

# Chapter 16. Conferences, Books, and Funding

**The Quest for Artificial Intelligence, Nilsson, N. J., 2009.**

**Lecture Notes on Artificial Intelligence, Spring 2012**

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# Contents

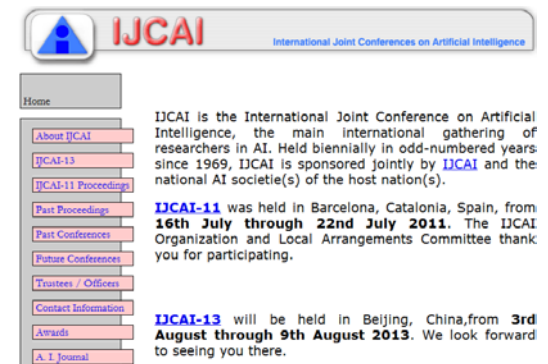
- Conferences
  - IJCAI
  - SIGART of the ACM
- Books
- Funds
  - DARPA
  - Lighthill Report

# Overview of Chapter 16

- AI communities in 1960s & 1970s
  - Conferences
  - Books
  - Funds
- Lighthill Report

# Conference

- International Joint Conference on Artificial Intelligence (IJCAI)
  - The first large conference devoted exclusively to A.I.
  - Held in Washington, DC, in May 1969.
  - Organized by
    - Donald E. Walker(1928-1993) of the MITRE Corp.
    - Alistair Holden (1930-1999) of the University of Washington.
  - About 600 people attended.
  - 63 papers were presented.



The screenshot shows the IJCAI website homepage. At the top is the IJCAI logo, which consists of a blue triangle with a white 'A' inside, followed by the text 'IJCAI' in red and 'International Joint Conferences on Artificial Intelligence' in blue. Below the logo is a navigation menu with links: Home, About IJCAI, IJCAI-13, IJCAI-11 Proceedings, Past Proceedings, Past Conferences, Future Conferences, Trustees / Officers, Contact Information, Awards, and A.I. Journal. The main content area contains text about the conference, mentioning that IJCAI-11 was held in Barcelona, Catalonia, Spain, from 16th July through 22nd July 2011, and that IJCAI-13 will be held in Beijing, China, from 3rd August through 9th August 2013.

[www.ijcai.org](http://www.ijcai.org)

# Conference

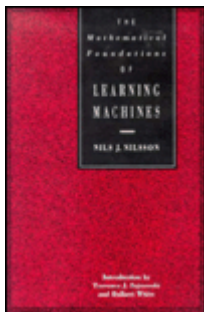
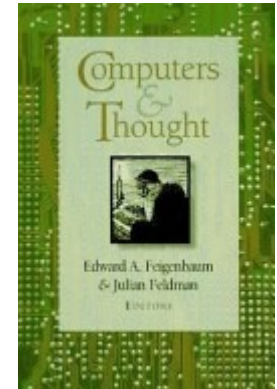
- Special Interest Group for ARTificial intelligence (SIGART of the ACM)
  - It began publishing a Newsletter in 1966.
  - Today, SIGART supports
    - Conferences: about 14 from 2009
    - Workshops
    - Awards: 6, including “Turing Awards”.
    - Journals



[www.sigart.org](http://www.sigart.org)

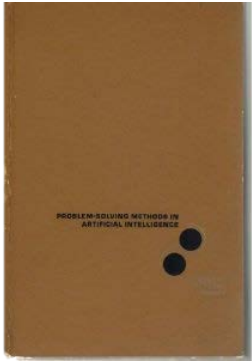
# Books

- Edward A. Feigenbaum and Julian Feldman, *Computers and Thought*, New York: McGraw-Hill Book Co., 1963. (The McGraw-Hill volume is now out of print; it is now available through AAI Press/MIT Press, 1995 edition.)
  - Collection of early AI and cognitive science papers



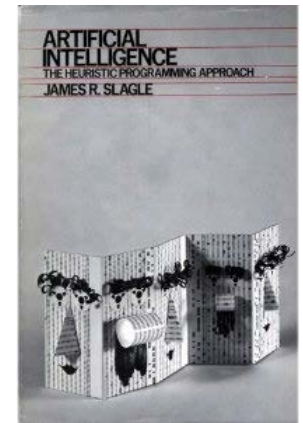
- Nils J. Nilsson, *Learning Machines: Foundations of Trainable Pattern-Classifying Systems*, New York: McGraw-Hill Book Co., 1965;
  - Republished as *The Mathematical Foundations of Learning Machines*, San Francisco: Morgan Kaufmann Publishers, 1990.

# Books



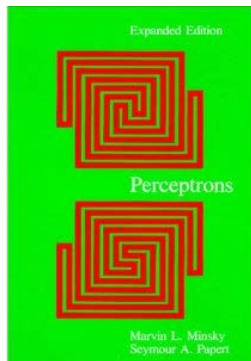
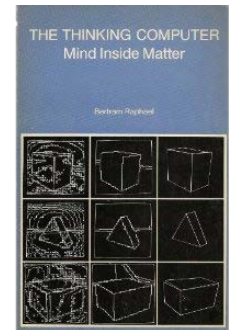
- Nils J. Nilsson, *Problem-Solving Methods in Artificial Intelligence*, New York:McGraw-Hill Book Co., 1971.
  - A Book about neural-network and statistical methods in pattern recognition.

- James R. Slagle, *Artificial Intelligence: The Heuristic Programming Approach*, New York: McGraw-Hill Book Co., 1971.
  - Author was Ph.D. student of Marvin Minsky at MIT.



# Books

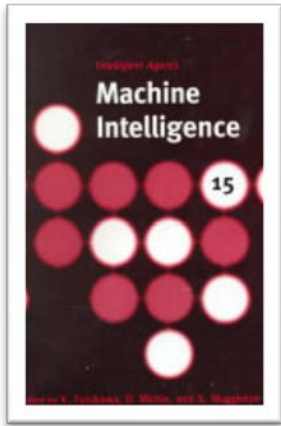
- Bertram Raphael, *The Thinking Computer: Mind Inside Matter*, New York: W. H. Freeman, 1976.
  - Author was Ph.D. student of Marvin Minsky at MIT.



- Marvin Minsky and Seymour Papert, *Perceptrons: An Introduction to Computational Geometry*, Cambridge, MA: MIT Press, 1969.
  - Authors proved that some versions of Rosenblatt's perceptrons had important limitations.
  - So this book cause of a fading interest in neural-network research.



# Books



- Machine Intelligence, 1967-1997.
  - A result of each workshop.
  - After 1997, it has been published online by the *Electronic Transactions on Artificial Intelligence*.  
<http://www.etai.info/mi>

The image is a screenshot of a website page. On the left, there is a vertical navigation menu with the following items: 'Areas', 'The Journal', 'For Authors', 'For Readers', 'For Guests', 'Organization', 'Character and Scope', 'Editorial Committee', 'Modus Operandi', and a list of years: '1998: MI 16', '2000: MI 17', '2001: MI 18', '2002: MI 19'. The main content area on the right features the ETAI logo (a stylized 'E' and 'A' with a triangle) and the text 'ELECTRONIC TRANSACTIONS ON ARTIFICIAL INTELLIGENCE'. Below the logo is the text 'Area of Machine Intelligence'. The main heading is 'Character and Scope of the ETAI Area 'Machine Intelligence''. The body text begins with 'Beginning with Machine Intelligence 16, articles from the Machine Intelligence workshops (MI) will be published as special issues in the Electronic Transactions on Artificial Intelligence (ETAI). The Machine Intelligence section of ETAI will continue the same tradition as the Machine Intelligence series ha pursued since its start in 1965, namely, to embrace whatever might arise of special timeliness in our area of research. Each workshop will have its own special focus and its own selection of invited participants, and the ETAI Special Issues for Machine Intelligence will reflect the topic and the quality of each workshop.'

<http://www.etai.info/mi>

# Funding

- Defense Advanced Research Projects Agency (DARPA). Since 1970.
  - November 19, 1969. U.S. Congress passed the “Mansfield Amendment” to Defense Procurement Authorization Act of 1970.
    - Defense Department restrict its support of basic research to projects with relationship to a specific military function or operation.
  - On March 23, 1972, the Defense Research Advanced Projects Agency (DARPA)
    - Reflect its emphasis on projects that contributed to enhanced military capabilities.

# Funding

- **Lighthill Report:** “Artificial Intelligence: A General Survey.”
  - Prof. James Lighthill, a famous **hydrodynamicist** at Cambridge University, to undertake an evaluative study of **AI research**.
  - He concluded that...
    - Existing AI search techniques (worked on toy problems) would not scale to real problems.
      - Because they would be stymied by the combinatorial explosion.
  - His report resulted substantial curtailment of AI research in U.K.
    - It also affects to DARPA.

# Funding

## ■ Nowadays

- Many AI techniques did begin to find application to real problems.

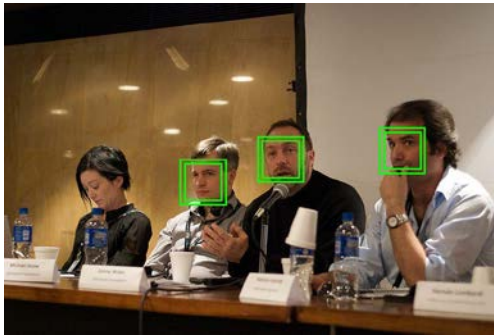


Image recognition

Google

Internet search engine



Cognitive Science



Smart Agent



Robotics

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