Targets

**3.1.1** Maternal  
Mortality Ratio

China  
2015  
27/100k

230 Indicators

# SDGs as interconnected system

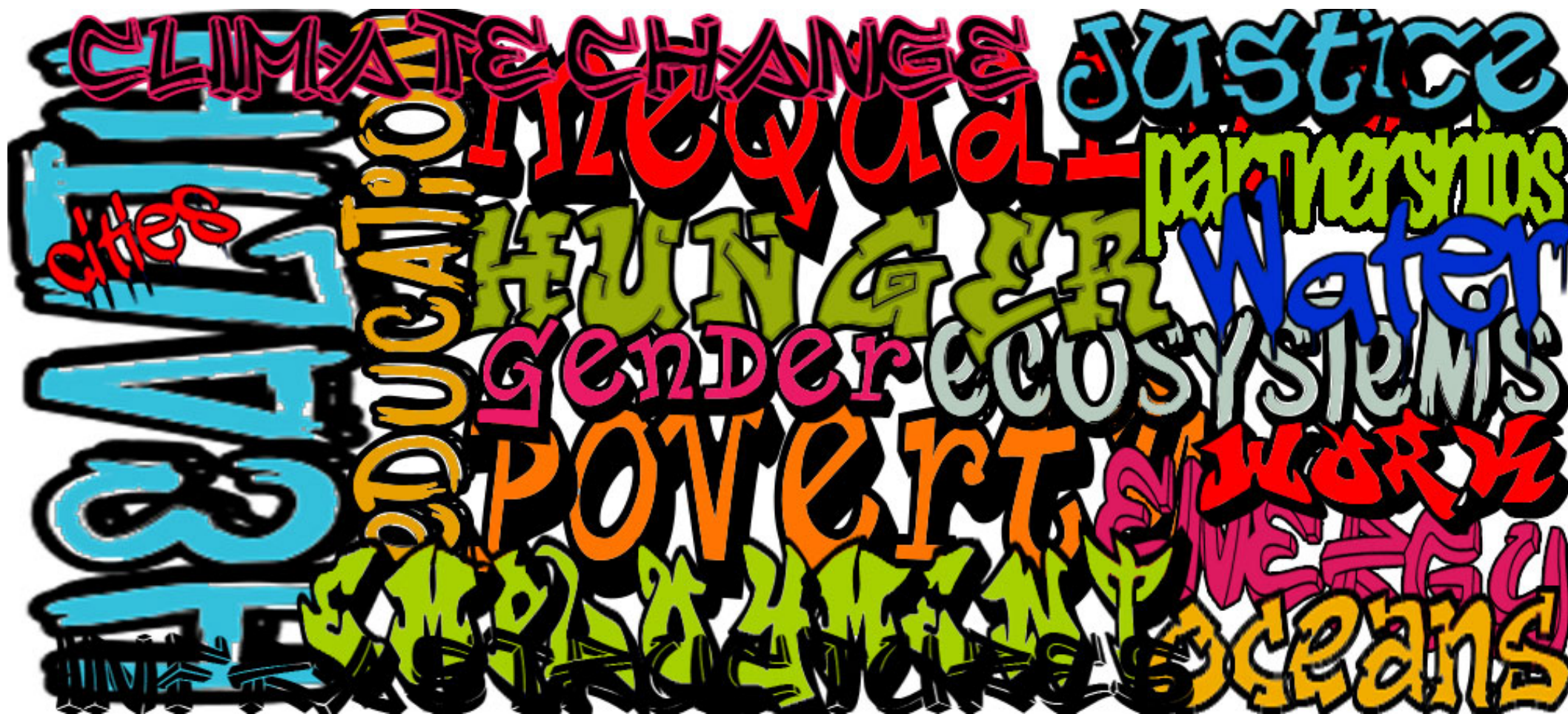


# Top-down view of the SDGs





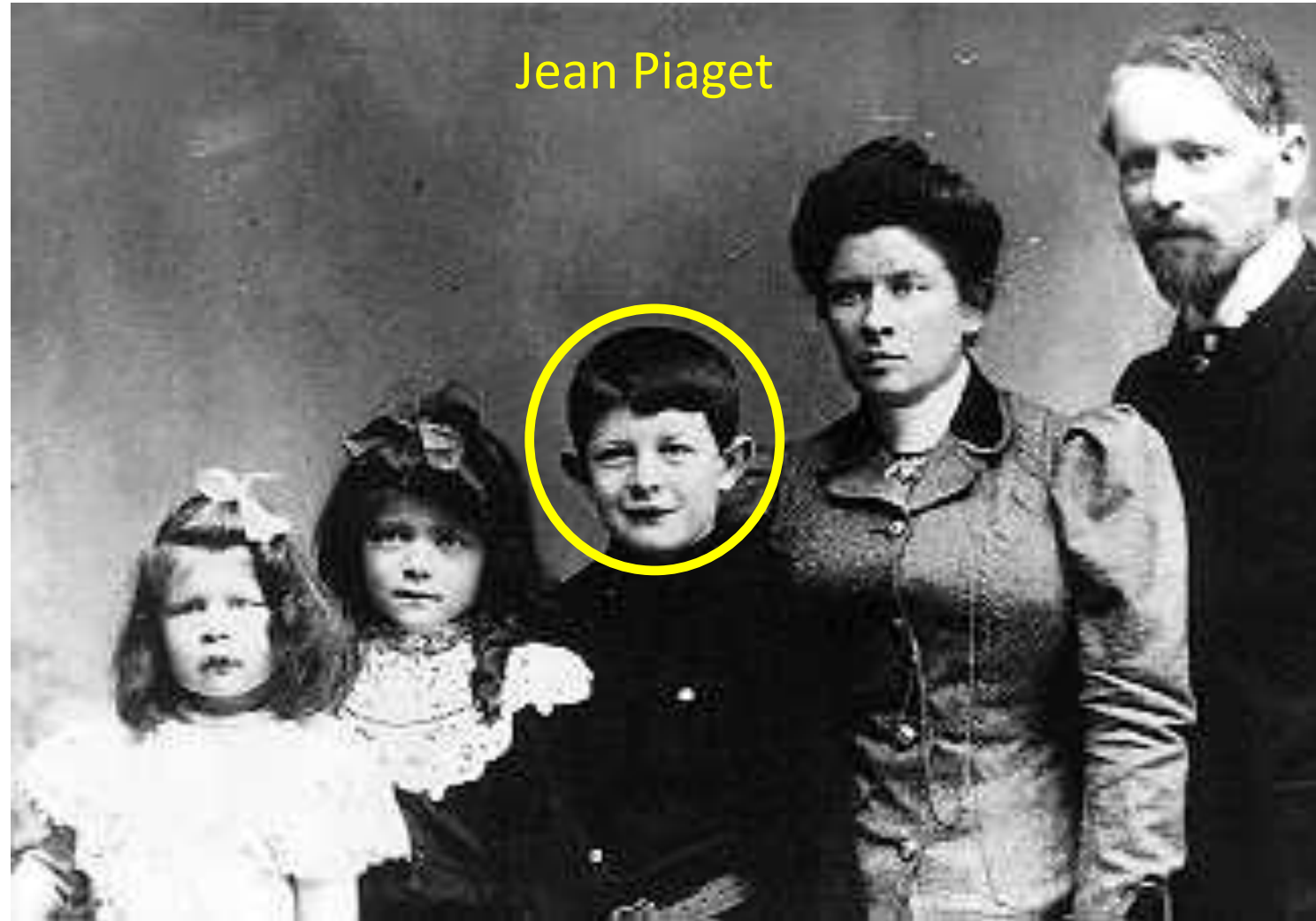
# Bottom-up view of SDGs



# Challenge-based learning



# Challenge-based learning



# Challenge-based learning



*“The principle goal of education should be creating men and women who are capable of doing new things, not simply repeating what other generations have done.”*

*“Only education is capable of saving our societies from possible collapse, whether violent, or gradual.”*

***Jean Piaget (1896-1980)***

# Challenge-based learning



**Jean Piaget**  
*Constructivism*



**Seymour Papert**  
*Constructionism*

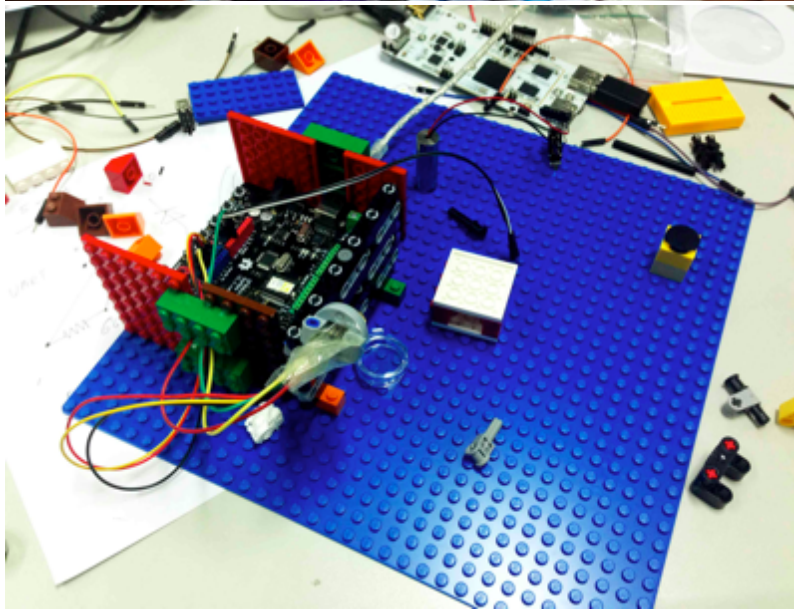


**Mitch Resnick**  
*Scratch*

# 2012: Open Wisdom Lab



# 2013: LEGO2NANO Summer School



大学生自制显微镜 最低花费仅为五六百



2013年09月07日09:50 来源: 京华时报 手机看新闻

打印 网摘 纠错 商城 分享 推荐 人民微博 关注 字号

原标题: 学生自制显微镜



昨天, 清华大学国际暑期学校举行挑战学习项目《从乐高到纳米显微镜》的成果展示会。5天内, 来自美国、英国、新加坡、罗马尼亚及中国等国家和地区的30多名博士、硕士生, 用乐高积木、中关村“淘”来的电子元件、扫描探针, 做出了花费最低仅为五六百元的纳米级原子力显微镜。据介绍, 用于教学的该类显微镜售价在20万元左右, 项目挑战的要求是造价千元以内, 能作为中国高中物理、生物等课堂的教具使用, 达到一定的观测精度要求。

记者欧阳晓菲 张晓鸽摄影报道


W NEWS Topics / TECHNOLOGY ARDUINOS MAKERS MICROSCOPES

PRINT AND DIGITAL ON SALE NOW **WIRED**

## UCL students build low-cost, Arduino-powered, Lego atomic force microscope

TECHNOLOGY / 18 SEPTEMBER 13 / by KADHIM SHUBBER

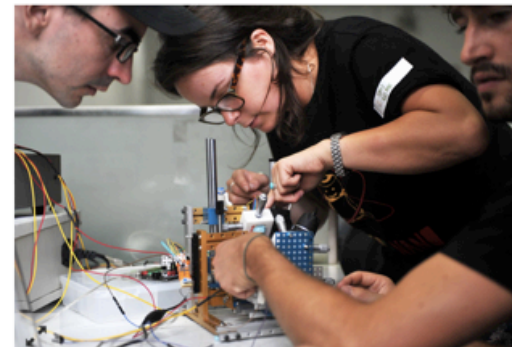
CAPTURE A SHOT THIS WINTER



ROLLOVER TO SEE OUR GALLERY

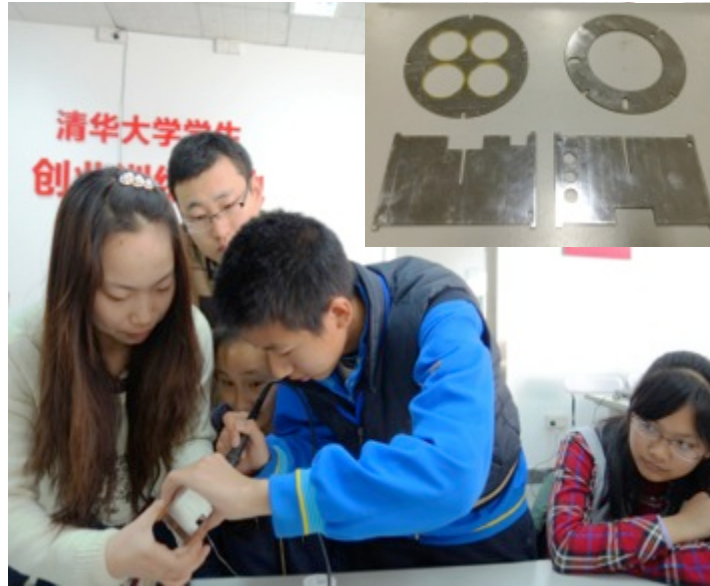
When Alice Pyne starts talking about giving "crystallised virus structures" to school children, my heart skips a beat. Surely we've screwed up the next generation enough already without giving them the means to wage biological warfare.

The virus in question, the tobacco mosaic virus, "cannot infect animals," she reassures me later. Her point is that instead of relying on 2D images in textbooks, we should be giving school children something real. Moreover, she wants them to be able to see these



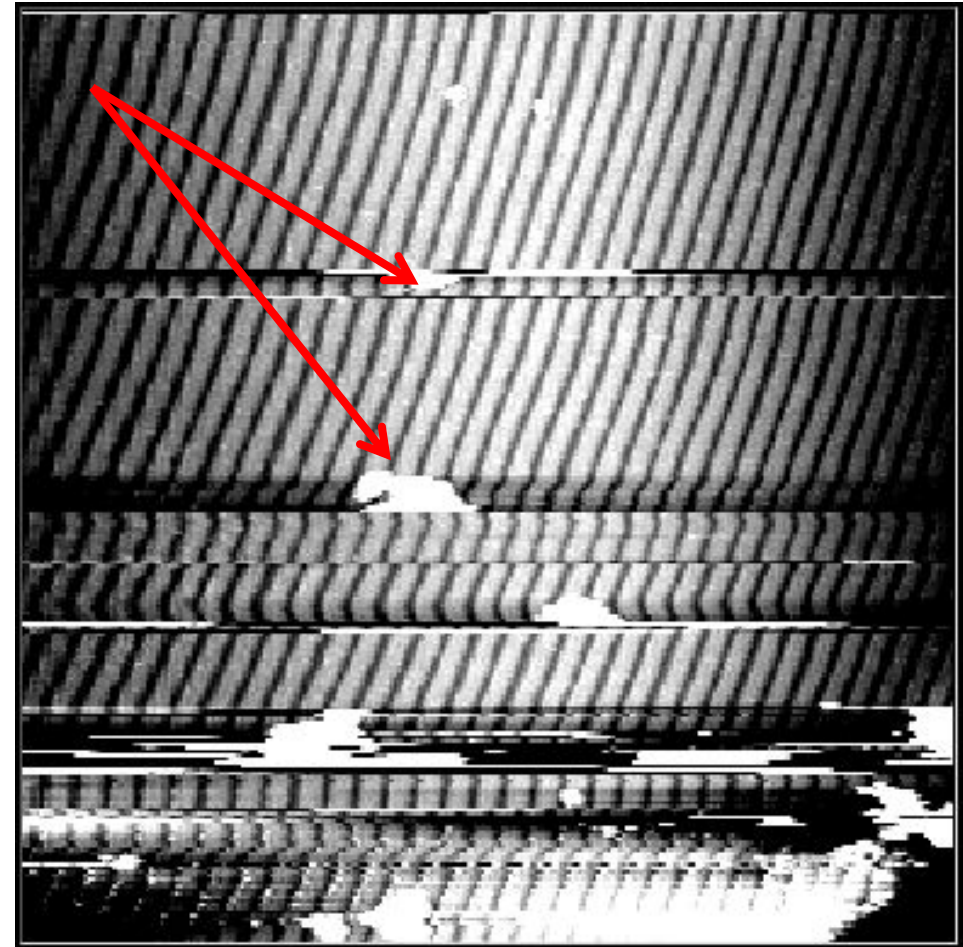


# 2014: LEGO2NANO in high schools





## *PM 2.5 particles on DVD grooves*



# 2017: Geneva Tsinghua Initiative



*Signature of the GTI MoU – Bern, Jan 17*



*Signature of the Master Agreement – Davos, Jan 17*



*GTI Luncheon – Davos, Jan 17*



*United Labs Launch – Davos, Jan 17*

# GTI Vision and Mission

1. Creating a novel international education programme
  - Developing **challenge-based learning** for the SDGs
2. Enhancing Geneva as a host to the UN, other IGOs and NGOs
  - Structuring **multi-stakeholder** partnerships effectively around the SDGs
3. Linking International Geneva with Entrepreneurial China
  - Establishing **project-based collaboration** between UN and China
4. Achieving measurable progress towards the SDGs
  - Generating **social and economic spin-off** through student-led innovation

# GTI Education Programmes

- **Summer Student Programme** : 2 month SDG Summer School
- **Masters Programme**: 2.5 year Master Programme (MPA + MS)
- **Exchange Programme** : TUSDG Institute / Geneva SDG Solution Space
- **Accelerator Programme**: 1-3 month support for SDG projects
- **Executive Programme** : 2 weeks for private / public / NGO sector
- **e-learning Programme**: Open Seventeen online coaching
- **Associated Initiatives**: United Labs, SDG in Progress, iSDG