



Applied Machine Learning  
Days 2020

# Welcome to EPFL

Martin Vetterli  
EPFL President

STCC  
27.01.2020

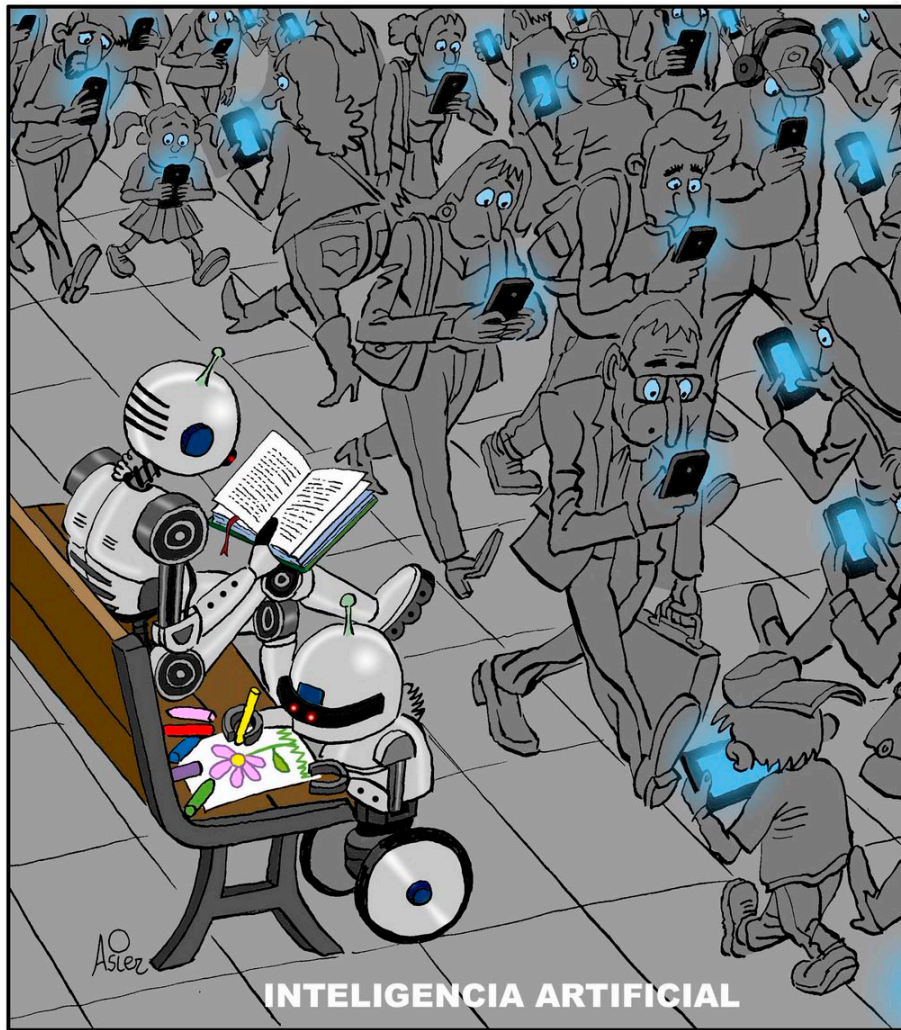
iStock



**Today's digital  
dream:  
machines for  
humans**



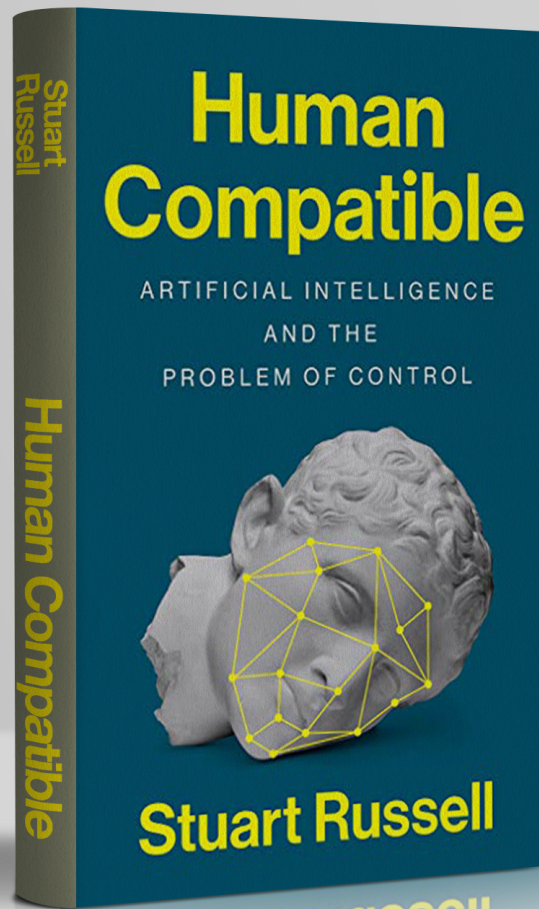
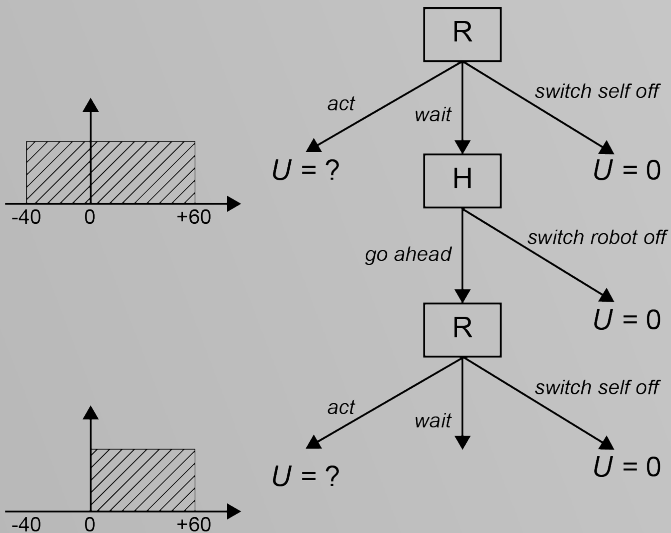
# ...and not the other way around



Asier (20 minutos)

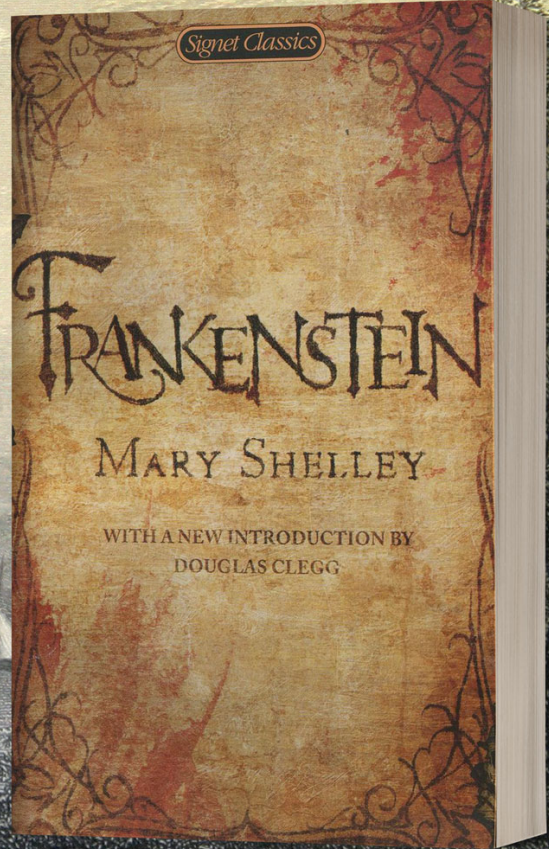
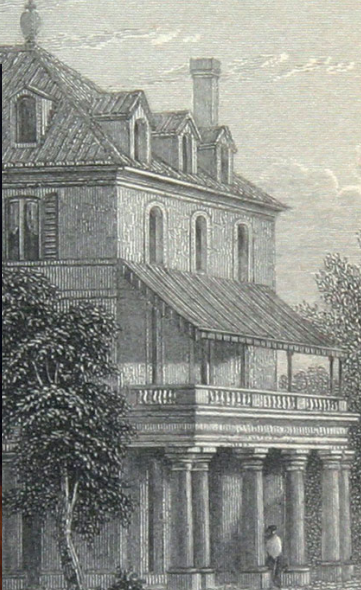
INTELIGENCIA ARTIFICIAL

# We can succeed (problem of control)





# But... a similar (Swiss) dream, 200 years older



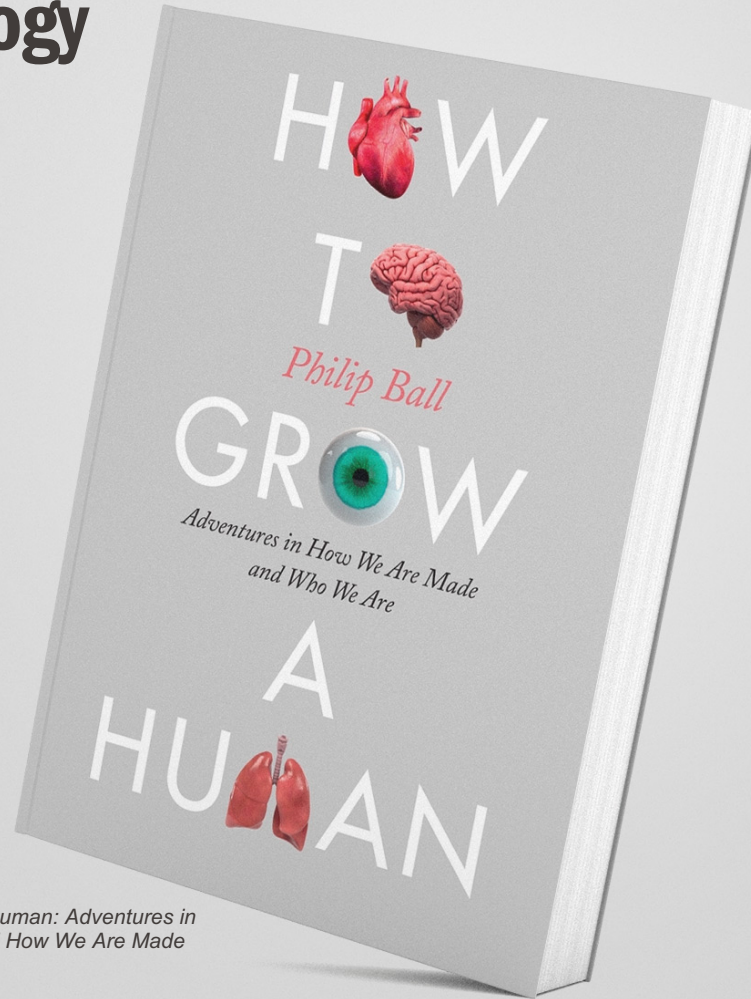
*Frankenstein by Mary Shelley,  
Villa Diodati in Geneva, where Mary Shelley conceived of the book*



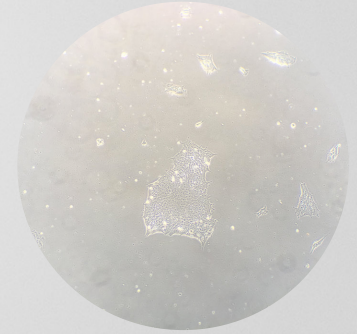
# Synthetic biology



The first stage of Phil's growing 'mini-brain'. Biopsy through the eye piece with an iPhone, using a light microscope



How to Grow a Human: Adventures in Who We Are and How We Are Made  
Philip Ball



Philip Ball's cells during conversion of skin cells to neurons. This shows a colony that has been transformed to a stem cell-like state



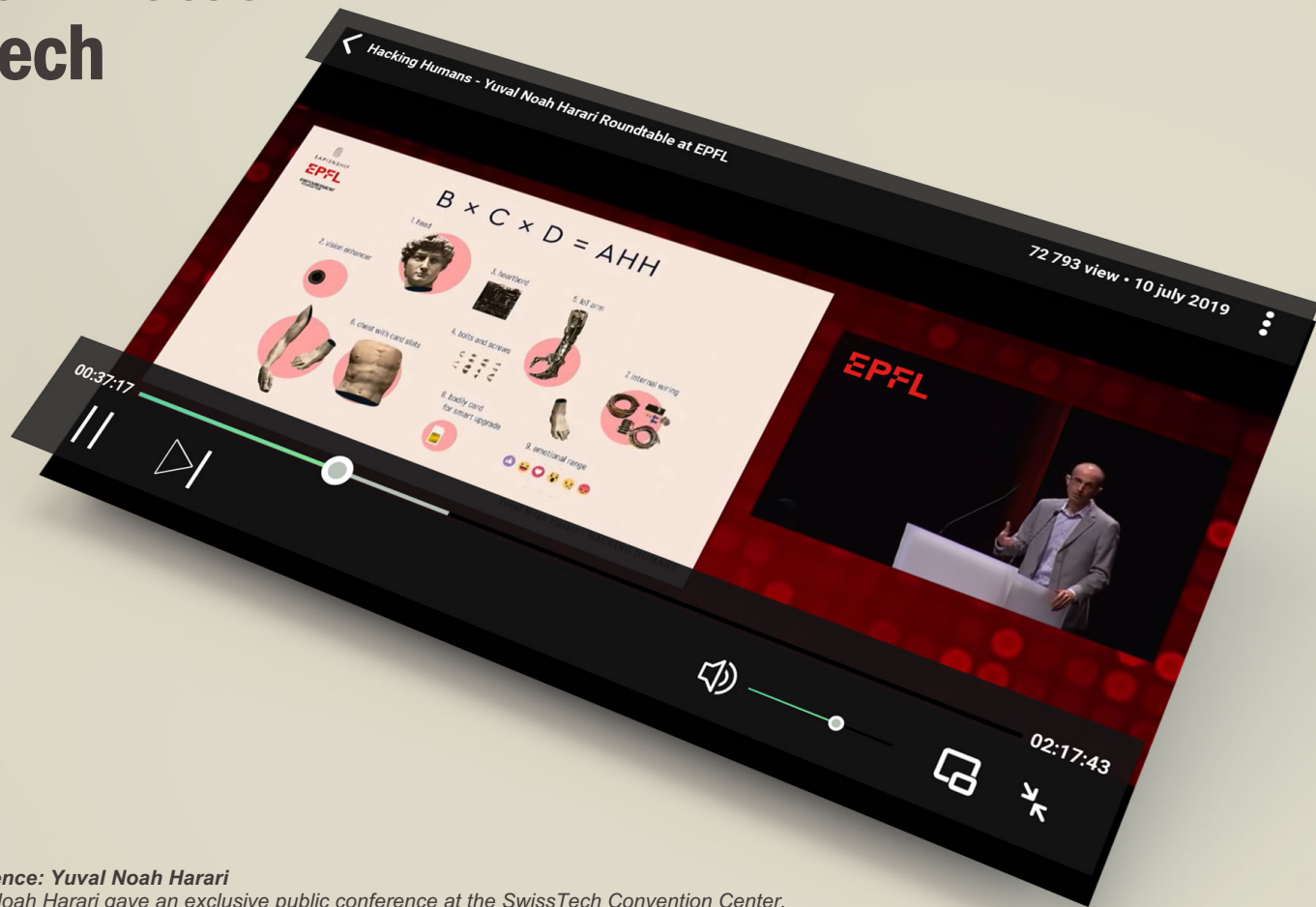
## A scalable pipeline for designing reconfigurable organisms

Sam Kriegman, Douglas Blackiston, Michael Levin, and Josh Bongard

PNAS first published January 13, 2020  
<https://doi.org/10.1073/pnas.1910837117>



# Merger of infotech and biotech



**EPFL Exclusive conference: Yuval Noah Harari**

On 10 July 2019, Yuval Noah Harari gave an exclusive public conference at the SwissTech Convention Center.



# So how will the real machines look like?

**R.U.R.** is a 1920 science fiction play by the Czech writer Karel Čapek.

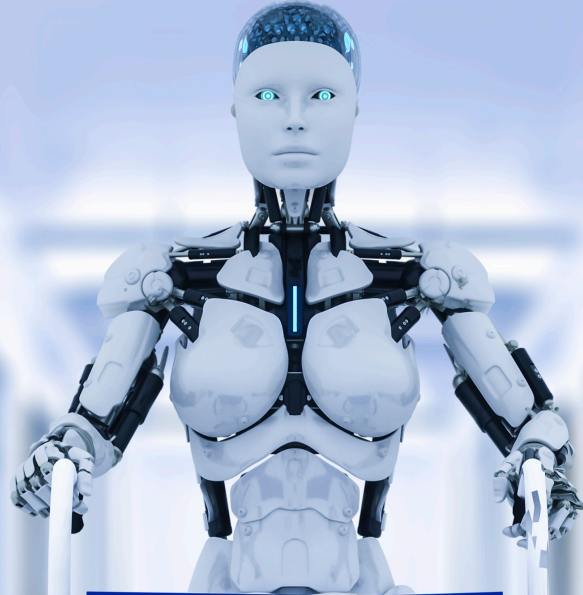
R.U.R. stands for Rossumovi Univerzální Roboti (Rossum's Universal Robots).

The English phrase "**Rossum's Universal Robots**" has been used as a subtitle. It premiered on 25 January 1921 and introduced the word "robot" to the English language and to science fiction as a whole.



*U.S. WPA Federal Theatre  
Project poster for the production  
by the Marionette Theatre, New  
York, 1939.*

# What do we learn?







**Thank you**

**Martin Vetterli**  
EPFL President