

# Beyond database research

Serge Abiteboul  
Inria and École Normale Supérieure, Paris



Before we start

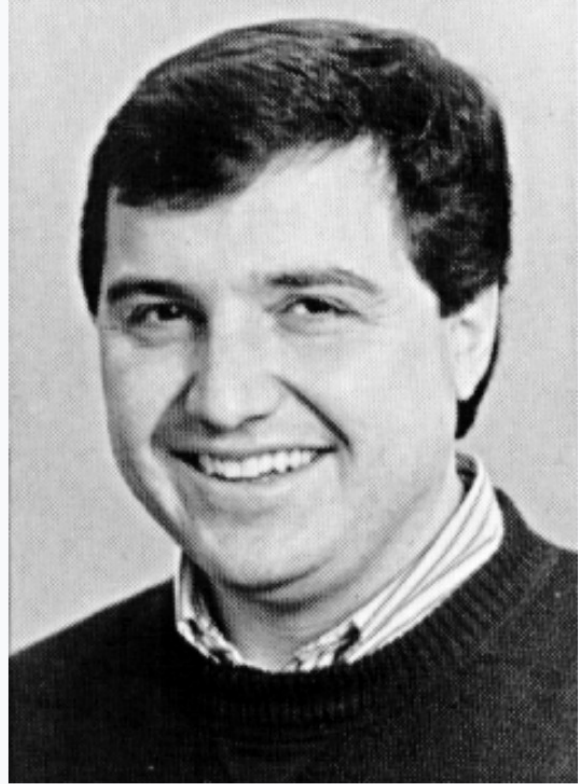
- This is a perfect occasion to remember the old friends
- And more friends: Alberto Mendelzon, Christine Collet, Hector Garcia-Molina...

Seymour Ginsburg



From my first web page

Paris Christos Kanellakis



**Born** December 3, 1953  
[Athens](#), Greece

**Died** December 20, 1995 (aged 42)  
near [Buga](#), [Colombia](#)



# Beyond database research?



Motivation (thanx Pierre): Answer an existential question some of you may be asking themselves:

**But what else can you do beyond database research?**

Scope of the talk: Work I did, not motivated by DB research?

**What do you call work?**



***Free content: This material is in Creative Content Zero***

***AI free: sorry, generative AI would have done much better***

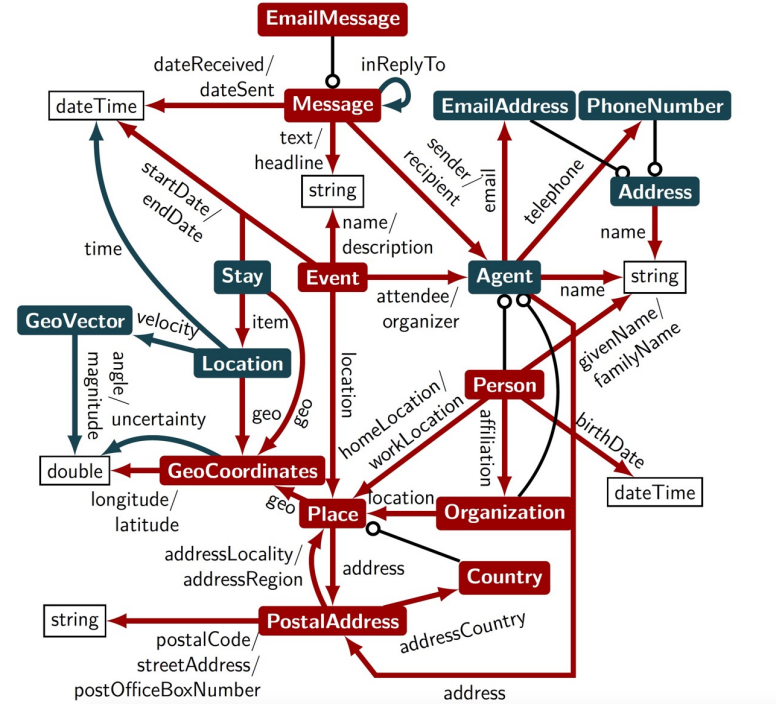
- ***even some of the drawings are mine***

***Content free: there will be no theorem in this presentation, and there will be no corollary, no proposition, no lemma, no proof, but many pictures***

Sergey Brin advice: if your talk is content-free, use many pictures

# Work at Inria (1): Personal information management systems

- PIMS: social impact
- **Managing you digital life, CACM 2015, with Benjamin André and Daniel Kaplan**
- Work with David Montoya and Pierre Senellart
  - PhD thesis: Personal knowledge base integrating data from a user and a timeline of their activities
- Article in SIGSPATIAL 2015



# Work at Inria (2): Responsible data analysis

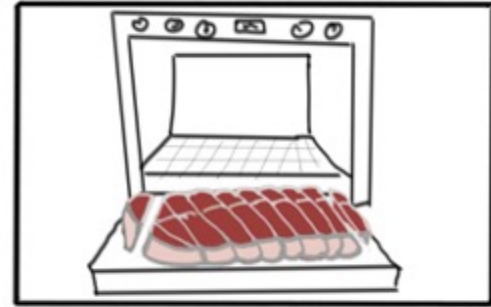
**Julia Stoyanovich et al., CACM 2022**

A series of articles with Julia and others

- EDBT
- Journal of Data and Information Quality
- ...

**Mon rosbif est biaisé**, Binaire, Le Monde

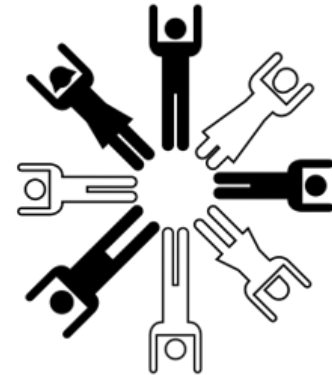
**Wanna hear the roast beef story ?**



# Work at Inria (3): Co-chair of Parity Committee at Inria

(Forget links to database research)

- Language in official documents
- Hiring and promotion of women
- Appropriate female presence in scientific organization, e.g., invited speakers
  - A great way to lose friends



# Mediation in computer science (1)

- Founder and editor of Blog binaire of *Le Monde*
- Started in 2013
- Almost 1000 articles published
  
- Selection of articles published as a book

**Digital technology and a passion for science**

**binaire**

L'informatique : science et technique au coeur du numérique<sup>8</sup>  
Avec la Société Informatique de France





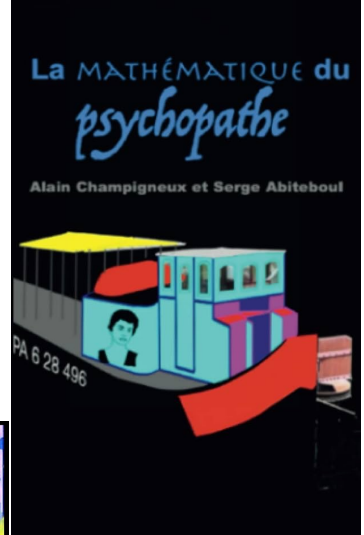
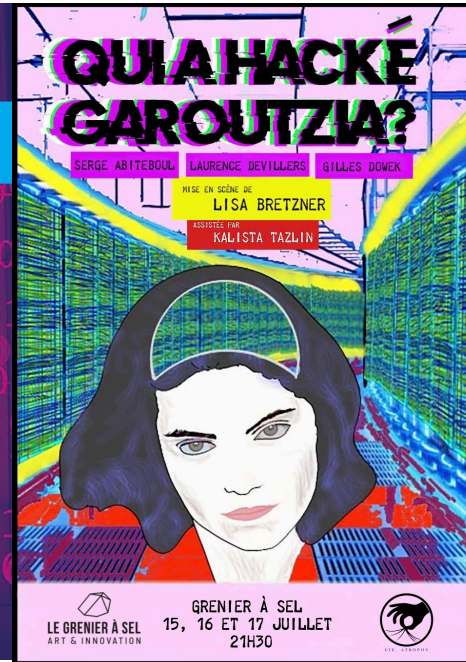
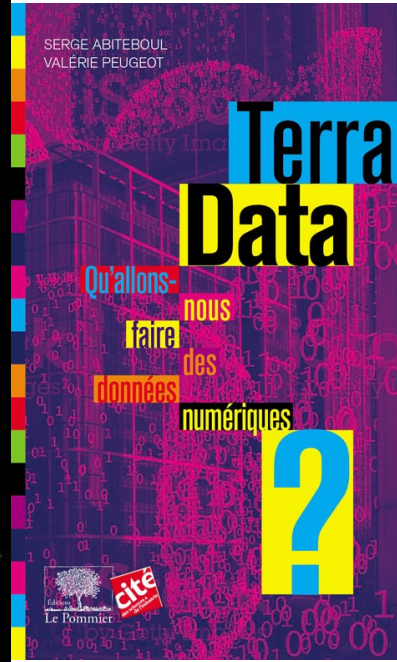
# The Age of Algorithms

Serge Abiteboul  
Gilles Dowek

## Mediation in computer science (2)

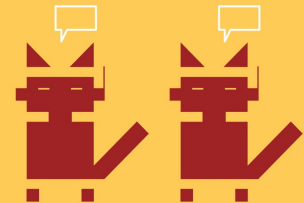
Essays,  
Short stories,  
Novels  
Plays  
(mostly in French)

Wanna see [Garoutzia's teaser](#) ?



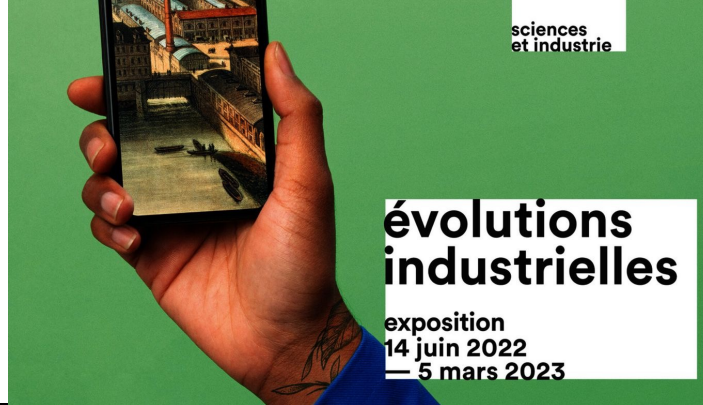
Le bot  
qui murmurait  
à l'oreille de  
la vieille dame  
et autres nouvelles numériques

Serge Abiteboul



## Mediation in computer science (3)

- Participation to a number of foundations: Fondation Inria, La main à la pâte, Fondation Sopra-Steria
- Founder and Chair of Fondation Blaise Pascal in 2018
- Scientific curator or exhibits



EXPOSITION  
2::02 --> 3::11 --> 2024



L'INTELLIGENCE  
ARTIFICIELLE ET MOI



Accueil → Au programme → Expositions temporaires → Terra Data

EXPOS TEMPORAIRES

# TERRA DATA

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L'EXPOSITION  
+

10

# Academy of sciences



## Computer science education in France

- Intense lobbying
- Work at French Academy of Sciences
- Key report of the Academy

Success : Teaching from 6 to 9th to 12th

Failure : Not enough trained CS teachers

- Report on 5G
- Report on Satellite constellations
- ...

- Report on Blockchain at French Academy of Technology

Report for the government on Data science education

**L'enseignement de l'informatique en France**

*Il est urgent de ne plus attendre*

**Rapport de l'Académie des sciences - Mai 2013**

# Works for the government

## National Digital Council 2013-2016

French independent advisory commission

- Digital divide
- Computer science education
- Network neutrality
- Platform neu
- ...



## Facebook Mission

## Arcep 2018-2024

French Electronic Communications, Postal and Print media distribution Regulatory Authority

Supposed to be a full time

- 4G deployment and 5G launch
- FttH deployment
- Net neutrality
- ipV6 deployment
- **Environmental issues**





## 3 focuses

- Environmental impacts of digital technology
- Social medias
- Digital commons (free lance)

# 1. Environmental impacts of digital technology

Work started in 2019 at Arcep

If we do nothing, the carbon print of digital technology could have tripled by 2050

Obtain data to measure it precisely from all digital actors (by law since 2022)

- Data essential for life-cycle analysis

Work with French environmental agency to propose actions to government, industry and users

European and international collaborations





# The ancient rituals

When the season comes, the researchers gather in some fancy place for bizarre rituals with weird names that make sense only to the initiated, such as SIGMOD, PODS, VLDB...

The main point is networking

- Not for favors
- Perhaps to be part of the crowd
- To meet the colleagues you want to work with

Hitting bars is more important than attending talks (don't repeat this to your advisors – they know)

Sponsored link



Life in academia  
Sigmod student workshop,  
**2007**



Quote: The time of these gatherings is counted because of their ecologically disastrous effects

Was I factually wrong? Eventually, correct?

## 2. Social networks

### Facebook Mission

*Emmanuel: FB moderation sucks*

*Mark: You kidding. It's brilliant!*

*Emmanuel: Would you open your company to some of my guys to check it up?*

*Mark: You bet!*

10 government employees from Ministry of Culture, Telecom regulator, Ministry of interior, Gendarmerie, etc. studied FB for a few months



SERGE ABITEBOUL  
JEAN CATTAN

Préface de Gérard Berry

**Creating a French framework to make social media platforms more accountable: Acting in France with a European vision, 2019**

Impact on European policy: Digital services act, 2023





### 3. Digital commons

Open science Sci-Hub  
Open data HTTP Internet  
IETF XML Wikipedia The web  
Open-source software HTM GPL  
GNU  
Creative commons  
Open RAN Git-Hub  
Decentralized Autonomous Organization TCP/IP Digital commons  
Free software Open education  
Open street map MOOC



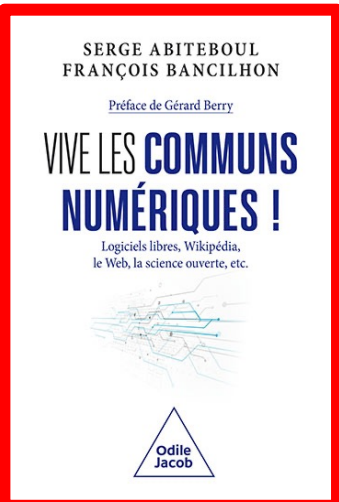
Alexandra Elbakyan



Richard Stallman



Elinor Ostrom



# Research vs. My work beyond research

## Common points

1. Difficult to measure the impact
2. There are great colleagues
3. It is great fun

## What I missed most in research

1. **The students and colleagues**
2. **Proving theorem**
3. **Designing new systems**



