

"CIÈNCIA I CULTURA 2016" a SANT CUGAT DEL VALLÈS

# QUE FAN ELS CIENTÍFICS ?

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## arXiv.org

- 1990: **Joanne Cohn** began emailing physics preprints to colleagues as **TeX** files.
- 1991: **Paul Ginsparg**, created a central mailbox stored at the **Los Alamos National Laboratory** which could be accessed from anywhere (**ppp LANL, CERN, DESY**)
- Additional modes: FTP in 1991, Gopher in 1992, and the **World Wide Web in 1993**.
- Term **e-print** to describe the articles, domain **xxx.lanl.gov**.
- LANL preprint archive expanded to include: mathematics, physics, astronomy, computer science, quantitative biology, statistics, and quantitative finance.
- 1999: Ginsparg changed institutions to **Cornell University** and changed name to **arXiv.org**.

May 2016: 1,150,000 e-prints

Led to the current movement in scientific publishing known as **open access**



## World Wide Web

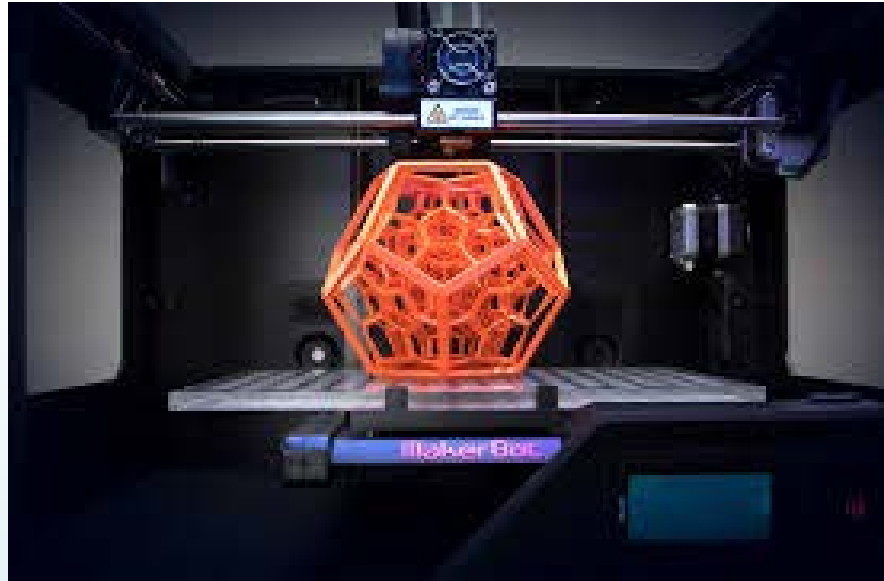
- 1989: **World Wide Web** invented by English scientist **Tim Berners-Lee**.
- 1990: wrote first **web browser** at **CERN** in Geneva (established by 12 European governments in 1952).
- Web pages are primarily text documents formatted and annotated with **Hypertext Markup Language (HTML)**.
- Web pages may contain **images, video, and software**.
- Embedded hyperlinks permit to **navigate** between **web pages**. Multiple web pages with a common theme or domain name are called a **website**.

In 1993, **CERN** announced that the **World Wide Web** would be **free to anyone**.



**Science Citation Index  
-Web of Science**

# 3D printing



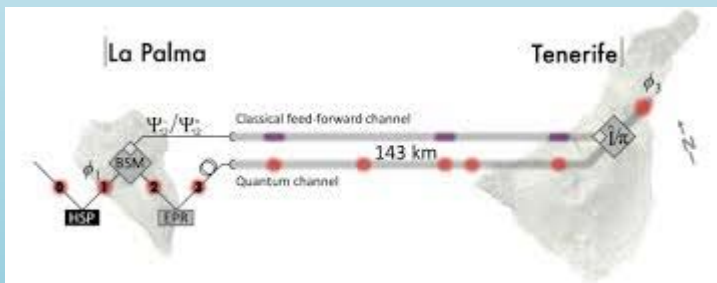
... at a distance ...



# Laboratory-grown organs



# Quantum Teleportation



Will Human Teleportation ever be possible?



120 m

100 m

80 m

60 m

40 m

20 m

**E-ELT comparado con la Sagrada Familia  
(European Southern Observatory (ESO))  
--Atacama, espejo primario de 39 metros**



# Que fem els científics?

1. La feina **ordinària**, la de cada dia, pot ser tan **monòtona** com la de qualsevol treballador
2. Però hi ha moments impagables, d'*Eureka!*, com l'atleta en **batre un rècord** en solitari
3. La **universalitat** de la Ciència, el **llenguatge comú matemàtic**, l'**intercanvi constant d'informació**
4. La **formació** d'altres, la **utilitat** del que fas, present o futura
5. La **petjada** que pot-ser deixarà la teva tasca