

Working with others and protecting our turf?

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1968-71



1975- 80



1980- 94



1994-2007



1971- 75



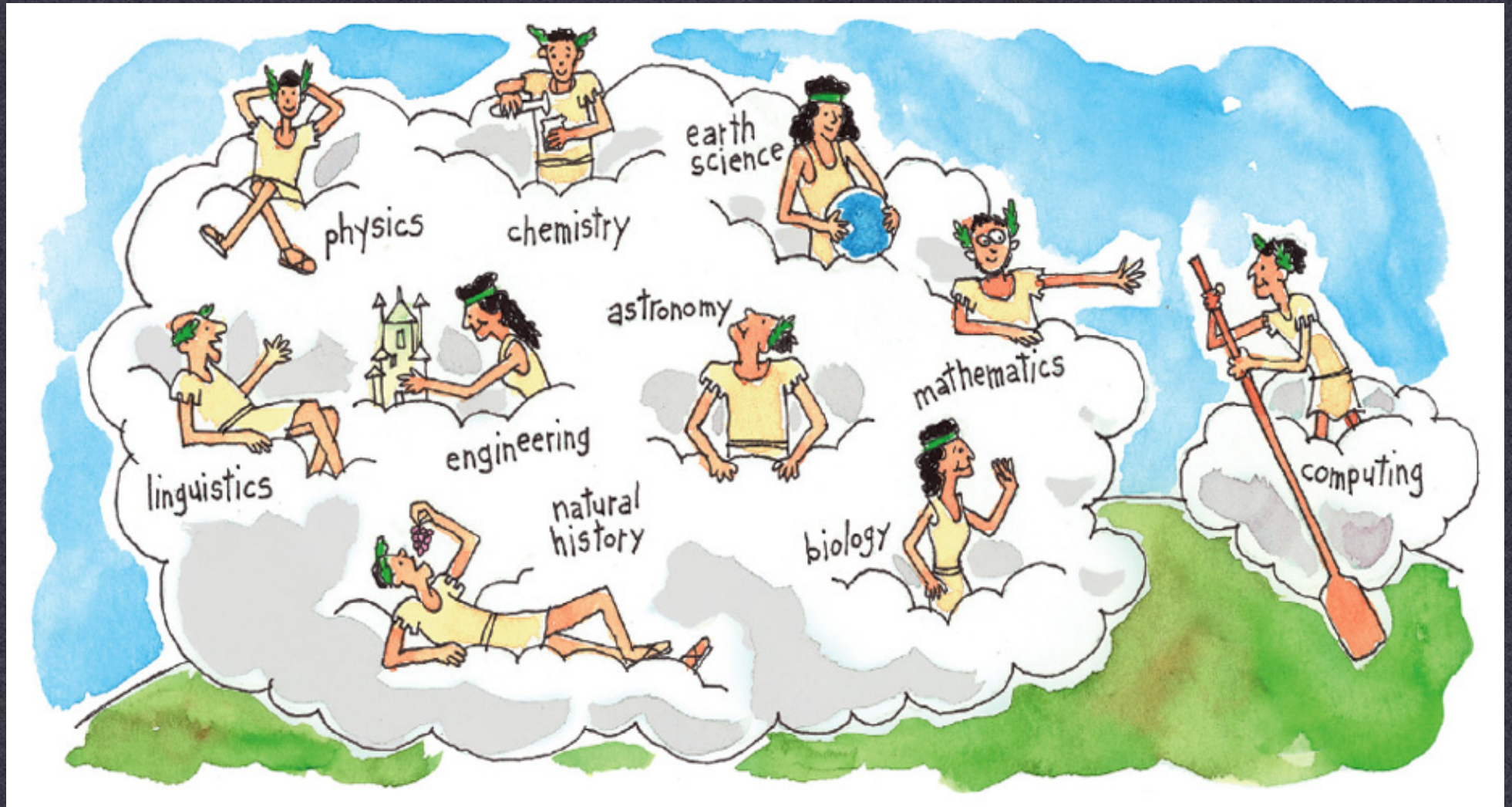
2004-NOW

MY JOURNEY

1968 - PRESENT

My history

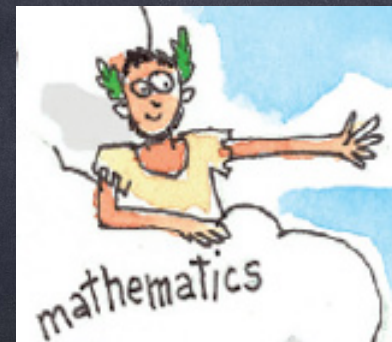
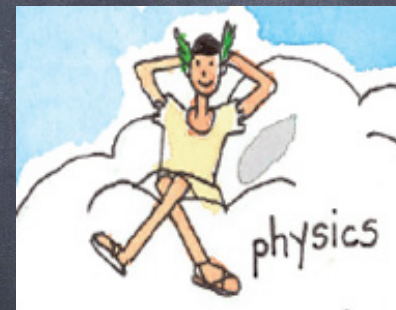
- Bachelor of science in **Electrical Engineering and Computer Science**, MIT
- Master in **Computer Engineering**, PhD in **Computer Science**, Case Western Reserve University
- Assistant Professor, **Computer Science** Department, University of North Carolina
- [10 years in industry in Silicon Valley]
- Professor of **Distributed Systems**, Technical University of Vienna
- Dean of the **Faculty of Informatics**, University of Lugano

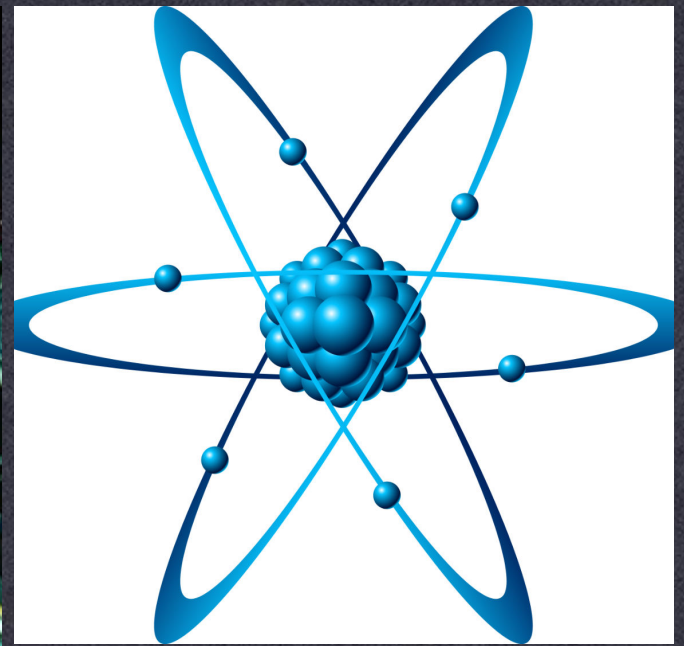
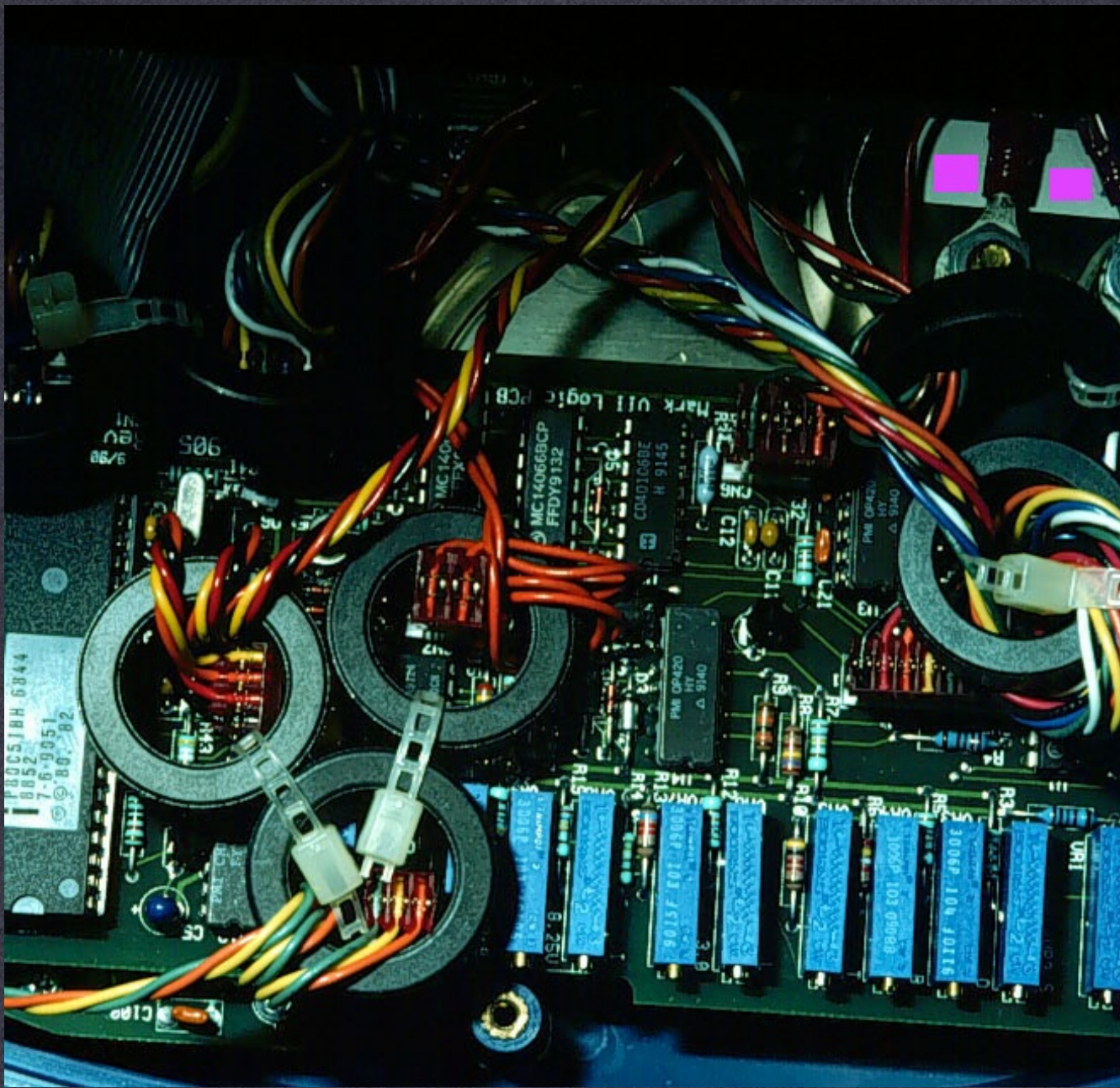


"Computing may be the fourth great domain of science along with the physical, life and social sciences"

P.J. Denning, The great principles of computing, The American Scientist, Sept.-Oct., 2010.

Yesterday...

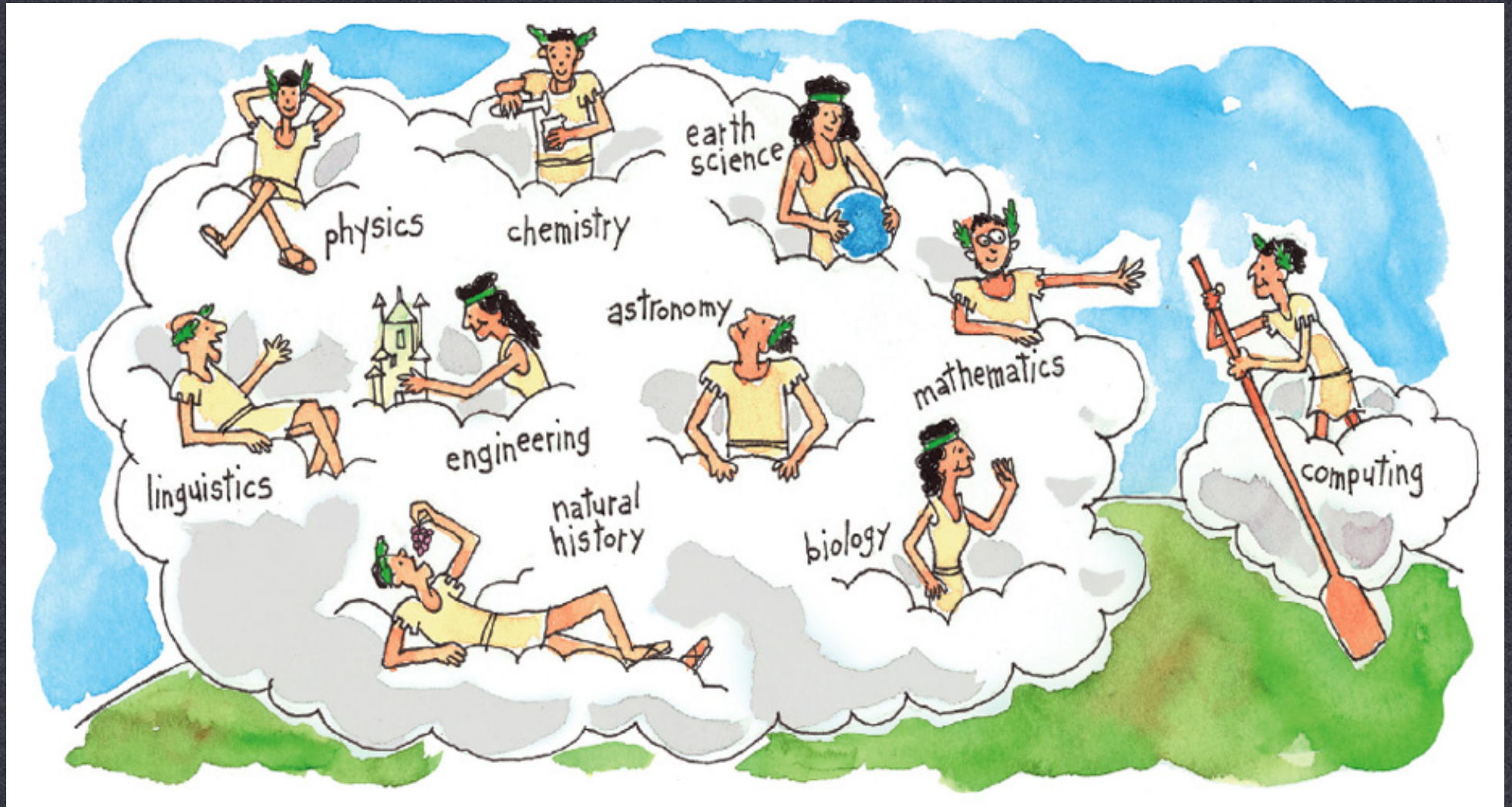




$$\int_{R_n} \dots dx = \int_{R_n} \frac{\partial}{\partial \theta} T(x, \theta) f(x, \theta) dx$$
$$\ln f_{a, \sigma^2}(\xi_1) = \frac{(\xi_1 - a)}{\sigma^2} f_{a, \sigma^2}(\xi_1) = \frac{1}{\sqrt{2\pi\sigma^2}}$$
$$f(x) \cdot \frac{\partial}{\partial \theta} f(x, \theta) dx = M \left(T(\xi) \cdot \frac{\partial}{\partial \theta} \ln L(\xi, \theta) \right)$$
$$f(x) \cdot \left(\frac{\partial}{\partial \theta} \ln L(x, \theta) \right) \cdot f(x, \theta) dx = \int_{R_n} T(x) \cdot \left(\frac{\partial}{\partial \theta} \frac{f(x, \theta)}{f(x, \theta)} \right) \cdot f(x, \theta) dx$$
$$T(\xi) = \frac{\partial}{\partial \theta} \int_{R_n} T(x) f(x, \theta) dx = \int_{R_n} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx$$

WHERE WE COME FROM

ELECTRICAL ENGINEERING, PHYSICS, MATHEMATICS



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Proliferation of hyphenated fields

- Computational physics, chemistry, biology, ...
- Computational geology, mathematics, ...
- Computational culture, sociology, linguistics, ...
- Web informatics, {Security, Media} informatics
- {Medical, Health} informatics
- Computational Informatics

Implications for

- Individual researchers
- Department level in university
- Discipline
- Profession

Individual Researcher

- Should I specialize in core computer science or take my computer science expertise into an application field
- Where do I publish?
- Am I just a programmer?
- Where do I get funding?

Department level

- How do we divide the budget?
- Do we hire computer scientists or application level experts?
- Are we producing just programmers or scientists?

Discipline and profession

- Are we our own science or we are only providing a service to other disciplines?
- What does a certification as a computer scientist guarantee?
- Are application specialists computer scientists?