Chapter 16. Conferences, Books, and Funding

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

Lecture Notes on Artificial Intelligence, Spring 2012

Summarized by Kim, Kwon-Ill and Yoo, Jun Hee

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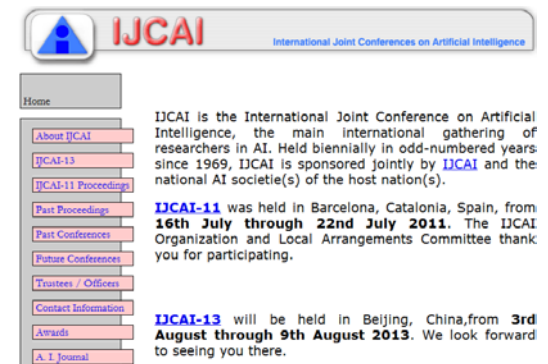
http://bi.snu.ac.kr

Contents

- Conferences
  - IJCAI
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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.

IJCAI is the International Joint Conference on Artificial Intelligence, the main international gathering of researchers in AI. Held biennially in odd-numbered years since 1969, IJCAI is sponsored jointly by IJCAI and the national AI societie(s) of the host nation(s).

IJCAI-11 was held in Barcelona, Catalonia, Spain, from 16th July through 22nd July 2011. The IJCAI Organization and Local Arrangements Committee thank you for participating.

IJCAI-13 will be held in Beijing, China,from 3rd August through 9th August 2013. We look forward to seeing you there.

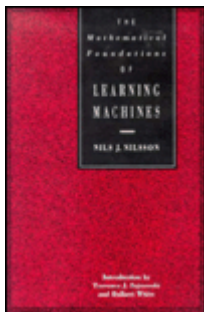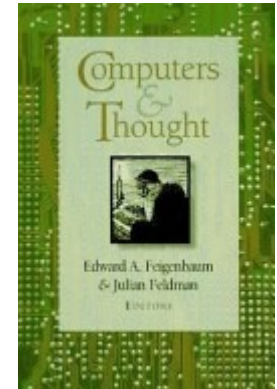www.ijcai.org

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".
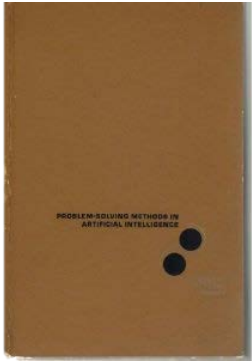   - Journals

www.sigart.org

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 AAAI Press/MIT Press, 1995 edition.)
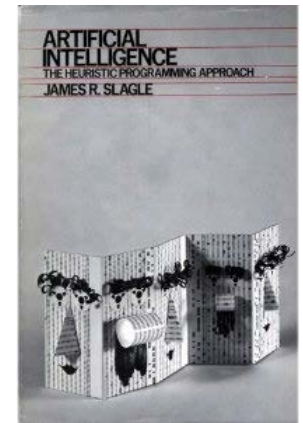 - Collection of early AI and cognitive science papers

- 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.
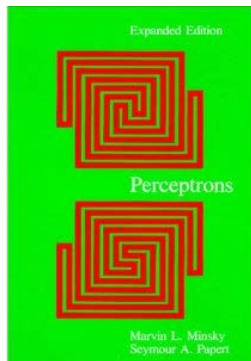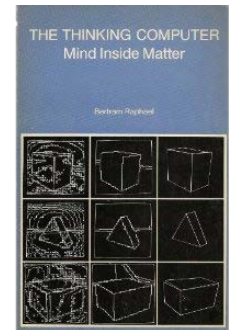
Books

- 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.
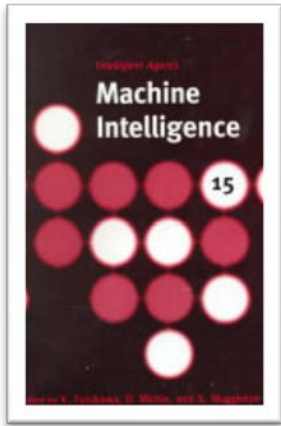
Books

- 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

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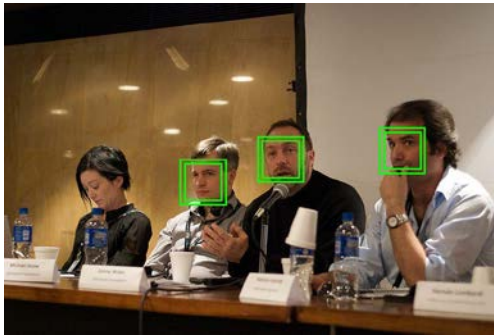 - Many AI techniques did begin to find application to real problems.

Image recognition

Internet search engine

Cognitive Science

Smart Agent

Robotics

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