A Subject Indexed Bibliography
of
Distributed Artificial Intelligence

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It is impossible to draw clear boundaries on the literature of a field, especially one as broad and interdisciplinary as Distributed AI. The total published literature in DAI now seems to exceed 500 papers, of which only 40 or so key papers could be included in this book. This bibliography has been designed to support the reader in pursuing his or her interest in DAI by reading further papers.

Due to limitations of space, we selected for this bibliography about 300 papers which were relatively recent and relatively accessible. We left out some older papers which have for the most part been superseded. We also excluded extremely recent papers on new ideas which have not yet been adequately explored or evaluated. We have had to overlook numerous papers on the fringes of DAI, and papers in other related areas which, even though important, have only an indirect contribution to DAI. But we have included a limited selection of works from related disciplines but unfortunately could not reference many sources in subject areas such as small group theory, organization theory, economics, game theory, etc. which would provide important new possibilities. We urge the reader to seek these by studying the bibliographies of papers included in the book.

We tried to limit our selection to papers published in journals and conferences, or at least in established report series from major universities. But we also have tried to maintain an international balance by mentioning papers from other countries which might be less accessible from the US. Unfortunately, several important entries in the DAI canon are virtually or completely inaccessible, We included some of these for historical accuracy and information. Perhaps the most notable is the often cited Proceedings of the 1985 Workshop on Distributed Artificial Intelligence, held at Sea Ranch, CA., which has not been available (though many papers from this workshop have been subsequently published elsewhere, e.g., see [Huhns87a]).

The subject index is intended to guide the reader in navigating the broad ocean of DAI. We have adopted a medium-grained subject description index with about 50 categories. Finer distinctions are made in our survey and the reader can be guided by this in making his or her own further distinctions. Each index category gives a list of from 5 to 20 papers to consult. The set of papers in each category will cover most of the current available concepts, mechanisms and systems that are relevant to the index category. Papers in particular application domains have been grouped under the index categories air traffic control domains, design domains, distributed sensing and interpretation domains, manufacturing domains, office information systems, robot domains and miscellaneous domains.
1  Actors

[Agha85][Agha86a][Agha86b][Clinger81][de Jong88] [Garner87][Hewitt77a] [Hewitt77b] [Hewitt80]
[Hewitt84a][Hewitt85] [Hewitt86] [Kornfeld81b] [Lieberman83] [Theriault83] [Yonezawa86]

2  Air traffic control domains

[Cammarata83] [Findler86] [McArthur82b] [Steeb81] [Steeb84] [Steeb86] [Thorndyke81]

3  Articulation work

[Bendi87] [Gasser84] [Gasser86] [Gerson86] [Hewitt86]

4  Belief modeling

[Ballim86a] [Ballim86b] [Bruce78] [Carbonell81] [Cohen79] [Cohen87a] [Cohen87b] [Cohen87d]
[deKleer86] [Konolige82] [Konolige86] [Pearl87] [Pollack87] [Sproull81] [Sycara85a] [Sycara85b]
[Vilain88] [Wilks87]

5  Blackboard systems

[Corkill86] [Corkill87] [Cullingford81] [Ensor85] [Ensor86] [Elbes86] [Erman75] [Erman80]
[Fennell77] [Fox81] [Gomez81] [Hayes-Roth79a] [Hayes-Roth79b] [Hayes-Roth85] [Hayes-Roth86]
[Jagannathan87a] [Jones86] [Leao86] [Lesser80a] [Lesser82] [Lesser83] [Nii86b] [Nii86a] [Yang85]

6  Centralized control

[Ackland85][Cammarata83][Cullingford81][Geoff83][Geoff84] [Geoff87d] [Hayes-Roth79a]
[Hayes-Roth79b] [Konolige80] [Konolige82] [Lansky85] [Lenat75] [Pednault87] [Steeb81] [Steeb84]
[Steeb86] [Stuart85] [Wood83]

7  Coherence

[Corkill83] [Davis83] [Durfee85] [Durfee87d] [Durfee87e] [Gasser87d] [Genesereth84] [Lesser83]
[Mead34] [Rosenschein85b] [Rosenschein87a] [Sacks74]

58
8 Contract net

[Davis83] [Parunak87] [Ramamirtham85] [Smith79] [Smith80] [Smith81a] [Smith81b] [Stankovic85]

9 Cooperation

[Axelrod84] [Axelrod86] [Benda85] [Cammarata83] [Durfee85] [Durfee87a] [Durfee87b] [Durfee87c] [Durfee87d] [Durfee87e] [Erman75] [Erman80] [Fikes82] [Genesereth84] [Harmon84] [Rosenschein86] [Smith81b] [Steeb81] [Steeb86] [Werner87] [Zachary88]

10 Coordination

[Axelrod86] [Backstrom88b] [Corkill83] [Davis81] [Durfee87a] [Durfee87b] [Durfee87c] [Gasser86] [Gasser88b] [Gasser88a] [Harmon84] [Harmon86] [Hewitt77b] [Hewitt83] [Lansky87b] [Malone87a] [Malone88a] [Moses86] [Rosenschein82] [Rosenschein86] [Schank77] [Stuart85] [Tenney79] [Tenney81a] [Tenney81b] [Winograd86]

11 Design domains

[Ackland85] [Ensor85] [Ensor86] [Lenat75] [Verrilli87] [Yang85]

12 Distributed control

[Brooks82] [Cammarata83] [Corkill79] [Cromarty86] [Davis83] [Elfe86] [Ferber88] [Findler87] [Huhns83] [Lesser80a] [Lesser82] [Minsky86] [Steeb81] [Steeb86] [Tenney79] [Tenney81a] [Tenney81b]

13 Distributed expert systems

[Ackland85] [Belloch86] [Huhns83] [MacIntosh87a] [MacIntosh87b] [Mukhopadhyay86] [Silverman86] [Sowizral84] [Thorndyke81]
14 Distributed knowledge and knowledge representation

[Appelt80] [Axelrod86] [Biecholch6] [Borchardt87] [Brooks82] [Cammarata83] [Carley86] [Corkill79]
[Cullingham81] [de Jong88] [Doyle79] [Fahlman83] [Genesereth84] [Georgeff83] [Georgeff84]
[Gomez81] [Green87] [Halpern86b] [Halpern86a] [Halpern84] [Hayes-Roth79a] [Hewitt77a]
[Hewitt84a] [Hewitt85] [Konolige80] [Kornfeld81b] [Konolige82] [Lenat75] [Lesser80a] [Lesser81]
[Lesser83] [Lieberman86] [Mason88] [Minsky80] [Pearl87] [Rieger81] [Smith79] [Steeb81] [Steeb84]
[Steeb86] [Steels79] [Vilain88] [Wesson81]

15 Distributed planning

[Backstrom88c] [Conry86] [Corkill79] [Dean87] [Durfee86] [Durfee87a] [Durfee87b] [Durfee87c]
[Findler86] [Georgeff87c] [Hayes-Roth79a] [Hayes-Roth79b] [Koo87] [Lansky87b] [Morgenstern87]
[Rosenschein82] [Shaw85] [Shaw87] [Steeb81] [Steeb84] [Steeb86] [Stuart85] [Thorndyke81] [Yang85]

16 Distributed problem solving

[Biecholch6] [Cammarata83] [Corkill82] [Corkill83] [Davis83] [Decker87b] [Dietrich86a] [Durfee85]
[Durfee86] [Durfee87a] [Durfee87b] [Durfee87c] [Durfee87d] [Durfee87e] [Erman75] [Erman80]
[Fennell77] [Green87] [Haase86] [Hsu87] [Kornfeld81a] [Kornfeld81b] [Leao86] [Lenat75] [Lesser83]
[Mazer86] [Mazer87] [McArthur82b] [Nii86c] [Pearl82] [Smith81a] [Smith81b] [Steeb81] [Steeb84]
[Steeb86] [Steels79] [Verrill87] [Waldinger77] [Wilensky84] [Zachary88]

17 Distributed sensing and interpretation domains

[Brown86] [Corkill82] [Corkill83] [Davis83] [Durfee85] [Durfee86] [Durfee87a] [Durfee87b]
[Durfee87c] [Durfee87d] [Durfee87e] [Erman75] [Erman80] [Hudlicka84] [Hudlicka86a] [Lesser83]
[Lesser88] [Schoen86] [Smith80] [Wesson81]

18 Distributed vehicle monitoring testbed

[Corkill82] [Corkill83] [Durfee85] [Durfee86] [Durfee87a] [Durfee87b] [Durfee87c] [Durfee87d]
[Durfee87e] [Hudlicka84] [Hudlicka86a] [Hudlicka86b] [Hudlicka87] [Lesser83] [Lesser88]
19 Experimental research

[Brooks82] [Brown86] [Cammarata83] [Corkill83] [Durfee84a] [Durfee84b] [Durfee85] [Durfee87d] [Gasser87d] [Gasser87c] [Hayes-Roth79a] [Lenat75] [Lesser80a] [Pavlin83] [Steeb81] [Steeb84] [Steeb86] [Wesson81] [Yang85]

20 Formal approaches, theories and methods

[Agha86a] [Appelt80] [Backstrom88c] [Clinger81] [Cohen79] [Cohen87b] [Cohen87a] [Genesereth84] [Georgeff83] [Georgeff84] [Georgeff86a] [Georgeff86b] [Georgeff87c] [Georgeff87b] [Georgeff87a] [Ginsberg87] [Hewitt77a] [Hewitt77b] [Hewitt84a] [Huberman88b] [Konolige80] [Konolige82] [Lansky85] [Lansky87a] [Lansky87b] [Rosenschein85a] [Rosenschein87b] [Shaw87] [Stuart85] [Stuart87] [Tenney79] [Tenney81a] [Tenney81b] [Waldinger77] [Werner87]

21 Functionally accurate cooperative systems

[Decker87b] [Decker87a] [Fennell77] [Lesser81] [Lesser83]

22 Hardware architectures

[Billstrom87][Bisiani85][Bisiani86][Bisiani87][Casais88][Durfee84a][Durfee84b] [Erman85] [Fennell77] [Hewitt80] [Hewitt84b] [Hewitt84a] [Kornfeld81b] [Lesser83] [Lieberman86] [McArthur82b]

23 Hierarchical control

[Cammarata83] [Findler87] [Fox79] [Fox81] [Steeb81] [Steeb84] [Steeb86]

24 Human-machine cooperation

[Barber83] [Borchardt87] [Chang87] [Croft87] [Ensor85] [Ensor86] [Fikes80] [Fikes82] [Goodson83] [Hewitt86] [Mazer86] [Mazer87] [Mazer88] [Oberquelle83] [Suchman87]
25 Manufacturing domains

[Findler87] [Fox84] [Gasser87a] [Maimon85] [Parunak87] [Sathi85] [Sathi86] [Shaw85] [Shaw87]

26 Markets

[Davis83] [Drexler88] [Kurose85] [Malone83] [Malone87a] [Malone87b] [Miller88a] [Miller88b] [Parunak87] [Ramamirtham85] [Smith79] [Smith80] [Smith81a] [Smith81b] [Stankovic85]

27 Metalevel knowledge and control

[Corkill82] [Corkill83] [Durfee85] [Durfee86] [Durfee87d] [Durfee87e] [Hayes-Roth85] [Hudlicka84] [Lesser83] [Rosenschein83] [Yang85]

28 Miscellaneous domains

[Boroughs77] [Brooks82] [Bruce78] [Conry86] [Doran87] [Fox79] [Gomez81] [Hayes-Roth79a] [Hayes-Roth79b] [Johnson86] [Minsky79] [Minsky80] [Sycara85a] [Sycara85b]

29 Modeling others

[Bruce78] [Cohen79] [Cohen87a] [Cohen87b] [Cohen87c] [Corkill79] [deKleer86] [Doyle79] [Durfee87a] [Gasser87d] [Gasser87c] [Gasser88a] [Ginsberg87] [Konolige82] [Konolige86] [Lenat75] [Mead84] [Pollack87] [Rosenschein82] [Rosenschein83] [Rosenschein85a] [Rosenschein85b] [Rosenschein87a] [Rosenschein86] [Schank77] [Steeb81] [Steeb84] [Steeb86] [Sycara85a] [Sycara85b] [Thorndyke81] [Wilensky84] [Wilks83] [Wilks87] [Winograd86] [Wood83]

30 Multiagent planning

[Appelt80] [Backstrom88c] [Bruce78] [Croft87] [Davis81] [Durfee86] [Durfee87a] [Durfee87b] [Durfee87c] [Georgeff83] [Georgeff84] [Hayes-Roth79a] [Hayes-Roth79b] [Konolige80] [Konolige82] [Koo87] [Lansky85] [Morgenstern87] [Pednault87] [Steeb81] [Steeb84] [Steeb86] [Stuart85] [Werner87] [Wood83]
31 Multiple perspective reasoning

[Bond87] [Cammarata83] [Carbonell81] [deKleer86] [Dietrich86b] [Durfee87a] [Durfee87c] [Gerson86] [Hewitt83] [Hewitt84a] [Hewitt84b] [Hewitt85] [Hewitt86] [Johnson86] [Kornfeld79] [Kornfeld81a] [Kornfeld81b] [Kornfeld82] [Smith85b]

32 Natural language and DAI

[Appelt81] [Cohen79] [Cohen87a] [Cohen87b] [Cohen87a] [Cullingford81] [Cullingford84] [Erman75] [Erman80] [Grosz85] [Grosz86] [Grosz87] [Labov74] [Rieger81] [Sacks74] [Small82]

33 Negotiation

[Alvarado86] [Carbonell81] [Conry86] [Davis83] [Dye87] [Durfee87a] [Durfee87c] [Gerson86] [Goldstein75] [Hewitt86] [Kornfeld81b] [Lee88] [Lesser83] [Levin77] [Pruitt81] [Rosenschein85b] [Rosenschein87a] [Shaw87] [Smith79] [Smith80] [Rosenschein85b] [Strauss78] [Sycara85a] [Sycara85b] [Willer81]

34 Observing, modeling and describing distributed system behavior

[Geffner87] [Huberman88a] [Hudlicka84] [Hudlicka86a] [Hudlicka86b] [Hudlicka87] [Lesser80b] [Lesser83] [Miller88b] [Pattison87] [Pavlin83] [Pavlin84]

35 Office information systems

[Barber80] [Barber82] [Barber83] [Croft87] [de Jong88] [Fikes80] [Fikes82] [Fox84] [Gasser86] [Gerson86] [Hewitt86] [Ho86] [Huhns83] [Koo87] [Mazer86] [Mazer87] [Mazer88] [Mukhopadhyay86] [Nirenberg86] [Sathi85] [Sathi86] [Woo86]

36 Open systems

[Dietrich86b] [Fikes80] [Gerson86] [Hewitt83] [Hewitt84a] [Hewitt84b] [Hewitt85] [Hewitt86] [Huberman88a] [Huberman88b] [Miller88a] [Miller88b]
37 Organizational structures, policies and architectures

[Axelrod86] [Benda85] [Bond87] [Cammarata83] [Corkill82] [Corkill83] [Davis83] [de Jong88]
[Durfee87a] [Durfee87b] [Durfee87c] [Findler87] [Fox79] [Fox81] [Gasser86] [Gasser88a]
[Hudlicka87] [Kornfeld81b] [Lesser80a] [Lesser83] [Malone83] [Malone84] [Malone87a] [Malone88a]
[McArthur82b] [Miller88a] [Pavlin83] [Pavlin84] [Pattison87] [Reddy82] [Rosenschein82] [Sathi85]
[Smith81b] [Steeb81] [Steeb84] [Steeb86] [Stuart85] [Tenney79] [Tenney81a] [Tenney81b] [Wesson81]

38 Rationality

[Cohen79] [Cohen87a] [Cohen87b] [Genesereth84] [Ginsberg87] [Rosenschein85a] [Rosenschein87a]

39 Real time and time dependence

[Elfe86] [Green87] [Lesser88] [Ramamritham85] [Schoen86] [Stankovic85] [Tenney79] [Tenney81a]
[Tenney81b] [Wood83]

40 Reasoning about action

[Allen84] [Backstrom88b] [Backstrom88c] [Barber80] [Croft87] [Dean87] [Georgeff83] [Georgeff84]
[Georgeff86a] [Georgeff86b] [Georgeff87a] [Georgeff87b] [Georgeff87c] [Hayes-Roth86] [Hewitt83]
[Konolige82] [Lansky85] [Mazer88] [McDermott78] [Morgenstern87] [Pednault87] [Sathi85]
[Schank77] [Stuart85] [Stuart87]

41 Reasoning about communication

[Appelt81] [Cammarata83] [Cohen79] [Cohen87b] [Cohen87a] [Cromarty86] [Cohen87b] [Davis83]
[Durfee87c] [Genesereth84] [Gordon71] [Grosz85] [Grosz86] [Grosz87] [Koo87] [Labov74] [Lesser80a]
[Lesser83] [Levin77] [Rosenschein86] [Rosenschein87a] [Sacks74] [Smith80] [Smith81b] [Steels79]
[Werner87] [Yang85]

42 Reasoning about knowledge

[Halpern86a] [Halpern86b] [Konolige86] [Rosenschein87b]
43 Representing action structures

[Backstrom88b] [Backstrom88c] [Dean87] [Durfee87a] [Durfee87c] [Gasser86] [Hudlicka84]
[Hudlicka86a] [Hudlicka86b] [Hudlicka87] [Pavlin83] [Pavlin84] [Sathi85]

44 Resolving disparities

[Deen87] [deKleer86] [Doyle79] [Durfee84a] [Durfee84b] [Durfee85] [Durfee86] [Durfee87a] [Durfee87b]
[Durfee87c] [Durfee87d] [Durfee87e] [Erman75] [Erman80] [Fennell77] [Genesereth84] [Halpern84]
[Hayes-Roth79a] [Hewitt84a] [Hewitt85] [Holzner83] [Koo87] [Kornfeld81b] [Lenat87] [Lesser81]
[Manning77] [Mason88] [Moses86] [Pearl82] [Rosenschein83] [Rosenschein85a] [Rosenschein85b]
[Rosenschein86] [Steels79] [Stuart85] [Suchman87] [Tenney79] [Tenney81a] [Tenney81b] [Vilain88]
[Wilensky84] [Wilks83] [Winograd86]

45 Resource allocation

[Davis83] [Hayes-Roth79a] [Hayes-Roth79b] [Kornfeld79] [Kornfeld81b] [Kornfeld82] [Lesser83]
[Parunak87] [Ramamritham85] [Smith79] [Smith80] [Smith81a] [Smith81b] [Stankovic85]

46 Robot domains

[Elfes86] [Gasser87a] [Georgeff86b] [Harmon84] [Harmon86] [Maimon85]

47 Simulation

[Durfee84a] [Durfee84b] [Fox84] [Hayes-Roth79a] [Lesser80b] [Lesser83] [Lieberman83]
[MacIntosh87a] [MacIntosh87b] [McArthur82a] [Reddy82] [Wood83]

48 Social metaphors

[Carley86] [Chandrasek81] [Chang87] [Fikes82] [Fox87] [Fox89] [Gasser86] [Hewitt77a] [Hewitt85]
[Ho86] [Holzner83] [Kornfeld81b] [Latour87] [Lesser83] [Malone88a] [Minsky79] [Minsky86]
[Sproull81] [Steels79] [Sycara85a] [Sycara85b] [Wesson81] [Woolgar85]
49 Social science background

[Abraham82] [Becker86] [Bentley54] [Blumer69] [Cooley64] [Dewey16] [Gerson86] [Hall82] [Kurose85] [Latour87] [Lawrence69] [Manning77] [Marshak72] [Mead34] [Parsons60] [Pruitt81] [Shibutani86] [Strauss78] [Thompson67] [Willer81]

50 Surveys, collections and bibliographies

[Abram84] [Bond88] [Chandrasek81] [Davis80] [Davis82] [Decker87b] [Fehling83] [Gasser87b] [Gasser88b] [Gasser88d] [Gasser88c] [Geoffr87c] [Halpern86a] [Hewitt84b] [Huhns87a] [Jagannathan87b] [Lesser87] [Nii86b] [Nii86a] [Smith85a] [Veitch86] [Zachary88]

51 Systems by name

**AF** [Green87],
**APIARY** [Lieberman83] [Hewitt80],
**CADRE** [Acker85],
**CALLISTO** [Sathi85] [Sathi86],
**CAOS** [Brown86] [Schoen86],
**CIS** [Belho86],
**CONTRACT NET** [Davis83] [Smith81a] and see CNET section,
**DESCANT** [Decker87a],
**DVMT** [Lesser83] and see DVMT section,
**FACILITY ADVISOR** [Silverman86],
**HEARSAY-II** [Erman75] [Erman80] [Fennell77] [Lesser80a] [Fox81],
**ISIS** [Fox84],
**MINDS system** [Mukhopadhyay86] [Huhns83],
**OPM** [Hayes-Roth79a] [Hayes-Roth79b],
**PERSUADER** [Sycara85a] [Sycara85b],
**POLYGON** [Rice86],
**POLYMER** [Croft87],
**PRESSURE** [Gasser87a],
**PUP6** [Lenat87],
**SPRING** [Raman85] [Stankovic85],
**YAMS** [Parunak87]

52 Task allocation

[Cammarata83] [Corkill79] [Cullingford81] [Davis83] [Durfee87a] [Durfee87c] [Gasser87a] [McArthur82b] [Malone87b] [Parunak87] [Raman85] [Shaw85] [Shen85] [Smith79] [Smith81a] [Smith81b] [Stankovic85] [Steeb81] [Steeb84] [Steeb86] [Thorndyke81] [Wesson81]
53 Task decomposition

[Chandrasek82] [Fahlman83] [Hinke88] [Lesser80a] [Smith85b] [Wesson81] [Yang85]

54 Tools

Integrative systems
MACE [Gasser87d] [Gasser87c],
ABE [Erman85],
AGORA [Bisiani85] [Bisiani86] [Bisiani87]

Concurrent, Distributed and Object-oriented languages
[Casais88] [Arbib85] [Arbib88] [Casais88],
CCLISP [Billstrom87],
OIL [Cohen85],
ORIENT84/K [Tokoro84],
ROSS [McArthur82a]

Actor languages
[Agha86a] [Garner87],
ACT2 [Theriault83],
ACT3 [Agha85],
APIARY [Hewitt80],
ETHER [Kornfeld81b] [Kornfeld79] [Kornfeld82],
PLASMA [Hewitt77a] [Yonezawa86],
UBIK [de Jong88]

Experimental Testbeds
[Yeung86],
AF [Green87],
APIARY [Lieberman83],
CAOS [Schoen86],
CNET [Smith81a],
DVMT [Durfee84a] [Durfee84b],
MACE [Gasser87d] [Gasser87c],
POLIGON [Nii86c] [Rice86],
SIMULACT [MacIntosh87a] [MacIntosh87b]

Parallel production systems and Blackboard languages
BB [Hayes-Roth86],
Blackboard shells [Jones86] [Hayes-Roth85],
CAGE [Aiello86] [Nii86c],
COPS [Leao86],
ERASMUS [Jagannathan87a],
FACILITY ADVISOR [Silverman86],
GBB [Corkill86] [Corkill87],
HEARSAAY-III [Balzer80] [Erman81]

Performance and modeling tools
[Pavlin83] [Pavlin84],

67
**EFIGE** [Pattison87],

**GEM specification framework** [Lausky87b]

Miscellaneous

**CALLISTO** [Sathi85] [Sathi86],

**PCS** [Chang87]
References


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