

An Indexed Bibliography of Genetic Algorithms in Manufacturing

compiled by

Jarmo T. Alander

Department of Information Technology and Production
Economics
University of Vaasa
P.O. Box 700
FIN-65101 Vaasa
Finland

e-mail: Jarmo.Alander@uwasa.fi
www: <http://www.uwasa.fi/~jal>
phone: 358-61-3248 444
fax: 358-61-3248 467

Report Series No. 94-1-MANU



DRAFT

Trademarks

Product and company names listed are trademarks or trade names of their respective companies.

Warning

While this bibliography has been compiled with the utmost care, the editor takes no responsibility for any errors, missing information, the contents or quality of the references, nor for the usefulness and/or the consequences of their application. The fact that a reference is included in this publication does not imply a recommendation. The use of any of the methods in the references is entirely at the user's own responsibility. Especially the above warning applies to those references that are marked by trailing †(or *), which are the ones that the editor has unfortunately not had the opportunity to read. An abstract was available of the references marked with *.

Contents

1	Preface	1
1.1	Your contributions erroneous or even missing?	1
1.2	How to get this report via Internet ?	3
1.3	Acknowledgement	3
2	Introduction	5
3	Statistical summaries	7
3.1	Publication type	7
3.2	Annual distribution	7
3.3	Classification	8
3.4	Authors	8
3.5	Geographical distribution	8
3.6	Conclusions and future	10
4	Indexes	11
4.1	Books	11
4.2	Journal articles	11
4.3	Theses	11
4.3.1	PhD theses	12
4.3.2	Master's theses	12
4.4	Report series	12
4.5	Patents	12
4.6	Authors	13
4.7	Subject index	17
4.8	Annual index	20
5	Permuted title index	21
	Bibliography	33
	Appendixes	49
A	Abbreviations	49
B	Bibliography entry formats	51

List of Tables

1.1	Other indexed GA subbibliographies.	3
2.1	Queries used to extract this subbibliography from the main one.	5
3.1	Distribution of publication type.	7
3.2	Annual distribution of contributions.	7
3.3	The most popular subjects.	8
3.4	The most productive genetic algorithms and manufacturing authors.	8
3.5	The geographical distribution of authors.	8

List of Figures

3.1 The number of papers applying genetic algorithms and manufacturing. 9

Chapter 1

Preface

“Living organism are consummate problem solvers.
They exhibit a versatility that puts the best computer
programs to shame.”

John H. Holland [1]

The material of this bibliography has been extracted from the genetic algorithm bibliography [2], which when this report was compiled contained 4712 items and which has been collected from several sources of genetic algorithm literature including Usenet newsgroup `comp.ai.genetic` and the bibliographies [3, 4, 5, 6]. The following index periodicals have been used systematically

- ACM: *ACM Guide to Computing Literature*: 1979 – 1993/4
- CA: *Computer Abstracts*: Jan. 1993 – Feb. 1995
- CCA: *Computer & Control Abstracts*: Jan. 1992 – Jun. 1995 (except May -95)
- CTI: *Current Technology Index* Jan./Feb. 1993 – Jan./Feb. 1994
- DAI: *Dissertation Abstracts International*: Vol. 53 No. 1 – Vol. 55 No. 9 (Mar. 1995)
- EEA: *Electrical & Electronics Abstracts*: Jan. 1991 – May 1995
- P: *Index to Scientific & Technical Proceedings*: Jan. 1986 – June 1995 (except Nov. 1994)
- A: *International Aerospace Abstracts*: Jan. 1995 – Apr. 1995
- N: *Scientific and Technical Aerospace Reports*: Jan. 1993 - July 1995
- EI A: *The Engineering Index Annual*: 1987 – 1992
- EI M: *The Engineering Index Monthly*: Jan. 1993 – June 1995

1.1 Your contributions erroneous or even missing?

This bibliography is updated on a regular basis and certainly contains many errors and inconsistencies. The editor would be glad to hear from any reader who notices any errors, missing information, articles etc. In the future a more complete version of this bibliography will be prepared for the genetic algorithms and manufacturing research community and others who are interested in this rapidly growing area of genetic algorithms.

When submitting updates to the database, paper copies of already published contributions are preferred. Paper copies (or ftp ones) are needed mainly for indexing. We are also doing reviews of different aspects and applications of GAs where we need as complete as possible collection of GA papers. Do not forget to include complete bibliographical information: copy also proceedings volume title pages, journal table of contents pages, etc. Observe that there exists several versions of each subbibliography, therefore **the reference numbers are not unique and should not be used alone in communication**, use author, title, and year instead.

Complete bibliographical information is really helpful for those who want to find your contribution in their libraries. If your paper was worth writing and publishing it is certainly worth to be referenced right in a bibliographical database read daily by GA researchers, both newcomers and established ones.

1.2 How to get this report via Internet?

Versions of this bibliography are available via anonymous ftp and www from the following sites:

<i>media</i>	<i>country</i>	<i>site</i>	<i>directory</i>	<i>file</i>
ftp	Finland	ftp.uwasa.fi	/cs/report94-1	gaMANUbib.ps.Z
www	Finland	http://www.cs.hut.fi	~ja/lgaMANUbib	gaMANUbib.html

Observe that these versions may be somewhat different and perhaps reduced as compared to this volume that you are now reading. Due to technical problems in transforming L^AT_EX documents into html ones the www versions contain usually less information than the corresponding ftp ones. It is also possible that the www version is completely unreachable.

The directory also contains some other indexed GA bibliographies shown in table 1.1.

<i>file</i>	<i>contents</i>
gaAIbib.ps.Z	GA in artificial intelligence
gaALIFEBib.ps.Z	GA in artificial life
gaARTbib.ps.Z	GA in art and music
gaAUSbib.ps.Z	GA in Australia
gaBASICSbib.ps.Z	Basics of GA
gaCADbib.ps.Z	GA in CAD
gaCHEMPHYSbib.ps.Z	GA in chemistry and physics
gaCONTROLbib.ps.Z	GA in control
gaDBbib.ps.Z	GA in databases
gaECObib.ps.Z	GA in economics and finance
gaENGBib.ps.Z	GA in engineering
gaESbib.ps.Z	Evolution strategies
gaFAR-EASTbib.ps.Z	GA in the Far East (Japan etc)
gaFTPbib.ps.Z	GA papers available via ftp
gaFUZZYbib.ps.Z	GA and fuzzy logic
gaGPbib.ps.Z	genetic programming
gaLOGISTICSbib.ps.Z	GA in logistics
gaMANUbib.ps.Z	GA in manufacturing
gaNNbib.ps.Z	GA in neural networks
gaNORDICbib.ps.Z	GA in Nordic countries
gaORbib.ps.Z	GA in operations research
gaPARAbib.ps.Z	Parallel and distributed GA
gaPOWERbib.ps.Z	GA in power engineering
gaROBObib.ps.Z	GA in robotics
gaSAbib.ps.Z	GA and simulated annealing
gaSIGNALbib.ps.Z	GA in signal and image processing
gaTHEORYbib.ps.Z	Theory and analysis of GA
gaVLSIbib.ps.Z	GA in VLSI design and testing

Table 1.1: Other indexed GA subbibliographies.

1.3 Acknowledgement

The editor wants to acknowledge all who have kindly supplied references, papers and other information on genetic algorithms and manufacturing literature. At least the following GA researchers have already kindly supplied their complete autobibliographies and/or proofread references to their papers: Dan Adler, Patrick Argos, Jarmo T. Alander, James E. Baker, Wolfgang Banzhaf, Christian Bierwirth, Joachim Born, Ralf Bruns, I. L. Bukatova, Thomas Bäck, Yuval Davidor, Dipankar Dasgupta, Marco Dorigo, Bogdan Filipič, Terence C. Fogarty, David B. Fogel, Toshio Fukuda, Hugo de Garis, Robert C. Glen, David

E. Goldberg, Martina Gorges-Schleuter, Hitoshi Hemmi, Jeffrey Horn, Aristides T. Hatjimihail, Mark J. Jakiela, Richard S. Judson, Akihiko Konagaya, Aaron Konstam, John R. Koza, Kristinn Kristinsson, D. P. Kwok, Carlos B. Lucasius, Michael de la Maza, John R. McDonnell, J. J. Merelo, Laurence D. Merkle, Zbigniew Michalewics, Melanie Mitchell, David J. Nettleton, Volker Nissen, Nicholas J. Radcliffe, Colin R. Reeves, David Rogers, Ivan Santibáñez-Koref, Marc Schoenauer, Markus Schwehm, Hans-Paul Schwefel, Michael T. Semertzidis, William M. Spears, Donald S. Szarkowicz, El-Ghazali Talbi, Leigh Tesfatsion, Peter M. Todd, Jari Vaario, Gilles Venturini, Hans-Michael Voigt, Roger L. Wainwright , Steward W. Wilson, Xin Yao, and Xiaodong Yin .

The editor also wants to acknowledge Elizabeth Heap-Talvela for her kind proofreading of the manuscript of this bibliography.

Chapter 2

Introduction

The table 2.1 gives the queries that have been used to extract this bibliography. The query system as well as the indexing tools used to compile this report from the BiBTeX-database [7] have been implemented by the author mainly as sets of simple awk programs [8].

<i>string</i>	<i>field</i>	<i>class</i>
manufacturing	ANNOTE	Manufacturing
assembly	ANNOTE	Assembly
process planning	ANNOTE	Process planning
line balancing	ANNOTE	Manufacturing
layout	ANNOTE	Layout design
scheduling	ANNOTE	Scheduling
pallet loading	ANNOTE	Bin-packing
production planning	ANNOTE	Production planning
process control	ANNOTE	Process control
process planning	ANNOTE	Process planning
sequencing	ANNOTE	Sequencing
transportation	ANNOTE	Transportation

Table 2.1: Queries used to extract this subbibliography from the main one.

Chapter 3

Statistical summaries

This chapter gives some general statistical summaries of genetic algorithms and manufacturing literature. More detailed indexes can be found in the next chapter.

References to each class (c.f table 2.1) are listed below:

- **Assembly** 8 references ([9]-[16])
- **Bin-packing** 3 references ([17]-[19])
- **Layout design** 49 references ([20]-[68])
- **Manufacturing** 20 references ([69]-[88])
- **Process control** 8 references ([89]-[96])
- **Process planning** 2 references ([97]-[98])
- **Production planning** 4 references ([99]-[102])
- **Scheduling** 164 references ([103]-[266])
- **Sequencing** 10 references ([267]-[276])
- **Transportation** 16 references ([277]-[292])

Observe that each reference is included (by the computer) only to one class (see also the queries for classification in table 2.1).

3.1 Publication type

This bibliography contains published contributions including reports and patents. All unpublished manuscripts have been omitted unless accepted for publication. In addition theses, PhD, MSc etc., are also included whether or not published somewhere.

Table 3.1 gives the distribution of publication type of the whole bibliography. Observe that the number of journal articles may also include articles published or to be published in unknown forums.

<i>type</i>	<i>number of items</i>
part of a collection	8
journal article	88
proceedings article	158
report	15
PhD thesis	13
MSc thesis	2
<i>total</i>	284

Table 3.1: Distribution of publication type.

3.2 Annual distribution

Table 3.2 gives the number of genetic algorithms and manufacturing papers published annually. The annual distribution is also shown in fig. 3.1. The average annual growth of GA papers has been approximately 40 % during almost the last twenty years.

<i>year</i>	<i>items</i>	<i>year</i>	<i>items</i>
1971	1	1972	0
1973	1	1974	0
1975	0	1976	0
1977	0	1978	0
1979	0	1980	0
1981	0	1982	0
1983	0	1984	0
1985	3	1986	1
1987	2	1988	7
1989	8	1990	10
1991	34	1992	42
1993	75	1994	78
1995	22		
<i>total</i>			284

Table 3.2: Annual distribution of contributions.

3.3 Classification

Every bibliography item has been given at least one describing keyword or classification by the editor of this bibliography. Keywords occurring most are shown in table 3.3.

scheduling	124
layout design	36
parallel GA	16
CAD	15
scheduling /job shop	12
job shop scheduling	9
optimization	7
TSP	7
process control	6
sequencing	5
scheduling /JSS	5
hybrid /simulated annealing	5
fuzzy systems	5
DNA sequencing	5
others	535

Table 3.3: The most popular subjects.

3.4 Authors

Table 3.4 gives the most productive authors.

total number of authors	441
Gen, Mitsuo	6
Kubota, Erika	5
Mazumder, Pinaki	5
Sannomiya, Nobuo	5
Starkweather, Timothy John	5
Tsujimura, Yasuhiro	5
8 authors	4
21 authors	3
84 authors	2
321 authors	1

Table 3.4: The most productive genetic algorithms and manufacturing authors.

3.5 Geographical distribution

The following table gives the geographical distribution of authors, when the country of the author was known. Approximately 75% of the references of the main database are classified by country.

Total 0

Table 3.5: The geographical distribution of authors.

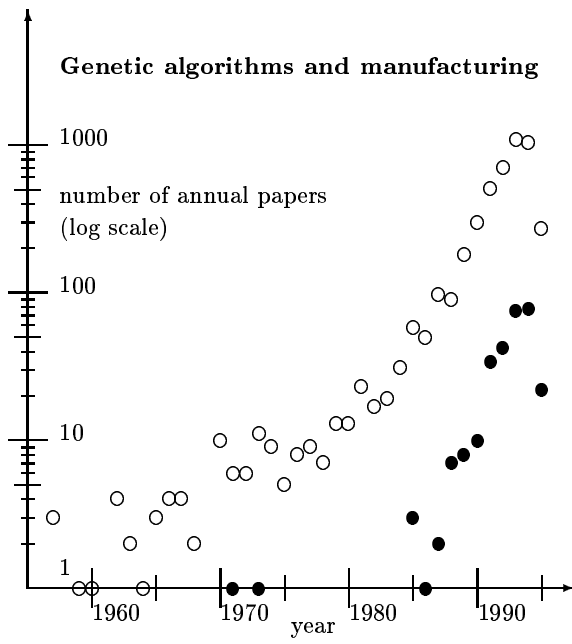


Figure 3.1: The number of papers applying **ge-
netic algorithms and manufacturing** (●) ○ =
total GA papers.

3.6 Conclusions and future

The editor believes that this bibliography contains references to most genetic algorithms and manufacturing contributions upto and including the year 1995 and the editor hopes that this bibliography could give some help to those who are working or planning to work in this rapidly growing area of genetic algorithms.

Chapter 4

Indexes

4.1 Books

The following list contains all items classified as books.

- none

4.2 Journal articles

The following list contains the references to every journal article included in this bibliography. The list is arranged in alphabetical order by the name of the journal.

Advanced Technology for Developers, [193]
AI Expert, [105, 220]
Biological Cybernetics, [171]
Byte, [155]
Chin. J. Electron. (China), [154]
CIRP Ann., [72, 12]
Comput. Oper. Res. (UK), [29]
Computer Aided Design, [67]
Computers in Industry, [98]
Computers & Industrial Engineering, [119, 23, 137, 278, 178, 191, 85, 86]
Computers & Operations Research, [71, 21, 132, 144, 77, 153, 268, 160, 164]
Control Eng. Pract., [80]
Control Engineering Practise, [78]
Electric Power Systems Research, [202]
Engineering Applications of Artificial Intelligence, [91]
Engineering Optimization, [51]
Ergonomics, [57]
European Journal of Operational Research, [62]
European Journal of Operations Research, [152, 225]
IEE Colloquium on VLSI Design Methodologies, [36]
IEE Proceedings, Computers and Digital Techniques, [27]
IEEE Expert, [173]
IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, [34, 54, 59, 252]
IEEE Transactions on Parallel and Distributed Systems, [120]

IEEE Transactions on Systems, Man, and Cybernetics, [24, 206, 291]
IFIP Trans. B, Appl. Technol. (Netherlands), [28]
IIE Trans., [125]
Industrial and Engineering Chemistry Research, [270]
Int. J. Syst. Sci. (UK), [10]
Integration, the VLSI Journal, [61]
International Journal of Production Research, [47]
International Journal on Computer Integrated Manufacturing, [100]
J. Comput. Civ. Eng., [31]
J. Korea Inf. Sci. Soc. (South Korea), [265]
Journal of Microcomputer Applications, [90]
Lettre du Transputer et des Calculateurs Distribués, [254]
Mitsui Zosen Tech. Rev. (Japan), [124]
Operations Research / Management Sciences, [14]
OR Spektrum, [284]
ORSA Journal on Computing, [9, 108, 285]
Parallel Computing, [169, 209]
Technique et Science Informatique TSI, [253]
Telematics and Informatics, [247]
Texas Instrument Technology Journal, [40]
Trans. Inst. Syst. Control Inf. Eng. (Japan), [139]
Transaction of Systems, Control and Information, [211]
Transaction of the Institute of Electronics, Information and Communication Engineers A (Japan), [22]
Transactions of ASME, Journal of Electronics Packaging, [16]
Transactions of the Institute of Electrical Engineers of Japan C, [121, 143, 13, 43, 260]
Transactions of the Institute of Electronics, Information and Communication Engineers (Japan), [42]
Transactions of the Society of Instrument and Control Engineers (Japan), [210, 256]
Transportation Engineering, [115, 140]
Wirtschaftsinformatik, [99, 214, 215, 218]

total 88 articles in 53 journals

4.3 Theses

The following two lists contain theses, first PhD theses and then Master's etc. theses, arranged in alphabetical order by the name of the school.

4.3.1 PhD theses

Case Western Reserve University, [141]
 Colorado State University, [177, 248]
 Mississippi State University, [81]
 The University of Manitoba, [70]
 University of Cambridge, [165]
 University of Central Florida, [112]
 University of Illinois at Chicago, [88]
 University of Iowa, [39]
 University of Missouri - Rolla, [136]
 University of Washington, [186, 292]
 Universität der Bremen, [180]

total 13 thesis in 11 schools

4.3.2 Master's theses

This list includes also “Diplomarbeit”, “Tech. Lic. Theses”, etc.

University of Edinburgh, [197]
 University of Tulsa, [184]

total 2 thesis in 2 schools

4.4 Report series

The following list contains references to all papers published as technical reports. The list is arranged in alphabetical order by the name of the institute.

Carleton University, [55]
 Carnegie-Mellon University, [240]
 Ecole Polytechnique Fédérale de Lausanne, [189]
 Eindhoven University of Technology, [188]
 Friedrich-Alexander-Universität Erlangen-Nürnberg, [60]
 Limburg University, [236]
 Netrologic, [286]
 RWTH Aachen, [101]
 Royal Melbourne Institute of Technology, [17]
 University of Exeter, [38]
 University of Michigan, [269, 174]
 University of Strathclyde, [227]
 University of Virginia, [33]
 Université Libre de Bruxelles, [148]

total 15 reports in 14 institutes

4.5 Patents

The following list contains the names of the patents of genetic algorithms and manufacturing. The list is arranged in alphabetical order by the name of the patent.

- none

4.6 Authors

The following list contains all genetic algorithms and manufacturing authors and references to their known contributions.

Abbott, L. A.,	[104]	Chan, W. T.,	[115, 140]
Abe, S.,	[73]	Chang, I.,	[201]
Abela, J.,	[168]	Changshui, Zhang,	[154]
Abramson, David,	[167, 168]	Chen, C. L. Philip,	[97]
Agarwal, Reena,	[20]	Chen, Chuen-Lung,	[152]
Akagaji, Shinsuke,	[37]	Cheng, Philip,	[79]
Akatsuka, N.,	[10]	Cheng, Runwei,	[111]
al, M. Sakawa et,	[243]	Chi, H.,	[72]
Al-Attar, Akeel,	[105]	Chockalingam, T.,	[169]
Ali, Shahid,	[106]	Choi, Jae Young,	[153]
Aljaber, Nasser,	[152]	Christodoulou, N.,	[163]
Andersen, B.,	[107]	Clarkson, Mark,	[155]
Anderson, Edward J.,	[9, 14]	Cleveland, Gary A.,	[187]
Anon.,	[286]	Cluitmans, L. J. M.,	[188]
Ansari, Nirwan,	[120, 207]	Cohoon, James P.,	[33, 34]
Araki, Miyuhiko,	[258]	Conway, Daniel G.,	[21]
Arunkumar, S.,	[169]	Cook, Diane J.,	[126, 145]
Ashmore, B.,	[40]	Corne, Dave,	[32, 196, 233]
Atlan, Laurent,	[170]	Costa, Daniel,	[189]
Awadh, B.,	[77]	Dagli, C.,	[191]
Awadth, Bahaa,	[70]	Dasgupta, Dipankar,	[226, 227]
Aytug, Haldun,	[71]	Davern, James John,	[112, 178]
Bac, Fam Quang,	[171]	David, Wu S.,	[125]
Bagchi, Sugato,	[172, 173]	Davidson, J. W.,	[31]
Banerjee, P.,	[49, 50]	Davis, Lawrence,	[192, 193]
Baumgartner, Joseph P.,	[145]	Delchambre, A.,	[69]
Bean, James C.,	[108, 269, 174]	Dissanayake, M. W. M. G.,	[264]
Beaty, Steven J.,	[175, 176, 177]	Dorigo, Marco,	[148]
Becker, B.-D.,	[244]	Dorndorf, Ulrich,	[236]
Benten, Muhammed S. T.,	[106]	Dowdy, Lawrence W.,	[159]
Bersini, Hugues,	[89]	Easton, Fred F.,	[194]
Biegel, John E.,	[178]	Eaton, M.,	[90]
Bierwirth, Christian,	[128, 179, 180]	Eblenkamp, Martin,	[113]
Bloebaum, C. L.,	[129]	Engle, M. L.,	[272]
Blume, C.,	[102]	Engst, Norbert,	[60]
Blume, Christian,	[109]	Ersoy, Cem,	[25]
Bonnet, Jérôme,	[170]	Esbensen, Henrik,	[30]
Bouffouix, S.,	[195]	Faccenda, J. F.,	[87]
Bourdon, K.,	[83]	Falkenauer, Emanuel,	[195, 69]
Bowden, Royce O.,	[81]	Fang, Hsiao-Lan,	[196, 197, 233]
Breuer, P.,	[83]	Fennel, Theron Randy,	[146]
Brind, C.,	[281]	Ferris, Michael C.,	[9, 14]
Brown, Donald E.,	[190, 283]	File, P. E.,	[267, 276]
Bruns, Ralf,	[181, 182, 183]	Filipič, Bogdan,	[114, 198, 199]
Burks, Christian,	[271, 272]	Fogarty, Terence C.,	[79, 91]
Cai, X.,	[142]	Forrest, Stephanie,	[271, 272]
Cartwright, H. M.,	[110]	Fourman, Michael P.,	[35, 36]
Cartwright, Hugh M.,	[185, 270]	Fox, B. R.,	[273]
Caskey, Kevin Richard,	[186]	Fox, Geoffrey C.,	[200]
Cavalier,	[123]	Fujita, Kikuo,	[37]
Chan, Heming,	[61]	Fukuda, T.,	[212]
Chan, K. C.,	[23, 64]	Fuquay, D'Ann,	[261]
		Furuhashi, Takeshi,	[13, 259, 260]
		Fwa, T. F.,	[115, 140]
		Gabbert, Paula S.,	[190]
		Gen, Mitsua,	[280]
		Gen, Mitsuo,	[111, 117, 147, 149, 151, 201]
		Germa, Noël,	[202]

- Gerys, D., [249]
 Glasmacher, Klaus, [41]
 Glesner, M., [203]
 Glover, David E., [39]
 Gold, Sönke-Sonnich, [60]
 Gonzalez, Carlos, [184]
 Gorrini, V., [148]
 Goulter, I. C., [31]
 Greenwood, Garrison W., [118]
 Grefenstette, John J., [92]
 Gruau, Frédéric C., [204]
 Gubbi, Ananda V., [288]
 Gupta, Ajay, [118]
 Gupta, Mahesh C., [219, 225]
 Gupta, Yash P., [219, 225]
 Hasegawa, Yoshishige, [258]
 Hashimoto, Y., [80]
 Haupt, M., [101, 83]
 Hawaleshka, O., [77]
 Hegde, Shailesh U., [33, 34]
 Hegde, U., [40]
 Heinzmann, F., [99]
 Held, M., [203]
 Hendriks, C. F. W., [157]
 Heß, Axel, [41]
 Hilliard, M. R., [221, 222, 223, 224]
 Hirata, H., [42, 43, 44]
 Hobbs, Matthew F., [285]
 Höfler, A., [45, 46]
 Holsapple, Clyde W., [206]
 Hon, K. K. B., [72, 47]
 Hong, R., [207]
 Hong, Young Sik, [265, 266]
 Hou, Edwin S. H., [120, 207, 208]
 Hu, Yu Hen, [66]
 Hunold, D., [83]
 Huntley, Christopher L., [190, 283]
 Huppe, B. S., [121]
 Hurley, S., [209]
 Husbands, Philip, [122, 100, 228, 229]
 Ibaraki, T., [143]
 Ida, Kenichi, [280]
 Ignizio, James P., [123]
 Iima, Hitoshi, [10, 210, 211, 82]
 Inoue, T., [242]
 Inoue, [22]
 Inuiguchi, M., [242]
 Ishibuchi, Hisao, [131]
 Ismail, H. S., [47]
 Iwata, T., [124]
 Jacob, Varghese S., [206]
 Jacob, W., [102]
 Jang, Yuongjo, [67]
 Ji, Zhiming, [15]
 Jimenez, F., [282]
 Jones, Albert, [166]
 Jorge, Leon V., [125]
 Józefowska, Joanna, [156]
 Juliff, Kate, [17, 18]
 Kadaba, Nagesh, [213]
 Kado, Kazuhiro, [32]
 Kamhawi, Hilmi N., [97]
 Kanet, John J., [214, 215]
 Karatza, Helen, [274]
 Karr, Charles L., [93]
 Karr, Charles R., [94]
 Ka-Wai, Lee, [142]
 Kawai, S., [139]
 Kawamura, Kazuhiko, [172, 173]
 Kemenade, C. H. M. van, [157]
 Khamisani, W., [27]
 Kidwell, Michelle D., [126, 216, 217]
 Kim, Gyoung H., [116]
 Kim, H., [119]
 Kim, Myunghwan, [67]
 Kim, Yei Chang, [265, 266]
 Kim, Youngtak, [67]
 Kimura, Atsushi, [76]
 King, R.-M., [49, 50]
 Kirokawa, Noriyasu, [37]
 Koakutsu, S., [42, 43, 44]
 Kobayashi, Shigenobu, [158]
 Koehler, Gary J., [71]
 Kok, Joost N., [157]
 Kopfer, H., [128, 284, 218]
 Kosak, Corey, [24, 48]
 Kozasa, Junji, [258]
 Krishnamoorthy, M., [168]
 Kubota, Erika, [117, 147, 149, 151, 201]
 Kulkarni, Janardan, [86]
 Kumar, Anup, [219, 225]
 Kundu, S., [28]
 Lauterbach, M., [83]
 Lawton, George, [220]
 Leclair, Steven R., [97]
 Lee, C. S. George, [116]
 Lee, Chae Y., [153]
 Lee, In, [245]
 Leino, Sami, [103]
 Leu, Ming C., [15, 16]
 Leyßner, U., [45, 46]
 Li, H. Y., [208]
 Li, Yinzhen, [280]
 Liepins, Gunar E., [221, 222, 223, 224]
 Lin, Chen-Sin, [144]
 Lin, C.-S., [29]
 Linkens, D. A., [95]
 Logan, Thomas D., [127]
 Lohbeck, T. K., [51]
 Long, Robert A., [270]
 Ly, Tai A., [252]
 Magill, E. H., [237]
 Maher, Mary Lou, [28]
 Mansour, Nashat, [194, 200]
 Mao, Chi-Yu, [66]
 Markowicz, Bernard P., [190, 283]

Marks, Joe,	[24, 48]	Palmucci, Jeff,	[250]
Márkus, András,	[98, 84]	Pao, Yoh-Han,	[135, 68]
Martin, Worthy N.,	[33, 34]	Paredis, Jan,	[234, 235]
Mason, Andrew J.,	[165]	Parsaei, Hamid R.,	[86]
Masui, T.,	[52]	Parsons, Rebecca,	[271, 272]
Mathias, Keith,	[275]	Perkins, Sonya,	[167]
Mattfeld, D. C.,	[128]	Perov, V. L.,	[171]
Mazumder, Pinaki,	[27, 30, 53, 54, 61]	Pesch, Erwin,	[236]
McCulley, C.,	[129]	Petty, Chrisila C.,	[159]
McDaniel, S.,	[275]	Pham, D. T.,	[57]
McGregor, Douglas R.,	[226, 227]	Pico, Carlos Alberto Gonzalez,	[133]
McMahon, M. B.,	[273]	Pingfan, Yan,	[154]
McSweeney, Kelly,	[118]	Prosser, P.,	[281, 19, 237]
Mellish, C.,	[196]	Psarras, J.,	[163]
Mergenthaler, W.,	[78]	Rabelo, Luis,	[166]
Michalewicz, Zbigniew,	[285, 290, 291]	Ragatz, Gary L.,	[160]
Mill, Frank,	[228, 229]	Rajendran, C.,	[137]
Miller, C. J.,	[267, 276]	Ramanathan, P.,	[205]
Mills, Graham,	[167, 168]	Rangarajan, G.,	[224]
Mitra, H.,	[205]	Rao, Vasant B.,	[58, 59]
Miyabe, Yutaka,	[172, 173]	Rebaudengo, M.,	[26]
Mohan, S.,	[53, 54]	Reddy, S. M.,	[27]
Mori, K.,	[212]	Reeves, Colin R.,	[268, 238, 239, 274]
Morikawa, Kojima,	[259, 260]	Reinartz, Karl Dieter,	[60]
Morrow, Michael,	[221]	Ren, Hong,	[120]
Mott, Gregory F.,	[185]	Renders, Jean-Michel,	[89, 96]
Mowchenko, Jack T.,	[252]	Reorda, Matteo Sonza,	[26]
Mulkens, H.,	[230]	Rhoads, D. G.,	[87]
Muller, C.,	[281, 237]	Richards, Dana S.,	[34]
Munetomo, Masaharu,	[130]	Richardson, Jon T.,	[221]
Muntean, Traian,	[253]	Robers, T.,	[83]
Murata, Tadahiko,	[131]	Ross, Peter,	[32, 233]
Murayama, T.,	[73]	Roth, Steven F.,	[240]
Nagai, N.,	[138]	Różycki, Rafał,	[156]
Naillon, Martine,	[170]	Rubin, Paul A.,	[160]
Nakano, Ryohei,	[231, 232]	Saab, Youssef G.,	[58, 59]
Nakashima, T.,	[277]	Sait, Sadiq M.,	[106]
Nakayama, T.,	[260]	Sakaguchi, H.,	[277]
Nara, K.,	[119]	Sakawa, M.,	[242]
Narendran, T. T.,	[85]	Samson, W. B.,	[267, 276]
Nishikawa, I.,	[80]	Sangalli, Nicoletta,	[161]
Nishikawa, Yoshikawa,	[257]	Sannomiya, Nobuo,	[10, 139, 210, 211, 82]
Nishikawa, Yoshikazu,	[255, 256]	Sappington, David E.,	[190, 283]
Nordström, Anna-Lena,	[132]	Sato, Yoshiharu,	[130]
Nordvik, Jean-Pierre,	[89, 96]	Schäftner, Christoph,	[60]
Norman, B. A.,	[174]	Schneider, Jerry B.,	[279]
Nygaard, Kendall E.,	[213, 287, 289]	Schöneburg, E.,	[99]
Nyongesa, H. Okola,	[95]	Schulte, J. W.,	[244]
Oba, F.,	[73]	Schwehm, Markus,	[162, 60]
Okutani, I.,	[121]	Seibulescu, Alexandru,	[134]
Onder, H. H.,	[57]	Semeraro, Quirico,	[161]
Ono, Isao,	[158]	Sen Gupta, Indranil,	[20]
Oommen, B. J.,	[55, 56]	Sepehri, N.,	[77]
Opaterny, Thilo,	[60]	Seredynski, F.,	[150]
Ost, Alexander,	[60]	Shahookar, Khushro,	[27, 61]
Oyman, A. İirfan,	[25]	Shaner, Daniel,	[262, 263]
Pakath, Ramakrishnan,	[206]	Shaw, Michael J.,	[245]
Palmer, Mark R.,	[221, 222, 223, 224]	Shen, Chang-Yun,	[135]

- Shieber, Stuart, [24, 48]
 Shiromaru, I., [242]
 Sikora, Riyaz, [245]
 Silva, A. De, [168]
 Sittisathanchai, Sinchai, [136, 191]
 Smith, Alice E., [65]
 Smith, D. G., [237]
 Smith, Stephen F., [187, 240]
 Smith, Stephen P., [241]
 Snowdon, Jane L., [71]
 Soderlund, C. A., [272]
 Sponsler, J. L., [246, 247]
 Srdoč, Alira, [114]
 Sridhar, J., [137]
 Sridharan, V., [214, 215]
 Stadler, W., [78]
 Starkweather, Timothy John, [275, 248, 261, 262, 263]
 Stefanitsis, E., [163]
 Stöppler, S., [179]
 Storer, Robert H., [125]
 Sugai, Y., [42, 43, 44]
 Suginozawa, N., [242]
 Sutoh, T., [138]
 Suzuki, H., [138]
 Syswerda, Gilbert, [249, 250, 251]
 Takai, Yoshiaki, [130]
 Talbi, El-Ghazali, [253, 254]
 Tam, Kar Yan, [62, 63]
 Tamaki, Hisashi, [255, 256, 257, 258]
 Tan, C. Y., [115, 140]
 Taneja, Mukesh, [74]
 Tansri, H., [23, 64]
 Tate, David M., [65]
 Tenga, R. F., [87]
 Thangiah, Sam Rabindranath, [287, 288, 289]
 Tokumaru, H., [80]
 Tollo, Tullio, [161]
 Tsai, Jay-Shinn, [166]
 Tsujimura, Yasuhiro, [117, 147, 149, 151, 201]
 Tsukiyama, M., [212]
 Tufekci, Suleyman, [132]
 Tuoma, J., [139]
 Tuson, A. L., [110]
 Uchikawa, Yoshiki, [13, 259, 260]
 Uchimura, K., [277]
 Uckun, Serdar, [172, 173]
 Underbrink, A. J., Jr., [146]
 Underbrink, Al J., Jr., [11]
 Utaka, J., [242]
 Valveti, J. S., [55]
 Vancza, Jozsef, [98, 84]
 Vavak, Frank, [79]
 Vempati, Venkateswara S., [152]
 Venkataramanan, M. A., [21]
 Venugopal, V., [85]
 Vignaux, G. A., [285, 290, 291]
 Viswanadham, N., [74]
 Wagner, Thomas D., [159]
 Wainwright, Roger L., [133]
 Walker, J. D., [267, 276]
 Walter, Thomas, [60]
 Walters, G. A., [38, 51]
 Warrington, S., [228]
 Watanabe, T., [80]
 Watson, K., [75]
 Wegglarz, J., [156]
 Wehn, N., [203]
 Whitley, C., [275]
 Whitley, Darrell, [275, 261, 262, 263]
 Wiedemann, J., [45, 46]
 Wiendahl, Hans-Peter, [12]
 Wilbertz, H., [78]
 Williams, George P., Jr., [11]
 Williams, George P. W., Jr., [146]
 Williamson, A. G., [75]
 Wong, Hermean, [15, 16]
 Wren, Anthony, [164]
 Wren, David O., [164]
 Wright, Ted, [141]
 Wu, X., [264]
 Xiong, Yihua, [279]
 Xiong, Y., [292]
 Yagiura, M., [143]
 Yamada, Takeshi, [232]
 Yamamura, Masayuki, [158]
 Yang, Xiaofeng, [278]
 Yeralan, Sencer, [144]
 Yeralan, S., [29]
 Yih, Yuehwern, [166]
 Yin, Xiaodong, [202]
 Yip, P. P. C., [68]
 Yip, Percy P. C., [135]
 Yoshikawa, T., [13]
 Yoshimura, Masata, [76]
 Zaveri, Jigish S., [206]
 Zgierski, J. R., [55, 56]
 Zhou, Yejin, [88]
 Zimmer, N., [78]
 Zimmermann, Gerhard, [41]

total 284 articles by 441 different authors

4.7 Subject index

All subject keywords of the papers given by the editor of this bibliography are shown next. The keywords “neural networks”, “optimization”, and “evolution strategies” have been omitted in this list because of their high occurrence rate.

- aerospace, [168]
- analysis
 - Markov chains, [171]
- analyzing GA
 - factor analysis, [225]
- application, [91]
 - manufacturing, [74]
 - VLSI, [61]
- applications
 - assembly, [11]
 - broadcasting, [105]
 - manufacturing, [88]
 - operation systems, [120]
 - transport, [164]
- assembly, [15]
- assembly planning, [16]
- assembly systems, [12]
 - search, [86]
- bin-packing, [69, 17, 18]
 - 2D, [60]
- biology, [276]
- CAD, [33, 34, 41, 56, 59, 61, 43, 57, 252, 66, 22, 24, 97, 76, 28]
- CAD
 - electronics, [13]
 - process planning, [84]
 - VLSI, [53, 54, 252]
- chromosome
 - 2D bitmap, [61]
- classifier systems, [71]
- classifiers, [221]
- combinatorial optimization, [171]
- comparison, [71]
 - branch and bound, [168]
 - constraint directed search, [104]
 - greedy, [10]
 - heuristics, [205, 31]
 - minimal conflict scheduling, [123]
 - opportunity algorithm, [126]
 - scheduling fitness function, [209]
 - scheduling methods, [258]
 - simulated annealing, [59, 252]
 - simulated annealing (SA superior), [283]
 - tabu search, [106]
- control
 - process control, [90, 94]
- crossover, [144]
 - group theory, [171]
 - permutations, [23]
 - scheduling, [143]
- data flow graphs, [188]
 - search, [86]
- decision making, [240]
- design
 - layout, [37]
 - VLSI, [61]
- DNA sequencing, [269, 271, 272, 276, 267]
- economics
 - industrial, [80]
 - manufacturing, [87]
- electronics
 - assembly, [16]
 - PCB assembly, [13]
- encoding, [69]
 - aerospace, [141]
 - assembly, [9, 10, 14]
 - chemical, [270, 124]
 - civil, [279, 31]
 - computer, [107]
 - construction, [45, 46]
 - power, [242, 138]
 - power supplies, [141]
 - road, [115, 140]
 - shipbuilding, [114]
 - transportation, [281, 282]
- evolutionary strategies
 - scheduling, [118]
- EVOLVER, [123]
- FMS, [208, 166, 206]
 - layout, [75]
- formal languages, [60]
- fuzzy sets, [282]
- fuzzy systems, [95, 242, 243, 117, 147]
- GALAPAGOS, [52]
- GAPE, [34]
- generations
 - 2000-5000, [126]
 - 50;100, [21]
- GENESIS, [213]
- genetic programming, [170, 204]
- GLEAM, [109]
- group technology, [72]
- hardware design, [252]
- hybrid
 - linear programming, [88]
 - neural networks, [136]
 - simulated annealing, [68, 119, 135, 30, 281]
 - tabu search, [189]
- hybrid methods, [200]
- image processing
 - fractals, [60]
- immune systems, [212]
- implementation
 - C, [34, 47]
 - Hypercube, [34]
 - MasPar, [60]
 - Prolog, [91]
 - Smalltalk-80, [88]
 - transputers, [229, 254, 167]

- initial population, [213]
- instruction scheduling, [177, 134]
- interactive, [52]
- job shop problem, [225, 128]
- job shop scheduling, [232, 264, 112, 113, 117, 142, 147, 149, 152]
- JSS, [161]
- layout design, [45, 46, 35, 36, 39, 49, 33, 55, 42, 58, 34, 48, 56, 59, 61, 67, 40, 43, 44, 47, 52, 53, 57, 62, 63, 54, 64, 65, 66, 21, 22, 23, 24, 74, 28, 31]
- layout design
 - area optimization, [26]
 - dynamic, [29]
 - facility, [68, 32]
 - FMS, [75]
 - networks, [38, 51]
 - shop job, [88]
 - VLSI, [27]
- learning, [236]
- line balancing, [69, 80]
- linear transportation problem, [291]
- load balancing, [130, 79]
- logistics, [163]
- machine learning, [223, 81, 71]
 - scheduling, [224]
- macro cell layout, [60]
- manufacturing, [72, 76, 79, 80]
 - assembly, [82, 73]
 - databases, [86]
 - layout design, [75]
 - process planning, [84, 70, 77]
 - setup, [83]
 - simulation, [71]
- manufacturing control, [81]
- multi-chromosome GA, [17, 18]
- multi-processors, [274]
- multiprocessors, [134]
- n-queens problem, [123]
- nesting, [47]
- network bisection, [59]
- networks
 - layout design, [51]
- noise, [276]
- operating systems
 - CPU scheduling, [107]
- pallet loading, [19, 17, 18]
 - load balancing, [145]
- parallel GA, [213, 34, 48, 229, 67, 179, 254, 257, 167, 180, 217, 60, 122, 128, 150, 162]
- parallel GA
 - workstation network, [53]
- parallel processing, [169]
- permutation
 - crossover, [27]
- permutation problems, [161]
- permutations, [171]
- planning
 - assembly, [15]
 - electronics, [13]
- population size, [225]
 - 12, [126]
 - 400, [21]
- process control, [91, 92, 96, 89, 93, 95]
- process planning, [98, 97]
- production planning, [99, 100, 102]
- PROGENITOR, [214, 215, 218]
- project management, [132]
 - review
 - process control, [89]
- robotics
 - scheduling, [148]
- routing, [81]
- rules, [91]
- SAGA, [30]
- scheduling, [192, 221, 222, 187, 224, 246, 247, 261, 178, 203, 207, 213, 249, 262, 172, 175, 185, 190, 195, 200, 202, 208, 214, 228, 229, 231, 238, 250, 251, 253, 255, 256, 263, 103, 165, 169, 179, 181, 188, 189, 69, 197, 198, 210, 215, 218, 220, 234, 236, 239, 241, 254, 257, 259, 166, 167, 168, 171, 174, 176, 180, 182, 183, 184, 186, 191, 193, 194, 196, 199, 201, 204, 205, 206, 211, 212, 216, 217, 219, 225, 226, 227, 230, 233, 235, 237, 240, 242, 243, 244, 60, 245, 248, 252, 258, 260, 264, 265, 104, 105, 106, 108, 109, 113, 114, 124, 127, 129, 130, 10, 135, 139, 11, 12, 141, 142, 143, 144, 146, 153, 155, 156, 159, 160]
- scheduling
 - air traffic, [157]
 - automotive manufacturing, [78]
 - computer tasks, [133]
 - CPU, [107]
 - dynamic, [71]
 - flowshop, [110, 131]
 - instructions, [134]
 - job shop, [170, 112, 116, 117, 125, 136, 137, 147, 149, 152, 154, 158]
 - JSS, [223, 173, 122, 128, 161]
 - Kanban, [162]
 - load balancing, [145, 150]
 - maintenance, [115, 119, 138, 140]
 - manpower, [121]
 - manufacturing, [85]
 - multicomputer, [266]
 - multiprocessor, [120, 151]
 - multiprocessors, [118, 126]
 - parallel processes, [209]
 - project, [132]
 - projects, [111]
 - public transport, [164]
 - robotic operations, [148]
 - vehicle-fleet, [163]
- search, [235]
- sequencing, [273, 275, 270, 274, 268]
- simulated annealing, [42, 43, 44, 78]
- simulation, [186, 102]
- space, [246]
- sports, [193]
- tabu search, [189, 176]
- telecommunications
 - layout design, [25]
- time-table, [105]
- transportation, [284, 115, 140]

- bicriteria, [280]
- delivery systems, [277]
- network design, [279]
- rail routing, [283]
- routing, [287, 288, 289]
- vehicle routing, [286, 277]
- transportation networks, [292]
- transportation problem, [290, 285]
 - bicriteria, [278]
- TSP, [261, 214, 59, 275, 263, 284, 60]
 - asymmetric, [171]
- vehicle routing, [281]
- VLSI, [53, 54, 66]
 - design, [40, 60, 22]
 - layout design, [50]
 - macrocell layout, [41]
- VLSI design, [34, 252, 27]
 - gate matrix layout, [20]
 - macro cell layout, [30]

4.8 Annual index

The following table gives references to the contributions published annually.

1971,	[45]
1973,	[46]
1985,	[192, 35, 36]
1986,	[39]
1987,	[49, 221]
1988,	[33, 91, 222, 223, 101, 19, 87]
1989,	[187, 92, 224, 55, 246, 247, 290, 261]
1990,	[178, 203, 42, 207, 213, 50, 83, 58, 249, 262]
1991,	[172, 175, 177, 185, 34, 190, 195, 200, 273, 202, 41, 208, 48, 214, 98, 285, 228, 229, 231, 286, 96, 56, 238, 59, 61, 275, 250, 251, 253, 255, 256, 291, 263, 67]
1992,	[103, 165, 169, 269, 179, 81, 181, 188, 189, 283, 69, 197, 198, 40, 99, 43, 44, 210, 47, 17, 215, 284, 218, 220, 15, 52, 53, 232, 85, 234, 86, 236, 57, 239, 241, 254, 62, 63, 257, 287, 259, 292]
1993,	[166, 167, 168, 170, 171, 173, 174, 176, 89, 180, 182, 183, 184, 270, 186, 191, 193, 194, 90, 196, 199, 271, 272, 37, 38, 201, 204, 205, 206, 209, 100, 211, 82, 18, 212, 93, 94, 216, 217, 219, 16, 95, 51, 225, 84, 54, 226, 227, 230, 233, 235, 237, 274, 240, 242, 243, 244, 60, 245, 248, 252, 258, 64, 65, 288, 289, 260, 102, 276, 264, 66, 265, 266, 88, 68]
1994,	[104, 20, 105, 106, 107, 9, 70, 71, 108, 109, 110, 111, 21, 112, 113, 114, 115, 116, 117, 118, 119, 72, 120, 121, 122, 123, 22, 124, 125, 23, 126, 24, 97, 127, 128, 129, 130, 131, 73, 132, 25, 133, 26, 10, 134, 27, 135, 136, 137, 138, 74, 139, 277, 11, 140, 267, 12, 75, 141, 142, 278, 279, 143, 144, 13, 76, 14, 145, 146, 147, 148, 28, 29, 30, 149, 150, 151, 280]
1995,	[77, 281, 152, 153, 154, 155, 31, 282, 156, 32, 157, 158, 78, 159, 268, 160, 161, 162, 163, 79, 80, 164]

Chapter 5

Permuted title index

The words of the titles of the articles are shown in the next table arranged in alphabetical order. The most common words have been excluded. The key word is shown by a disk (●) in the title field with the exception that it is omitted when appearing as the first word of the title after shown keyword. The other abbreviation used to compress titles are shown in appendix A.

- [95] **acquisition** Real-time ● of fuzzy rules using GAs
- [93] **adaptive** An ● syst. for process cntr. using GA
- [289] – Dynamic trajectory routing using an ● search method
- [39] – Experimentation with an ● search strategy for solving a key-board design/configuring problem
- [212] – Immune networks using GA for ● production sch.
- [61] – Macro-cell and module placement by gen. ● search with bitmap-represented chromosome
- [28] ● design using a GA
- [157] **air traffic control planning** Evol. computation in ●
- [168] **aircraft** Computing opt. schedules for landing ●
- [265] **allocation** A GA for task ● in multiprocessor syst.
- [200] – A hybrid GA for task ● in multicomputers
- [106] – GSA: sch. and ● using GA
- [74] – Inspection ● in manufacturing syst. : A GA appr.
- [266] – Task ● using a GA in multicomputer syst.
- [180] **Analyse** Flowshop Scheduling mit Par. en Genetischen Algorithmen – Eine problemorientierten ● genetischer Suchstrategien
- [115] **Analysis** Road maintenance planning using GAs. II: ●
- [78] **annealing** Opt. automotive manufacturing sequences using simulated ● and GAs
- [67] – Stepwise-overlapped par. ● and its appl. to floorplan design
- [232] **applicable** A GA ● to large-scale job-shop problems
- [267] **application** A hybrid GA ● to a gen. sequencing problem
- [255] – A neighborhood model of the GA and its ● to the jobshop sch.
- [257] – A par. GA based on a neighborhood model and its ● to the jobshop sch.
- [13] – A study on ● of GA to automatic placement of parts on printed circuit boards
- [148] – An ● of evol. alg. to the sch. of robotic operations
- [152] – An ● of GAs for flow shop problem
- [104] – Comparison of a constraint directed search to a GA in a sch. ●
- [219] – GAs ● in a machine sch. problem
- [284] – Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs concepts and their ● to freight minimization in commercial long distance freight transportation]
- [55] ● of GAs to the keyboard opt. problem
- [121] ● of GA to manpower sch. problem
- [258] ● of search methods to sch. problem in plastics forming plant: A binary Rep. appr.
- [30] – SAGA: a unification of the GA with simulated annealing and its ● to macro-cell placement
- [276] – THE GENIE PROJECT: A GA ● to a sequencing problem in the biological domain
- [259] – Single populated GA and its ● to JSS
- [67] – Stepwise-overlapped par. annealing and its ● to floorplan design
- [250] – The ● of GAs to resource sch.
- [179] – The ● of par. GA to the n/m7P/Cmax flowshop problem
- [223] **applications** Machine learning ● to job shop sch.
- [50] – Opt. by simulated evol. with ● to standard cell placement
- [256] **applied** A GA as ● to the JSS
- [81] – GA based machine learning ● to the dynamic routing of discrete parts
- [65] – GA opt. ● to variations of the unequal area facilities layout problem
- [186] – GAs and neural networks ● to manufacturing sch.
- [11] – GAs ● to assembly operations
- [246, 247] – GAs ● to the sch. of the Hubble space telescope
- [238] – Recent Alg. developments ● to sch. problems
- [252] **Applying** simulated evol. to high level synthesis
- [112] **architecture** An ● for job shop sch. with GAs
- [253] **architectures** Méthodes de placement statique des processus sur ● parallèles
- [26] **area** A GA for floorplan ● opt.
- [65] – GA opt. appl. to variations of the unequal ● facilities layout problem
- [73] **assembly** Assembly partitioning by GA for generating ● sequences efficiently
- [82] – GA appr. to a production ordering problem in an ● process with buffers
- [10] – GA appr. to a production ordering problem in an ● process with constant use of parts
- [15] – GA for solving printed circuit board ● planning problems
- [11] – GAs appl. to ● operations
- [14] – GAs for comb. opt. : The ● line balancing problem
- [9] – GAs for comb. opt. : The ● line balancing problem
- [271] – GAs for DNA sequence ●
- [260] – LSI ● line sch. using a GA
- [73] ● partitioning by GA for generating assembly sequences efficiently
- [16] – Planning of component placement/insertion sequence and feeder setup in PCB ● using GA
- [272] – Stochastic opt. tools for genomic sequence ●
- [12] **assembly systems** Decentral production sch. of ● with GA
- [139] **assignment** GA appr. to an operation ● problem
- [213] **automated** Improving the perf. of GAs in ● discovery of parameters
- [222] – The computer as a partner in Alg. design: ● discovery of parameters for a multiobjective sch. heuristic
- [13] **automatic** A study on appl. of GA to ● placement of parts on printed circuit boards
- [24] **Automating** the layout of network diagrams with specified visual organization
- [78] **automotive** Opt. ● manufacturing sequences using SA and GAs
- [234] **background** Exploiting constraints as ● knowledge for GAs - A case-study for sch.
- [145] **balancing** A GA for load ● in par. computers
- [14] – GAs for comb. opt. : The assembly line ● problem
- [79] – Use of the GA for load ● of sugar beet presses
- [124] **batch** Sch. method using GA for multipurpose ● plant operation
- [27] **beam** Gen. ● search for gate matrix layout
- [128] **behavior** Cntr. of par. pop. dynamics by social-like ● of GA-individuals
- [60] **Beiträge** Massiv par. e genetische Algorithmen, ● zum Tag der Informatik Erlangen 1993

- [278] **bicriteria** Evol. prog. for • transportation problem
- [280] – Solving • solid transportation problem by GA
- [69] **bin packing** A GA for • and line balancing
- [258] **binary** Appl. of search methods to sch. problem in plastics forming plant: A • Rep. appr.
- [46] **biological** Opt. of the layout of trusses combining strategies based on Mitchell's theorem and on the • principles of evol.
- [276] – THE GENIE PROJECT: A GA appl. to a sequencing problem in the • domain
- [61] **bitmap-represented** Macro-cell and module placement by gen. adaptive search with • chromosome
- [42, 44] **Block** placement by improved simulated annealing based on GA
- [15] **board** GA for solving printed circuit • assembly planning problems
- [91] **boiler** Rule-based opt. of combustion in multiple-burner furnaces and • plants
- [31] **branched** Evol. prog. for design of rectilinear • networks
- [82] **buffers** GA appr. to a production ordering problem in an assembly process with •
- [216] **bus-based** Using GAs to schedule distr. tasks on a • syst.
- [127] **card** An electronic • production line loading prog. - An evol. alg. impl.
- [234] **case-study** Exploiting constraints as background knowledge for GAs - A • for sch.
- [137] **cell** A GA for family and job sch. in a flowline-based manufacturing •
- [50] – Opt. by simulated evol. with appl. to standard • placement
- [49] – ESP: A new standard • placement package using simulated evol.
- [53, 54] – Wolverines: standard • placement on a network of workstations
- [159] **characterize** Using GAs to • workloads
- [270] **chemical** Simultaneous opt. of • flowshop sequencing and topology using GAs
- [182] **chromosome** Direct • Rep. and advanced gen. operators for production sch.
- [61] – Macro-cell and module placement by gen. adaptive search with bitmap-represented •
- [17] – Using a multi • GA to pack a truck
- [245] **chromosome structure** Joint lot sizing and sequencing with GAs for sch. : evolving the •
- [15] **circuit** GA for solving printed • board assembly planning problems
- [221] **classifier** A • based syst. for discovering sch. heuristics
- [163] **CLP** Combination of GAs and • in the vehicle-fleet sch. problem
- [185] **clues** Looking around: Using • from the data space to guide GA search
- [229] **Co-Evolution** Simulated • as The Mechanism for Emergent Planning and Sch.
- [122] **coevolutionary** Distr. • GAs for multi-criteria and multi-constraint opt.
- [163] **Combination** of GAs and CLP in the vehicle-fleet sch. problem
- [14] **combinatorial** GAs for • opt. : The assembly line balancing problem
- [9] – GAs for • opt. : The assembly line balancing problem
- [59] • opt. by stochastic evol.
- [171] **combinatorial optimization** New evol. GAs for NP-complete • problems
- [119] **combined** A method for maintenance sch. using GA • with SA
- [46] **combining** Opt. of the layout of trusses • strategies based on Mitchell's theorem and on the biological principles of evol.
- [91] **combustion** Rule-based opt. of • in multiple-burner furnaces and boiler plants
- [218] **comments** PROGENITOR - A GA for production sch. •
- [284] **commercial** Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in • long distance freight transportation]
- [35] **Compaction** of symbolic layout using GAs
- [275] **comparison** A • of gen. sequencing operators
- [104] • of a constraint directed search to a GA in a sch. appl.
- [209] – Taskgraph mapping using a GA: a • of fitness functions
- [129] **complex** Opt. sequencing for • eng. syst. using GAs
- [16] **component** Planning of • placement/insertion sequence and feeder setup in PCB assembly using GA
- [157] **computation** Evol. • in air traffic cntr. planning
- [167] – Par. isation of a GA for the • of efficient train schedules
- [77] **computer-aided** A • process planning model based on GAs
- [101] **Computer-assisted** opt. of working points in plastics processing
- [130] **computing** A gen. appr. to dynamic load balancing in a distr. • syst.
- [168] • opt. schedules for landing aircraft
- [25] **concentrator** Solving • location-problems using GAs
- [284] **concepts** Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs • and their appl. to freight minimization in commercial long distance freight transportation]
- [76] **concurrent** Evol. al opt. of product design based on • processing of design and manufacturing info
- [10] **constant** GA appr. to a production ordering problem in an assembly process with • use of parts
- [111] **constrained** Evol. prog. for resource • project sch. problem
- [235] – Gen. state-space search for • opt. problems
- [104] **constraint** Comparison of a • directed search to a GA in a sch. appl.
- [205] **constraints** A gen. appr. for sch. non-preemptive tasks with precedence and deadline •
- [234] – Exploiting • as background knowledge for GAs - A case-study for sch.
- [206] **contexts** A gen. -based hybrid scheduler for generating static schedules in flexible manufacturing •
- [88] **continuous** GA with qualitative knowledge enhancement for layout design under • space formulation
- [92] **control** A syst. for learning • strategies with GAs
- [93] – An adaptive syst. for process • using GA
- [96] – GAs and their potential for use in process • A case study
- [94] – GAs for modelling, design, and process •
- [89] – GAs for process • A survey
- [128] • of par. pop. dynamics by social-like behavior of GA-individuals
- [90] – Process • using gen. trained neural networks
- [110] **control system** GAs and flowshop sch. : towards the development of a real-time process •
- [231] **Conventional** GA for job shop problems
- [281] **Co-operative** simulated annealing and GAs for vehicle routing problems
- [107] **CPU** Tuning computer • sch. alg. using EP
- [143] **crossover** On gen. • operators for sequencing problems
- [23] **crossover operations** Study of gen. • on the facilities layout problem
- [292] **cumulative** Opt. of transportation network design problems using a • GA and neural networks
- [254] **d'algorithms** Etude expérimentale • de placement de processus
- [203] **datapath** A novel sch. /allocation appr. for • synthesis based on GAs
- [205] **deadline** A gen. appr. for sch. non-preemptive tasks with precedence and • constraints
- [12] **Decentral** production sch. of assembly syst. with GA
- [224] **decision** Learning • rules for sch. problems
- [240] **decision-making** Intelligent support for human computer interaction and • in distribution planning and sch. syst.
- [279] **Demand/supply** relationship in transportation network design problems: A GA appr.
- [160] **dependent** Sch. in a sequence • setup environment with gen. search
- [28] **design** Adaptive • using a GA
- [279] – Demand/supply relationship in transportation network • problems: A GA appr.
- [34] – Distr. GAs for the floorplan • problem
- [31] – Evol. prog. for • of rectilinear branched networks
- [76] – Evol. al opt. of product • based on concurrent processing of • and manufacturing info
- [38] – Evol. • for the opt. layout of tree networks
- [97] – Feature sequencing in the Rapid • Syst. using a GA
- [33] – Floorplan • using distr. GAs
- [88] – GA with qualitative knowledge enhancement for layout • under continuous space formulation
- [94] – GAs for modelling, • and process cntr.
- [62] – GAs, function opt. , and facility •
- [47] – New appr. for the nesting of two-dimensional shapes for press tool •
- [292] – Opt. of transportation network • problems using a cumulative GA and neural networks
- [67] – Stepwise-overlapped par. annealing and its appl. to floorplan •

- [222] – The computer as a partner in Alg. • Automated discovery of parameters for a multiobjective sch. heuristic
- [39] **design/configuring** Experimentation with an adaptive search strategy for solving a key-board • problem
- [155] **desk** Moody's evolving help •
- [110] **development** GAs and flowshop sch. : towards the • of a real-time process cntr. syst.
- [238] **developments** Recent Alg. • appl. to sch. problems
- [24] **diagrams** Automating the layout of network • with specified visual organization
- [182] **Direct** chromosome Rep. and advanced gen. operators for production sch.
- [104] **directed** Comparison of a constraint • search to a GA in a sch. appl.
- [144] **disciplines** Gen. search with dynamic operating •
- [221] **discovering** A classifier based syst. for • sch. heuristics
- [213] **discovery** Improving the perf. of GAs in automated • of parameters
- [222] – The computer as a partner in Alg. design: Automated • of parameters for a multiobjective sch. heuristic
- [81] **discrete** GA based machine learning appl. to the dynamic routing of • parts
- [156] **discrete-continuous** A GA to some • sch. problems
- [284] **distance** Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long • freight transportation]
- [153] **distinct** A GA for job sequencing problems with • due and general early-tardy penalty weights
- [130] **distributed** A gen. appr. to dynamic load balancing in a • computing syst.
- [194] – A • GA for employee staffing and sch. problems
- [33] – Floorplan design using • GAs
- [170] – Learning • reactive strategies by gen. prog. for the general job shop problem
- [122] • coevol. GAs for multi-criteria and multi-constraint opt.
- [237] • GAs for resource allocation
- [34] • GAs for the floorplan design problem
- [216] – Using GAs to schedule • tasks on a bus-based syst.
- [217] **distribution** A par. GA for functional task •
- [240] – Intelligent support for human computer interaction and decision-making in • planning and sch. syst.
- [271] **DNA** GAs for • sequence assembly
- [276] **domain** THE GENIE PROJECT: A GA appl. to a sequencing problem in the biological •
- [164] **driver** A GA for public transport • sch.
- [130] **dynamic** A gen. appr. to • load balancing in a distr. computing syst.
- [81] – GA based machine learning appl. to the • routing of discrete parts
- [126] – GA for • task sch.
- [71] – Gen. learning of • sch. within a simulation environment
- [21, 29] – Gen. search and the • facility layout problem
- [144] – Gen. search with • operating disciplines
- [150] • mapping and load balancing with par. GAs
- [133, 184] • sch. of computer tasks using GAs
- [274] • Sequencing of a Multi-Processor Syst. : A GA Appr.
- [289] • trajectory routing using an adaptive search method
- [128] **dynamics** Cntr. of par. pop. • by social-like behavior of GA-individuals
- [153] **early-tardy** A GA for job sequencing problems with distinct due and general • penalty weights
- [87] **economic** Use of a GA for • opt. of a manufacturing syst.
- [100] **ecosystems** An • model for integrated production planning
- [261] **edge** Sch. problems and traveling salesmen: The gen. • recombination operator
- [158] **efficient** An • GA for job shop sch. problems
- [207] • multiprocessor sch. based on GAs
- [167] – Par. isation of a GA for the computation of • train schedules
- [73] **efficiently** Assembly partitioning by GA for generating assembly sequences •
- [127] **electronic** An • card production line loading prog. - An evol. alg. impl.
- [229] **Emergent** Simulated Co-Evol. as The Mechanism for • Planning and Sch.
- [194] **employee** A distr. GA for • staffing and sch. problems
- [88] **enhancement** GA with qualitative knowledge • for layout design under continuous space formulation
- [198, 199] **Enhancing** gen. search to schedule a production unit
- [129] **engineering** Opt. sequencing for complex • syst. using GAs
- [45] **Entwurfstheorie** Untersuchungen zur Anwendung einer grundlegenden • auf praktische Probleme der Leichtbaukonstruktion
- [236] **environment** Evol. based learning in a job shop sch. •
- [71] – Gen. learning of dynamic sch. within a simulation •
- [160] – Sch. in a sequence dependent setup • with gen. search
- [60] **Erlangen** Massiv par. e genetische Algorithmen, Beiträge zum Tag der Informatik • 1993
- [49] **ESP** A new standard cell placement package using simulated evol.
- [254] **Etude** expérimentale d'alg. de placement de processus
- [131] **evaluation** Perf. • of GAs for flowshop sch. problems
- [252] **evolution** Applying simulated • to high level synthesis
- [59] – Comb. opt. by stochastic •
- [138] – Large-scale generator maintenance sch. using simulated •
- [80] – Line balancing using a gen. • model
- [236] • based learning in a job shop sch. environment
- [278] • prog. for bicriteria transportation problem
- [31] • prog. for design of rectilinear branched networks
- [111] • prog. for resource constrained project sch. problem
- [50] – Opt. by simulated • with appl. to standard cell placement
- [46] – Opt. of the layout of trusses combining strategies based on Mitchell's theorem and on the biological principles of •
- [49] – ESP: A new standard cell placement package using simulated •
- [99] **Evolution** PERPLEX: Produktionsplanung nach dem Vorbild der •
- [66] **evolution** Solving gate-matrix layout problems by simulated •
- [58] – Stochastic • a fast effective heuristics for some generic layout problems
- [76] **Evolutional** opt. of product design based on concurrent processing of design and manufacturing info
- [148] **evolutionary** An appl. of • alg. to the sch. of robotic operations
- [127] – An electronic card production line loading prog. - An • alg. impl.
- [116] – An • appr. to the job-shop sch. problem
- [189] – An • tabu search alg. and the NHL sch. problem
- [171] – New • GAs for NP-complete comb. opt. problems
- [157] • computation in air traffic cntr. planning
- [38] • design for the opt. layout of tree networks
- [109] – Planning and opt. of sch. in industrial production by GAs and • strategy
- [135] – Sch. multiple job problems with guided • simulated annealing appr.
- [107] – Tuning computer CPU sch. alg. using • prog.
- [118] **evolutionary strategies** Sch. tasks in multiprocessor syst. using •
- [282] **evolutive** Fuzzy multi-objective solid transportation problem via • prog.
- [245] **evolving** Joint lot sizing and sequencing with GAs for sch. : • the chromosome structure
- [155] – Moody's • help desk
- [36] • layout
- [196] **exam** Solving the module • sch. problem with GAs
- [254] **expérimentale** Etude • d'alg. de placement de processus
- [241] **experimenta** An • on using GAs to learn sch. heuristics
- [39] **Experimentation** with an adaptive search strategy for solving a key-board design/configuring problem
- [234] **Exploiting** constraints as background knowledge for GAs - A case-study for sch.
- [172] **Exploring** problem-specific recombination operators for job shop sch.
- [65] **facilities** GA opt. appl. to variations of the unequal area • layout problem
- [23] – Study of gen. crossover operations on the • layout problem
- [63] **facility** A GA appr. to the • layout problem
- [68] – A new Opt. for the • layout problem
- [32] – A study of GA hybrids for • layout problems
- [62] – GAs, function opt. , and • design
- [21, 29] – Gen. search and the dynamic • layout problem
- [137] **family** A GA for • and job sch. in a flowline-based manufacturing cell
- [58] **fast** Stochastic evol. : a • effective heuristics for some generic layout problems
- [40] **feasibility** A • study of gen. placement

- [97] **Feature** sequencing in the Rapid Design Syst. using a GA
- [16] **feeder** Planning of component placement/insertion sequence and • setup in PCB assembly using GA
- [209] **fitness functions** Taskgraph mapping using a GA: a comparison of •
- [206] **flexible manufacturing** A gen. -based hybrid scheduler for generating static schedules in • contexts
- [75] **flexible manufacturing system** Opt. • layout with GAs
- [166] **flexible manufacturing systems** Intelligent sch. for •
 – Task sch. for • based on GAs
- [208] **floorplan** A GA for • area opt.
- [26] – Distr. GAs for the • design problem
- [34] – design using distr. GAs
- [33] – Stepwise-overlapped par. annealing and its appl. to • design
- [67] **Floorplanning** by improved simulated annealing based on GAs
- [43] **flow** A GA for • shop sch. with travel times between machines
- [142] – Investigations on solving the load • problem by GAs
- [202] – Minimizing • time variance in a single machine syst. using GA
- [225] **flow shop problem** A GA for •
- [201] – An appl. of GAs for •
- [152] **flow shop releases** Using GAs to schedule •
- [187] **flowline-based** A GA for family and job sch. in a • manufacturing cell
- [137] **flowshop** A GA appr. to stochastic • sequencing
- [239] – A GA for • sequencing
- [268] – A solution of modified • sch. problem by using GA
- [211] • Scheduling mit Par. en Genetischen Algorithmen – Eine problemorientierten Analyse genetischer Suchstrategien
- [180] – Perf. evaluation of GAs for • sch. problems
- [131] – Perf. of GAs in the solution of permutation • problems
- [161] – Revisiting the Johnson alg. for • sch. with GAs
- [230] – Simultaneous opt. of chemical • sequencing and topology using GAs
- [270] **flowshop problem** The appl. of par. GA to the $n/m7P/Cmax$ •
- [179] **flowshop scheduling** GAs and • towards the development of a real-time process cntr. syst.
- [110] **formulation** GA with qualitative knowledge enhancement for layout design under continuous space •
- [88] – Road maintenance planning using GAs. I: •
- [140] **Frachtoptimierungsproblem** Konzepte genetischer Algorithmen und ihre Anwendung auf das • im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long distance freight transportation]
- [284] **freight** Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. sproblem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to • minimization in commercial long distance • transportation]
- [62] **function** GAs, • opt. , and facility design
- [217] **functional** A par. GA for • task distribution
- [91] **furnaces** Rule-based opt. of combustion in multiple-burner • and boiler plants
- [243] **fuzzy** Hot parts operating schedule by GAs and • modeling
- [242] – Hot parts operating schedule of gas turbines by GAs and • satisficing methods
- [282] • multi-objective solid transportation problem via evolutive prog.
- [117, 147] – Solving job-shop sch. problem with • processing time using GA
- [95] **fuzzy rules** Real-time acquisition of • using GAs
- [105] **GA-heuristic** A hybrid • search strategy
- [128] **GA-individuals** Cntr. of par. pop. dynamics by social-like behavior of •
- [242] **gas turbines** Hot parts operating schedule of • by GAs and fuzzy satisficing methods
- [27] **gate** Gen. beam search for • matrix layout
- [20] **gate matrix** On the synthesis of • layout
- [66] **gate-matrix** Solving • layout problems by simulated evol.
- [206] **generating** A gen. -based hybrid scheduler for • static schedules in flexible manufacturing contexts
- [73] – Assembly partitioning by GA for • assembly sequences efficiently
- [138] **generator** Large-scale • maintenance sch. using simulated evol.
- [58] **generic** Stochastic evol. : a fast effective heuristics for some • layout problems
- [90] **genetically** Process cntr. using • trained neural networks
- [206] **genetic-based** A • hybrid scheduler for generating static schedules in flexible manufacturing contexts
- [136] **Genetic-neuro** scheduler
- [267] **genetics** A hybrid GA appl. to a • sequencing problem
- [269] • and random keys for sequencing and opt.
- [276] **GENIE THE • PROJECT**: A GA appl. to a sequencing problem in the biological domain
- [272] **genomic** Stochastic opt. tools for • sequence assembly
- [284] **gewerblichen** Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. sproblem im • Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long distance freight transportation]
- [41] **global** A GA for • improvement of macrocell layouts
- [52] **Graphic** object layout with interactive GAs
- [72] **group technology** New appr. of • part families opt.
- [85] **grouping** A GA appr. to the machine-component • problem with multiple objectives
- [45] **grundlegenden** Untersuchungen zur Anwendung einer • Entwurfstheorie auf praktische Probleme der Leichtbaukonstruktion
- [106] **GSA** sch. and allocation using GA
- [185] **guide** Looking around: Using clues from the data space to • GA search
- [135] **guided** Sch. multiple job problems with • evol. simulated annealing appr.
- [155] **help** Moody's evolving • desk
- [222] **heuristic** The computer as a partner in Alg. design: Automated discovery of parameters for a multiobjective sch. •
- [221] **heuristics** A classifier based syst. for discovering sch. •
- [169] – A randomized • for the mapping problem: The gen. appr.
- [241] – An experimenta on using GAs to learn sch. •
- [58] – Stochastic evol. : a fast effective • for some generic layout problems
- [243] **Hot** parts operating schedule by GAs and fuzzy modeling
- [242] • parts operating schedule of gas turbines by GAs and fuzzy satisficing methods
- [246, 247] **Hubble space telescope** GAs appl. to the sch. of the •
- [240] **human** Intelligent support for • computer interaction and decision-making in distribution planning and sch. syst.
- [206] **hybrid** A gen. -based • scheduler for generating static schedules in flexible manufacturing contexts
- [105] – A • GA-heuristic search strategy
- [267] – A • GA appl. to a gen. sequencing problem
- [19] – A • GA for pallet loading
- [200] – A • GA for task allocation in multicomputers
- [37] • appr. for opt. nesting using a GA and a local minimization alg.
- [32] **hybrids** A study of GA • for facility layout problems
- [284] **ihre** Konzepte genetischer Algorithmen und • Anwendung auf das FrachtOpt. sproblem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long distance freight transportation]
- [212] **Immune** networks using GA for adaptive production sch.
- [127] **implementation** An electronic card production line loading prog. - An evol. alg. •
- [109] **industrial** Planning and opt. of sch. in • production by GAs and ES
- [60] **Informatik** Massiv par. e genetische Algorithmen, Beiträge zum Tag der • Erlangen 1993
- [76] **information** Evol. al opt. of product design based on concurrent processing of design and manufacturing •
- [86] • resource matrix for production and intelligent manufacturing using GA techniques
- [74] **Inspection** allocation in manufacturing syst. : A GA appr.
- [175] **instruction** GAs and • sch.
- [176] – GAs versus tabu search for • sch.
- [134] • sch. on multiprocessors using a GA
- [177] • sch. using GAs
- [100] **integrated** An ecosyst. model for • production planning
- [86] **intelligent** Info resource matrix for production and • manufacturing using GA techniques
- [166] • sch. for flexible manufacturing syst.
- [240] • support for human computer interaction and decision-making in distribution planning and sch. syst.

- [240] **interaction** Intelligent support for human computer • and decision-making in distribution planning and sch. syst.
- [52] **interactive** Graphic object layout with • GAs
- [197] **Investigating** GAs for sch.
- [202] **Investigations** on solving the load flow problem by GAs
- [162] **JIT-Fertigungsstraßen** Opt. der Partitionierung und Kanban-Zuordnung bei •
- [125] **job** Robustness measures and robust sch. for • shops
- [135] – Sch. multiple • problems with guided evol. simulated annealing appr.
- [137] **job scheduling** A GA for family and • in a flowline-based manufacturing cell
- [165] **Job Scheduling** GAs and •
- [153] **job sequencing problems** A GA for • with distinct due and general early-tardy penalty weights
- [195] **job shop** A GA for •
- [170] **job shop problem** Learning distr. reactive strategies by gen. prog. for the general •
- [231] **job shop problems** Conventional GA for •
- [112] **job shop scheduling** An architecture for • with GAs
- [236] – Evol. based learning in a • environment
- [172] – Exploring problem-specific recombination operators for •
- [178] – GAs and •
- [191] – Gen. neuro-scheduler for •
- [223] – Machine learning appl. to •
- [173] – Managing gen. search in •
- [192] • with GAs
- [174] – Random keys for •
- [158] **job shop scheduling problems** An efficient GA for •
- [232] **job-shop** A GA applicable to large-scale • problems
- [256] **jobshop** A GA as appl. to the • sch.
- [233] **job-shop** A promising GA appr. to • sch. , re-scheduling and open-shop scheduling problems
- [264] – An appr. for supervised • sch. using GAs
- [259] **jobshop** Single populated GA and its appl. to • sch.
- [154] **job-shop scheduling** A GA of solving • problem
- [255] **jobshop scheduling** A neighborhood model of the GA and its appl. to the •
- [257] – A par. GA based on a neighborhood model and its appl. to the •
- [116] **job-shop scheduling** An evol. appr. to the • problem
- [149] **job-shop scheduling problem** Solving • using GA
- [117, 147] – Solving • with fuzzy processing time using GA
- [230] **Johnson** Revisiting the • alg. for flowshop sch. with GAs
- [245] **Joint** lot sizing and sequencing with GAs for sch. : evolving the chromosome structure
- [162] **Kanban-Zuordnung** Opt. der Partitionierung und • bei JIT-Fertigungsstraßen
- [55] **keyboard** Appl. of GAs to the • opt. problem
- [39] **key-board** Experimentation with an adaptive search strategy for solving a • design/configuring problem
- [56] **Keyboard** opt. using gen. techniques
- [108] **keys** GAs and random • for sequencing and opt.
- [269] – Gen. and random • for sequencing and opt.
- [174] – Random • for job shop sch.
- [234] **knowledge** Exploiting constraints as background • for GAs - A case-study for sch.
- [88] – GA with qualitative • enhancement for layout design under continuous space formulation
- [183] **Knowledge-augmented** GA for production sch.
- [57] **knowledge-based** A • syst. for opt. workplace layouts using a GA
- [181] – Incorporating of a • sch. syst. into a GA
- [249] • gen. search in schedule opt.
- [284] **Konzepte** genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long distance freight transportation]
- [168] **landing** Computing opt. schedules for • aircraft
- [232] **large-scale** A GA applicable to • job-shop problems
- [138] • generator maintenance sch. using simulated evol.
- [63] **layout** A GA appr. to the facility • problem
- [68] – A new Opt. for the facility • problem
- [48] – A Par. GA for Network-Diagram •
- [64] – A quantitative appr. to the plant • problem using GAs
- [24] – Automating the • of network diagrams with specified visual organization
- [35] – Compaction of symbolic • using GAs
- [38] – Evol. design for the opt. • of tree networks
- [36] – Evolving •
- [65] – GA opt. appl. to variations of the unequal area facilities • problem
- [88] – GA with qualitative knowledge enhancement for • design under continuous space formulation
- [27] – Gen. beam search for gate matrix •
- [21, 29] – Gen. search and the dynamic facility • problem
- [52] – Graphic object • with interactive GAs
- [20] – On the synthesis of gate matrix •
- [51] – Opt. • of tree networks using GAs
- [46] – Opt. of the • of trusses combining strategies based on Mitchell's theorem and on the biological principles of evol.
- [75] – Opt. flexible manufacturing syst. • with GAs
- [66] – Solving gate-matrix • problems by simulated evol.
- [58] – Stochastic evol. : a fast effective heuristics for some generic • problems
- [23] – Study of gen. crossover operations on the facilities • problem
- [32] **layout problems** A study of GA hybrids for facility •
- [41] **layouts** A GA for global improvement of macrocell •
- [57] – A knowledge-based syst. for opt. workplace • using a GA
- [241] **learn** An experimenta on using GAs to • sch. heuristics
- [92] **learning** A syst. for • cntr. strategies with GAs
- [190] – A Syst. for • Routes and Schedules with GA
- [236] – Evol. based • in a job shop sch. environment
- [71] – Gen. • of dynamic sch. within a simulation environment
- [224] • decision rules for sch. problems
- [170] • distr. reactive strategies by gen. prog. for the general job shop problem
- [45] **Leichtbaukonstruktion** Untersuchungen zur Anwendung einer grundlegenden Entwurfstheorie auf praktische Probleme der •
- [252] **level** Applying simulated evol. to high • synthesis
- [14] **line** GAs for comb. opt. : The assembly • balancing problem
- [260] – LSI assembly • sch. using a GA
- [69] **line balancing** A GA for bin packing and •
- [80] • using a gen. evol. model
- [9] **line balancing problem** GAs for comb. opt. : The assembly •
- [291] **linear** A GA for the • transportation problem
- [145] **load** A GA for • balancing in par. computers
- [202] – Investigations on solving the • flow problem by GAs
- [79] – Use of the GA for • balancing of sugar beet presses
- [130] **load balancing** A gen. appr. to dynamic • in a distr. computing syst.
- [150] – Dynamic mapping and • with par. GAs
- [127] **loading** An electronic card production line • prog. - An evol. alg. impl.
- [37] **local** Hybrid appr. for opt. nesting using a GA and a • minimization alg.
- [25] **location-problems** Solving concentrator • using GAs
- [245] **lot sizing** Joint • and sequencing with GAs for sch. : evolving the chromosome structure
- [260] **LSI** assembly line sch. using a GA
- [219] **machine** GAs appl. in a • sch. problem
- [225] – Minimizing flow time variance in a single • syst. using GA
- [81] **machine learning** GA based • appl. to the dynamic routing of discrete parts
- [223] • appl. to job shop sch.
- [85] **machine-component** A GA appr. to the • grouping problem with multiple objectives
- [142] **machines** A GA for flow shop sch. with travel times between •
- [41] **macrocell** A GA for global improvement of • layouts
- [61] **Macro-cell** and module placement by gen. adaptive search with bitmap-represented chromosome
- [30] – SAGA: a unification of the GA with simulated annealing and its appl. to • placement
- [119] **maintenance** A method for • sch. using GA combined with SA
- [138] – Large-scale generator • sch. using simulated evol.
- [140] – Road • planning using GAs. I: Formulation
- [115] – Road • planning using GAs. II: Analysis
- [114] **management** Task sch. and resource • in ship repair using a GA
- [173] **Managing** gen. search in job shop sch.
- [121] **manpower** Appl. of GA to • sch. problem
- [137] **manufacturing** A GA for family and job sch. in a flowline-based • cell
- [70] – A • process planning model using GAs
- [76] – Evol. al opt. of product design based on concurrent processing of design and • info

- [186] – GAs and neural networks appl. to • sch.
 [86] – Info resource matrix for production and intelligent • using GA techniques
 [74] – Inspection allocation in • syst. : A GA appr.
 [78] – Opt. automotive • sequences using SA and GAs
 [87] – Use of a GA for economic opt. of a • syst.
 [169] **mapping** A randomized heuristics for the • problem: The gen. appr.
 [150] – Dynamic • and load balancing with par. GAs
 [209] – Taskgraph • using a GA: a comparison of fitness functions
 [60] **Massiv** par. e genetische Algorithmen, Beiträge zum Tag der Informatik Erlangen 1993
 [27] **matrix** Gen. beam search for gate • layout
 [125] **measures** Robustness • and robust sch. for job shops
 [229] **Mechanism** Simulated Co-Evol. as The • for Emergent Planning and Sch.
 [119] **method** A • for maintenance sch. using GA combined with SA
 [289] – Dynamic trajectory routing using an adaptive search •
 [124] – Sch. • using GA for multipurpose batch plant operation
 [258] **methods** Appl. of search • to sch. problem in plastics forming plant: A binary Rep. appr.
 [242] – Hot parts operating schedule of gas turbines by GAs and fuzzy satisficing •
 [287] **MICAH** a GA syst. for multi-commodity transshipment problems
 [286] **Microcomputer-based** vehicle routing and sch.
 [37] **minimization** Hybrid appr. for opt. nesting using a GA and a local • alg.
 [284] – Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. sproblem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight • in commercial long distance freight transportation]
 [225] **Minimizing** flow time variance in a single machine syst. using GA
 [46] **Mitchell's** Opt. of the layout of trusses combining strategies based on • theorem and on the biological principles of evol.
 [77] **model** A computer-aided process planning • based on GAs
 [70] – A manufacturing process planning • using GAs
 [255] – A neighborhood • of the GA and its appl. to the jobshop sch.
 [257] – A par. GA based on a neighborhood • and its appl. to the jobshop sch.
 [100] – An ecosyst. • for integrated production planning
 [80] – Line balancing using a gen. evol. •
 [243] **modeling** Hot parts operating schedule by GAs and fuzzy •
 [94] **modelling** GAs for • design, and process cntr.
 [211] **modified** A solution of • flowshop sch. problem by using GA
 [204] **modular** Gen. synthesis of • neural networks
 [22] **module** A • placement using GAs
 [61] – Macro-cell and • placement by gen. adaptive search with bitmap-represented chromosome
 [196] – Solving the • exam sch. problem with GAs
 [155] **Moody's** evolving help desk
 [17] **multi** Using a • chromosome GA to pack a truck
 [18] **multi-chromosome** A • GA for pallet loading
 [287] **multi-commodity** MICAH: a GA syst. for • transshipment problems
 [266] **multicomputer** Task allocation using a GA in • syst.
 [200] **multicomputers** A hybrid GA for task allocation in •
 [122] **multi-constraint** Distr. coevol. GAs for multi-criteria and • opt.
 [122] **multi-criteria** Distr. coevol. GAs for • and multi-constraint opt.
 [282] **multi-objective** Fuzzy • solid transportation problem via evolutive prog.
 [222] **multiobjective** The computer as a partner in Alg. design: Automated discovery of parameters for a • sch. heuristic
 [91] **multiple-burner** Rule-based opt. of combustion in • furnaces and boiler plants
 [265] **multiprocessor** A GA for task allocation in • syst.
 [120] – A GA for • sch.
 [274] **Multi-Processor** Dynamic Sequencing of a • Syst. : A GA Appr.
 [207] **multiprocessor** Efficient • sch. based on GAs
 [151] – GA for • sch. problems
 [118] – Sch. tasks in • syst. using evol. strategies
 [134] **multiprocessors** Instruction sch. on • using a GA
 [124] **multipurpose** Sch. method using GA for • batch plant operation
 [257] **neighborhood** A par. GA based on a • model and its appl. to the jobshop sch.
 [255] – A • model of the GA and its appl. to the jobshop sch.
 [37] **nesting** Hybrid appr. for opt. • using a GA and a local minimization alg.
 [47] – New appr. for the • of two-dimensional shapes for press tool design
 [24] **network** Automating the layout of • diagrams with specified visual organization
 [279] – Demand/supply relationship in transportation • design problems: A GA appr.
 [292] – Opt. of transportation • design problems using a cumulative GA and neural networks
 [53, 54] – Wolverines: standard cell placement on a • of workstations
 [48] **Network-Diagram** A Par. GA for • Layout
 [31] **networks** Evol. prog. for design of rectilinear branched •
 [38] – Evol. design for the opt. layout of tree •
 [212] – Immune • using GA for adaptive production sch.
 [51] – Opt. layout of tree • using GAs
 [186] **neural networks** GAs and • appl. to manufacturing sch.
 [204] – Gen. synthesis of modular •
 [292] – Opt. of transportation network design problems using a cumulative GA and •
 [90] – Process cntr. using gen. trained •
 [191] **neuro-scheduler** Gen. • for job shop sch.
 [189] **NHL** An evol. tabu search alg. and the • sch. problem
 [179] **n/m7P/Cmax** The appl. of par. GA to the • flowshop problem
 [285] **nonlinear** A nonstandard GA for the • transportation problem
 [205] **non-preemptive** A gen. appr. for sch. • tasks with precedence and deadline constraints
 [285] **nonstandard** A • GA for the nonlinear transportation problem
 [171] **NP-complete** New evol. GAs for • comb. opt. problems
 [52] **object** Graphic • layout with interactive GAs
 [85] **objectives** A GA appr. to the machine-component grouping problem with multiple •
 [233] **open-shop** A promising GA appr. to JSS, re-sch. and • scheduling problems
 [144] **operating** Gen. search with dynamic • disciplines
 [243] – Hot parts • schedule by GAs and fuzzy modeling
 [242] – Hot parts • schedule of gas turbines by GAs and fuzzy satisficing methods
 [139] **operation** GA appr. to an • assignment problem
 [124] – Sch. method using GA for multipurpose batch plant •
 [148] **operations** An appl. of evol. alg. to the sch. of robotic •
 [11] – GAs appl. to assembly •
 [261] **operator** Sch. problems and traveling salesmen: The gen. edge recombination •
 [275] **operators** A comparison of gen. sequencing •
 [182] – Direct chromosome Rep. and advanced gen. • for production sch.
 [172] – Exploring problem-specific recombination • for job shop sch.
 [273] – Gen. • for sequencing problems
 [143] – On gen. crossover • for sequencing problems
 [168] **optimal** Computing • schedules for landing aircraft
 [38] – Evol. design for the • layout of tree networks
 [37] – Hybrid appr. for • nesting using a GA and a local minimization alg.
 [51] • layout of tree networks using GAs
 [129] • sequencing for complex eng. syst. using GAs
 [162] **Optimierung** der Partitionierung und Kanban-Zuordnung bei JIT-Fertigungsstraßen
 [102] – Produktionsplanung und • durch Simulation, genetische Algorithmen und Parallelisierung
 [26] **optimization** A GA for floorplan area •
 [55] – Appl. of GAs to the keyboard • problem
 [59] – Comb. • by stochastic evol.
 [101] – Computer-assisted • of working points in plastics processing
 [122] – Distr. coevol. GAs for multi-criteria and multi-constraint •
 [76] – Evol. al • of product design based on concurrent processing of design and manufacturing info
 [65] – GA • appl. to variations of the unequal area facilities layout problem

- [108] – GAs and random keys for sequencing and •
 [14] – GAs for comb. • The assembly line balancing problem
 [9] – GAs for comb. • The assembly line balancing problem
 [220] – GAs for schedule •
 [62] – GAs, function • and facility design
 [228] – GAs, production plan • and sch.
 [235] – Gen. state-space search for constrained • problems
 [269] – Gen. and random keys for sequencing and •
 [56] – Keyboard • using gen. techniques
 [249] – Knowledge-based gen. search in schedule •
 [72] – New appr. of group technology part families •
 [50] • by simulated evol. with appl. to standard cell placement
 [84] • of process plans by GAs
 [248] • of sequencing problems using GAs
 [46] • of the layout of trusses combining strategies based on Mitchell's theorem and on the biological principles of evol.
 [292] • of transportation network design problems using a cumulative GA and neural networks
 [109] – Planning and • of sch. in industrial production by GAs and ES
 [91] – Rule-based • of combustion in multiple-burner furnaces and boiler plants
 [251] – Schedule • Using GAs
 [270] – Simultaneous • of chemical flowshop sequencing and topology using GAs
 [272] – Stochastic • tools for genomic sequence assembly
 [87] – Use of a GA for economic • of a manufacturing syst.
 [68] **optimizer** A new • for the facility layout problem
 [57] **optimizing** A knowledge-based syst. for • workplace layouts using a GA
 [78] • automotive manufacturing sequences using SA and GAs
 [75] • flexible manufacturing syst. layout with GAs
 [262] – Using simulations with GAs for • schedules
 [210] **ordering** GA appr. to a production • problem
 [82] – GA appr. to a production • problem in an assembly process with buffers
 [10] – GA appr. to a production • problem in an assembly process with constant use of parts
 [24] **organization** Automating the layout of network diagrams with specified visual •
 [17] **pack** Using a multi-chromosome GA to • a truck
 [49] **package** Esp: A new standard cell placement • using simulated evol.
 [19] **pallet loading** A hybrid GA for •
 [18] – A multi-chromosome GA for •
 [253] **parallèles** Méthodes de placement statique des processus sur architectures •
 [257] **parallel** A • GA based on a neighborhood model and its appl. to the jobshop sch.
 [217] – A • GA for functional task distribution
 [48] – A • GA for Network-Diagram Layout
 [128] – Cntr. of • pop. dynamics by social-like behavior of GA-individuals
 [150] – Dynamic mapping and load balancing with • GAs
 [67] – Stepwise-overlapped • annealing and its appl. to floorplan design
 [179] – The appl. of • GA to the n/m7P/Cmax flowshop problem
 [145] **parallel computers** A GA for load balancing in •
 [60] **parallele** Massiv • genetische Algorithmen, Beiträge zum Tag der Informatik Erlangen 1993
 [180] **Parallelen** Flowshop Scheduling mit • Genetischen Algorithmen – Eine problemorientierten Analyse genetischer Suchstrategien
 [167] **Parallelisation** of a GA for the computation of efficient train schedules
 [102] **Parallelisierung** Produktionsplanung und -Opt. durch Simulation, genetische Algorithmen und •
 [193] **Paralympic games** Sch. the 1992 • with a GA
 [213] **parameters** Improving the perf. of GAs in automated discovery of •
 [222] – The computer as a partner in Alg. design: Automated discovery of • for a multiobjective sch. heuristic
 [162] **Partitionierung** Opt. der • und Kanban-Zuordnung bei JIT-Fertigungsstraßen
 [73] **partitioning** Assembly • by GA for generating assembly sequences efficiently
 [16] **PCB** Planning of component placement/insertion sequence and feeder setup in • assembly using GA
 [153] **penalty** A GA for job sequencing problems with distinct due and general early-tardy • weights
 [213] **performance** Improving the • of GAs in automated discovery of parameters
 [131] • evaluation of GAs for flowshop sch. problems
 [161] • of GAs in the solution of permutation flowshop problems
 [161] **permutation** Perf. of GAs in the solution of • flowshop problems
 [99] **PERPLEX** Produktionsplanung nach dem Vorbild der Evolution
 [40] **placement** A feasibility study of gen. •
 [22] – A module • using GAs
 [13] – A study on appl. of GA to automatic • of parts on printed circuit boards
 [42, 44] – Block • by improved simulated annealing based on GA
 [254] – Etude expérimentale d'alg. de • de processus
 [61] – Macro-cell and module • by gen. adaptive search with bitmap-represented chromosome
 [253] – Méthodes de • statique des processus sur architectures parallèles
 [50] – Opt. by simulated evol. with appl. to standard cell •
 [30] – SAGA: a unification of the GA with simulated annealing and its appl. to macro-cell •
 [49] – Esp: A new standard cell • package using simulated evol.
 [53, 54] – Wolverines: standard cell • on a network of workstations
 [16] **placement/insertion** Planning of component • sequence and feeder setup in PCB assembly using GA
 [228] **plan** GAs, production • opt. , and sch.
 [100] **planning** An ecosyst. model for integrated production •
 [15] – GA for solving printed circuit board assembly • problems
 [98] – GAs in process •
 [240] – Intelligent support for human computer interaction and decision-making in distribution • and sch. syst.
 [109] • and opt. of sch. in industrial production by GAs and ES
 [16] • of component placement/insertion sequence and feeder setup in PCB assembly using GA
 [140] – Road maintenance • using GAs. I: Formulation
 [115] – Road maintenance • using GAs. II: Analysis
 [229] – Simulated Co-Evol. as The Mechanism for Emergent • and Sch.
 [84] **plans** Opt. of process • by GAs
 [64] **plant** A quantitative appr. to the • layout problem using GAs
 [258] – Appl. of search methods to sch. problem in plastics forming • A binary Rep. appr.
 [124] – Sch. method using GA for multipurpose batch • operation
 [91] **plants** Rule-based opt. of combustion in multiple-burner furnaces and boiler •
 [101] **plastics** Computer-assisted opt. of working points in • processing
 [258] **plastics forming** Appl. of search methods to sch. problem in • plant: A binary Rep. appr.
 [101] **points** Computer-assisted opt. of working • in plastics processing
 [259] **populated** Single • GA and its appl. to JSS
 [128] **population** Cntr. of par. • dynamics by social-like behavior of GA-individuals
 [96] **potential** GAs and their • for use in process cntr. : A case study
 [141] **power** A GA appr. to sch. resources for a space • syst.
 [45] **praktische** Untersuchungen zur Anwendung einer grundlegenden Entwurfstheorie auf • Probleme der Leichtbaukonstruktion
 [205] **precedence** A gen. appr. for sch. non-preemptive tasks with • and deadline constraints
 [47] **press** New appr. for the nesting of two-dimensional shapes for • tool design
 [15] **printed** GA for solving • circuit board assembly planning problems
 [13] **printed circuit boards** A study on appl. of GA to automatic placement of parts on •
 [63] **problem** A GA appr. to the facility layout •
 [85] – A GA appr. to the machine-component grouping • with multiple objectives
 [291] – A GA for the linear transportation •
 [132] – A GA for the talent sch. •
 [154] – A GA of solving job-shop sch. •
 [267] – A hybrid GA appl. to a gen. sequencing •
 [68] – A new Opt. for the facility layout •
 [285] – A nonstandard GA for the nonlinear transportation •
 [64] – A quantitative appr. to the plant layout • using GAs

- [169] – A randomized heuristics for the mapping • The gen. appr.
- [211] – A solution of modified flowshop sch. • by using GA
- [116] – An evol. appr. to the job-shop sch. •
- [189] – An evol. tabu search alg. and the NHL sch. •
- [55] – Appl. of GAs to the keyboard opt. •
- [121] – Appl. of GA to manpower sch. •
- [258] – Appl. of search methods to sch. • in plastics forming plant: A binary Rep. appr.
- [163] – Combination of GAs and CLP in the vehicle-fleet sch. •
- [34] – Distr. GAs for the floorplan design •
- [111] – Evol. prog. for resource constrained project sch. •
- [39] – Experimentation with an adaptive search strategy for solving a key-board design/configuring •
- [210] – GA appr. to a production ordering •
- [82] – GA appr. to a production ordering • in an assembly process with buffers
- [10] – GA appr. to a production ordering • in an assembly process with constant use of parts
- [139] – GA appr. to an operation assignment •
- [65] – GA opt. appl. to variations of the unequal area facilities layout •
- [219] – GAs appl. in a machine sch. •
- [14] – GAs for comb. opt. : The assembly line balancing •
- [290] – GAs for the transportation •
- [21, 29] – Gen. search and the dynamic facility layout •
- [202] – Investigations on solving the load flow • by GAs
- [276] – THE GENIE PROJECT: A GA appl. to a sequencing • in the biological domain
- [196] – Solving the module exam sch. • with GAs
- [23] – Study of gen. crossover operations on the facilities layout •
- [45] **Probleme** Untersuchungen zur Anwendung einer grundlegenden Entwurfstheorie auf praktische • der Leichtbaukonstruktion
- [180] **problemorientierten** Flowshop Scheduling mit Par. en Genetischen Algorithmen – Eine • Analyse genetischer Suchstrategien
- [194] **problems** A distr. GA for employee staffing and sch. •
- [232] – A GA applicable to large-scale job-shop •
- [156] – A GA to some discrete-continuous sch. •
- [233] – A promising GA appr. to JSS, re-sch. and open-shop scheduling •
- [279] – Demand/supply relationship in transportation network design • A GA appr.
- [288] – Effect of gen. sectoring on vehicle routing • with time windows
- [15] – GA for solving printed circuit board assembly planning •
- [273] – Gen. operators for sequencing •
- [235] – Gen. state-space search for constrained opt. •
- [224] – Learning decision rules for sch. •
- [171] – New evol. GAs for NP-complete comb. opt. •
- [143] – On gen. crossover operators for sequencing •
- [248] – Opt. of sequencing • using GAs
- [292] – Opt. of transportation network design • using a cumulative GA and neural networks
- [131] – Perf. evaluation of GAs for flowshop sch. •
- [161] – Perf. of GAs in the solution of permutation flowshop •
- [238] – Recent Alg. developments appl. to sch. •
- [135] – Sch. multiple job • with guided evol. simulated annealing appr.
- [261] – Sch. • and traveling salesmen: The gen. edge recombination operator
- [287] – MICAH: a GA syst. for multi-commodity transshipment •
- [66] – Solving gate-matrix layout • by simulated evol.
- [58] – Stochastic evol. : a fast effective heuristics for some generic layout •
- [172] **problem-specific** Exploring • recombination operators for job shop sch.
- [93] **process** An adaptive syst. for • cntr. using GA
- [82] – GA appr. to a production ordering problem in an assembly • with buffers
- [10] – GA appr. to a production ordering problem in an assembly • with constant use of parts
- [110] – GAs and flowshop sch. : towards the development of a real-time • cntr. syst.
- [96] – GAs and their potential for use in • cntr. : A case study
- [94] – GAs for modelling, design, and • cntr.
- [89] – GAs for • cntr. : A survey
- [98] – GAs in • planning
- [90] • cntr. using gen. trained neural networks
- [84] – Opt. of • plans by GAs
- [77] **process planning** A computer-aided • model based on GAs
- [70] – A manufacturing • model using GAs
- [101] **processing** Computer-assisted opt. of working points in plastics •
- [76] – Evol. al opt. of product design based on concurrent • of design and manufacturing info
- [117, 147] – Solving job-shop sch. problem with fuzzy • time using GA
- [254] **processus** Etude expérimentale d'alg. de placement de •
- [253] – Méthodes de placement statique des • sur architectures parallèles
- [76] **product** Evol. al opt. of • design based on concurrent processing of design and manufacturing info
- [100] **production** An ecosyst. model for integrated • planning
- [12] – Decentral • sch. of assembly syst. with GA
- [182] – Direct chromosome Rep. and advanced gen. operators for • sch.
- [198, 199] – Enhancing gen. search to schedule a • unit
- [210] – GA appr. to a • ordering problem
- [82] – GA appr. to a • ordering problem in an assembly process with buffers
- [10] – GA appr. to a • ordering problem in an assembly process with constant use of parts
- [228] – GAs, • plan opt., and sch.
- [212] – Immune networks using GA for adaptive • sch.
- [86] – Info resource matrix for • and intelligent manufacturing using GA techniques
- [183] – Knowledge-augmented GA for • sch.
- [244] • sch. using GAs
- [109] – Planning and opt. of sch. in industrial • by GAs and ES
- [218] – PROGENITOR - A GA for • sch. (comments)
- [214] – PROGENITOR: A GA for • sch.
- [215] – PROGENITOR: A GA for • sch. (reply)
- [127] **production line** An electronic card • loading prog. - An evol. alg. impl.
- [102] **Produktionsplanung** und -Opt. durch Simulation, genetische Algorithmen und Parallelisierung
- [99] **Produktionsplanung** PERPLEX: • nach dem Vorbild der Evolution
- [218] PROGENITOR - A GA for production sch. (comments)
- [214] • A GA for production sch.
- [215] • A GA for production sch. (reply)
- [282] **programming** Fuzzy multi-objective solid transportation problem via evolutive •
- [107] – Tuning computer CPU sch. alg. using evol. •
- [111] **project** Evol. prog. for resource constrained • sch. problem
- [276] PROJECT THE GENIE • A GA appl. to a sequencing problem in the biological domain
- [233] **promising** A • GA appr. to JSS, re-sch. and open-shop scheduling problems
- [83] **Prozeßmodelle** — Der Schlüssel zur Qualitätsverbesserung beim Spritzgießen
- [164] **public transport** A GA for • driver sch.
- [88] **qualitative** GA with • knowledge enhancement for layout design under continuous space formulation
- [83] **Qualitätsverbesserung** Prozeßmodelle — Der Schlüssel zur • beim Spritzgießen
- [64] **quantitative** A • appr. to the plant layout problem using GAs
- [283] **Rail network routing** and sch. using simulated annealing
- [108] **random** GAs and • keys for sequencing and opt.
- [269] – Gen. and • keys for sequencing and opt.
- [174] • keys for job shop sch.
- [169] **randomized** A • heuristics for the mapping problem: The gen. appr.
- [170] **reactive** Learning distr. • strategies by gen. prog. for the general job shop problem
- [110] **real-time** GAs and flowshop sch. : towards the development of a • process cntr. syst.
- [95] • acquisition of fuzzy rules using GAs
- [238] **Recent** Alg. developments appl. to sch. problems
- [172] **recombination** Exploring problem-specific • operators for job shop sch.
- [261] – Sch. problems and traveling salesmen: The gen. edge • operator
- [31] **rectilinear** Evol. prog. for design of • branched networks

- [279] **relationship** Demand/supply • in transportation network design problems: A GA appr.
- [114] **repair** Task sch. and resource management in ship • using a GA
- [215] **reply** PROGENITOR: A GA for production sch. •
- [258] **representation** Appl. of search methods to sch. problem in plastics forming plant: A binary • appr.
- [182] – Direct chromosome • and advanced gen. operators for production sch.
- [233] **re-scheduling** A promising GA appr. to JSS, • and open-shop sch. problems
- [111] **resource** Evol. prog. for • constrained project sch. problem
- [114] – Task sch. and • management in ship repair using a GA
- [250] – The appl. of GAs to • sch.
- [237] **resource allocation** Distr. GAs for •
- [86] **resource matrix** Info • for production and intelligent manufacturing using GA techniques
- [141] **resources** A GA appr. to sch. • for a space power syst.
- [230] **Revisiting** the Johnson alg. for flowshop sch. with GAs
- [140] **Road** maintenance planning using GAs. I: Formulation
- [115] • maintenance planning using GAs. II: Analysis
- [148] **robotic** An appl. of evol. alg. to the sch. of • operations
- [125] **robust** Robustness measures and • sch. for job shops
- [125] **Robustness** measures and robust sch. for job shops
- [190] **Routes** A Syst. for Learning • and Schedules with GA
- [289] **routing** Dynamic trajectory • using an adaptive search method
- [288] – Effect of gen. sectoring on vehicle • problems with time windows
- [81] – GA based machine learning appl. to the dynamic • of discrete parts
- [91] **Rule-based** opt. of combustion in multiple-burner furnaces and boiler plants
- [224] **rules** Learning decision • for sch. problems
- [119] **SA** A method for maintenance sch. using GA combined with •
- [30] **SAGA** a unification of the GA with simulated annealing and its appl. to macro-cell placement
- [242] **satisficing** Hot parts operating schedule of gas turbines by GAs and fuzzy • methods
- [198, 199] **schedule** Enhancing gen. search to • a production unit
- [220] – GAs for • opt.
- [243] – Hot parts operating • by GAs and fuzzy modeling
- [242] – Hot parts operating • of gas turbines by GAs and fuzzy satisficing methods
- [249] – Knowledge-based gen. search in • opt.
- [251] • Opt. Using GAs
- [216] – Using GAs to • distr. tasks on a bus-based syst.
- [187] – Using GAs to • flow shop releases
- [206] **scheduler** A gen. -based hybrid • for generating static schedules in flexible manufacturing contexts
- [136] – Gen. -neuro •
- [206] **schedules** A gen. -based hybrid scheduler for generating static • in flexible manufacturing contexts
- [190] – A Syst. for Learning Routes and • with GA
- [168] – Computing opt. • for landing aircraft
- [167] – Par. isation of a GA for the computation of efficient train •
- [262] – Using simulations with GAs for opt. •
- [221] **scheduling** A classifier based syst. for discovering • heuristics
- [194] – A distr. GA for employee staffing and • problems
- [141] – A GA appr. to • resources for a space power syst.
- [256] – A GA as appl. to the jobshop •
- [142] – A GA for flow shop • with travel times between machines
- [120] – A GA for multiprocessor •
- [164] – A GA for public transport driver •
- [132] – A GA for the talent • problem
- [156] – A GA to some discrete-continuous • problems
- [205] – A gen. appr. for • non-preemptive tasks with precedence and deadline constraints
- [119] – A method for maintenance • using GA combined with SA
- [233] – A promising GA appr. to job-shop • re-sch. and open-shop • problems
- [211] – A solution of modified flowshop • problem by using GA
- [148] – An appl. of evol. alg. to the • of robotic operations
- [264] – An appr. for supervised job-shop • using GAs
- [189] – An evol. tabu search alg. and the NHL • problem
- [241] – An experimenta on using GAs to learn • heuristics
- [121] – Appl. of GA to manpower • problem
- [258] – Appl. of search methods to • problem in plastics forming plant: A binary Rep. appr.
- [163] – Combination of GAs and CLP in the vehicle-fleet • problem
- [104] – Comparison of a constraint directed search to a GA in a • appl.
- [12] – Decentral production • of assembly syst. with GA
- [182] – Direct chromosome Rep. and advanced gen. operators for production •
- [133, 184] – Dynamic • of computer tasks using GAs
- [207] – Efficient multiprocessor • based on GAs
- [111] – Evol. prog. for resource constrained project • problem
- [234] – Exploiting constraints as background knowledge for GAs - A case-study for •
- [180] **Scheduling** Flowshop • mit Par. en Genetischen Algorithmen – Eine problemorientierten Analyse genetischer Suchstrategien
- [126] **scheduling** GA for dynamic task •
- [175] – GAs and instruction •
- [186] – GAs and neural networks appl. to manufacturing •
- [219] – GAs appl. in a machine • problem
- [246, 247] – GAs appl. to the • of the Hubble space telescope
- [228] – GAs, production plan opt. , and •
- [176] – GAs versus tabu search for instruction •
- [71] – Gen. learning of dynamic • within a simulation environment
- [106] – GSA: • and allocation using GA
- [212] – Immune networks using GA for adaptive production •
- [181] – Incorporating of a knowledge-based • syst. into a GA
- [134] – Instruction • on multiprocessors using a GA
- [177] – Instruction • using GAs
- [240] – Intelligent support for human computer interaction and decision-making in distribution planning and • syst.
- [166] – Intelligent • for flexible manufacturing syst.
- [197] – Investigating GAs for •
- [245] – Joint lot sizing and sequencing with GAs for • evolving the chromosome structure
- [183] – Knowledge-augmented GA for production •
- [138] – Large-scale generator maintenance • using simulated evol.
- [224] – Learning decision rules for • problems
- [260] – LSI assembly line • using a GA
- [286] – Microcomputer-based vehicle routing and •
- [160] • in a sequence dependent setup environment with gen. search
- [124] • method using GA for multipurpose batch plant operation
- [135] • multiple job problems with guided evol. simulated annealing appr.
- [261] • problems and traveling salesmen: The gen. edge recombination operator
- [118] • tasks in multiprocessor syst. using evol. strategies
- [193] • the 1992 Paralympic games with a GA
- [146] • with GAs
- [131] – Perf. evaluation of GAs for flowshop • problems
- [109] – Planning and opt. of • in industrial production by GAs and ES
- [244] – Production • using GAs
- [283] – Rail network routing and • using simulated annealing
- [238] – Recent Alg. developments appl. to • problems
- [230] – Revisiting the Johnson alg. for flowshop • with GAs
- [125] – Robustness measures and robust • for job shops
- [218] – PROGENITOR - A GA for production • (comments)
- [214] – PROGENITOR: A GA for production •
- [215] – PROGENITOR: A GA for production • (reply)
- [229] – Simulated Co-Evol. as The Mechanism for Emergent Planning and •
- [259] – Single populated GA and its appl. to jobshop •
- [103] – Skedulointiongelma • and GA]
- [196] – Solving the module exam • problem with GAs
- [114] – Task • and resource management in ship repair using a GA
- [208] – Task • for flexible manufacturing syst. based on GAs
- [250] – The appl. of GAs to resource •
- [222] – The computer as a partner in Alg. design: Automated discovery of parameters for a multiobjective • heuristic
- [107] – Tuning computer CPU • alg. using EP
- [188] – Using GAs for • data flow graphs
- [151] **scheduling problems** GA for multiprocessor •
- [203] **scheduling/allocation** A novel • appr. for datapath synthesis based on GAs
- [83] **Schlüssel** Prozessmodelle — Der • zur Qualitätsverbesserung beim Spritzgießen
- [105] **search** A hybrid GA-heuristic • strategy

- [258] — Appl. of • methods to sch. problem in plastics forming plant: A binary Rep. appr.
- [104] — Comparison of a constraint directed • to a GA in a sch. appl.
- [289] — Dynamic trajectory routing using an adaptive • method
- [198, 199] — Enhancing gen. • to schedule a production unit
- [39] — Experimentation with an adaptive • strategy for solving a key-board design/configuring problem
- [27] — Gen. beam • for gate matrix layout
- [235] — Gen. state-space • for constrained opt. problems
- [21, 29] — Gen. • and the dynamic facility layout problem
- [144] — Gen. • with dynamic operating disciplines
- [249] — Knowledge-based gen. • in schedule opt.
- [185] — Looking around: Using clues from the data space to guide GA •
- [61] — Macro-cell and module placement by gen. adaptive • with bitmap-represented chromosome
- [173] — Managing gen. • in job shop sch.
- [160] — Sch. in a sequence dependent setup environment with gen. •
- [288] **sectoring** Effect of gen. • on vehicle routing problems with time windows
- [271] **sequence** GAs for DNA • assembly
- [16] — Planning of component placement/insertion • and feeder setup in PCB assembly using GA
- [160] — Sch. in a • dependent setup environment with gen. search
- [272] — Stochastic opt. tools for genomic • assembly
- [73] **sequences** Assembly partitioning by GA for generating assembly • efficiently
- [78] — Opt. automotive manufacturing • using SA and GAs
- [275] **sequencing** A comparison of gen. • operators
- [239] — A GA appr. to stochastic flowshop •
- [268] — A GA for flowshop •
- [267] — A hybrid GA appl. to a gen. • problem
- [274] — Dynamic • of a Multi-Processor Syst. : A GA Appr.
- [97] — Feature • in the Rapid Design Syst. using a GA
- [108] — GAs and random keys for • and opt.
- [273] — Gen. operators for • problems
- [269] — Gen. and random keys for • and opt.
- [245] — Joint lot sizing and • with GAs for sch. : evolving the chromosome structure
- [143] — On gen. crossover operators for • problems
- [129] — Opt. • for complex eng. syst. using GAs
- [248] — Opt. of • problems using GAs
- [276] — THE GENIE PROJECT: A GA appl. to a • problem in the biological domain
- [270] — Simultaneous opt. of chemical flowshop • and topology using GAs
- [16] **setup** Planning of component placement/insertion sequence and feeder • in PCB assembly using GA
- [160] — Sch. in a sequence dependent • environment with gen. search
- [47] **shapes** New appr. for the nesting of two-dimensional • for press tool design
- [114] **ship** Task sch. and resource management in • repair using a GA
- [142] — A GA for flow • sch. with travel times between machines
- [125] **shops** Robustness measures and robust sch. for job •
- [226, 227] **Short** term unit-commitment using GAs
- [252] **simulated** Applying • evol. to high level synthesis
- [138] — Large-scale generator maintenance sch. using • evol.
- [229] • Co-Evol. as The Mechanism for Emergent Planning and Sch.
- [50] — Opt. by • evol. with appl. to standard cell placement
- [78] — Opt. automotive manufacturing sequences using • annealing and GAs
- [283] — Rail network routing and sch. using • annealing
- [49] — ESP: A new standard cell placement package using • evol.
- [66] — Solving gate-matrix layout problems by • evol.
- [42, 44] **simulated annealing** Block placement by improved • based on GA
- [281] — Co-operative • and GAs for vehicle routing problems
- [43] — Floorplanning by improved • based on GAs
- [30] — SAGA: a unification of the GA with • and its appl. to macro-cell placement
- [135] — Sch. multiple job problems with guided evol. • appr.
- [71] **simulation** Gen. learning of dynamic sch. within a • environment
- [102] **Simulation** Produktionsplanung und -Opt. durch • genetische Algorithmen und Parallelisierung
- [262] **simulations** Using • with GAs for opt. schedules
- [270] **Simultaneous** opt. of chemical flowshop sequencing and topology using GAs
- [225] **single** Minimizing flow time variance in a • machine syst. using GA
- [259] • populated GA and its appl. to JSS
- [103] **Skedulointiongelma** [Sch. and GA]
- [128] **social-like** Cntr. of par. pop. dynamics by • behavior of GA-individuals
- [282] **solid** Fuzzy multi-objective • transportation problem via evolutive prog.
- [280] — Solving bicriteria • transportation problem by GA
- [211] **solution** A • of modified flowshop sch. problem by using GA
- [161] — Perf. of GAs in the • of permutation flowshop problems
- [154] **solving** A GA of • job-shop sch. problem
- [39] — Experimentation with an adaptive search strategy for • a key-board design/configuring problem
- [15] — GA for • printed circuit board assembly planning problems
- [202] — Investigations on • the load flow problem by GAs
- [280] • bicriteria solid transportation problem by GA
- [25] • concentrator location-problems using GAs
- [66] • gate-matrix layout problems by simulated evol.
- [149] • job-shop sch. problem using GA
- [117, 147] • job-shop sch. problem with fuzzy processing time using GA
- [196] • the module exam sch. problem with GAs
- [141] **space** A GA appr. to sch. resources for a • power syst.
- [88] — GA with qualitative knowledge enhancement for layout design under continuous • formulation
- [185] — Looking around: Using clues from the data • to guide GA search
- [24] **specified** Automating the layout of network diagrams with • visual organization
- [83] **Spritzgießen** Prozeßmodelle — Der Schlüssel zur Qualitätsverbesserung beim •
- [194] **staffing** A distr. GA for employee • and sch. problems
- [50] **standard** Opt. by simulated evol. with appl. to • cell placement
- [49] — ESP: A new • cell placement package using simulated evol.
- [53, 54] — Wolverines: • cell placement on a network of workstations
- [235] **state-space** Gen. • search for constrained opt. problems
- [206] **static** A gen. -based hybrid scheduler for generating • schedules in flexible manufacturing contexts
- [253] **statique** Méthodes de placement • des processus sur architectures parallèles
- [67] **Stepwise-overlapped** par. annealing and its appl. to floorplan design
- [239] **stochastic** A GA appr. to • flowshop sequencing
- [59] — Comb. opt. by • evol.
- [58] • evol. : a fast effective heuristics for some generic layout problems
- [272] • opt. tools for genomic sequence assembly
- [92] **strategies** A syst. for learning cntr. • with GAs
- [170] — Learning distr. reactive • by gen. prog. for the general job shop problem
- [46] — Opt. of the layout of trusses combining • based on Mitchell's theorem and on the biological principles of evol.
- [105] **strategy** A hybrid GA-heuristic search •
- [39] — Experimentation with an adaptive search • for solving a key-board design/configuring problem
- [109] — Planning and opt. of sch. in industrial production by GAs and evol. •
- [180] **Suchstrategien** Flowshop Scheduling mit Par. en Genetischen Algorithmen — Eine problemorientierten Analyse genetischer •
- [79] **sugar beet presses** Use of the GA for load balancing of •
- [264] **supervised** An appr. for • JSS using GAs
- [113] **supply** A GA for improved tool •
- [240] **support** Intelligent • for human computer interaction and decision-making in distribution planning and sch. syst.
- [89] **survey** GAs for process cntr. : A •
- [35] **symbolic** Compaction of • layout using GAs
- [203] **synthesis** A novel sch. /allocation appr. for datapath • based on GAs
- [252] — Applying simulated evol. to high level •
- [204] — Gen. • of modular neural networks
- [20] — On the • of gate matrix layout
- [189] **tabu search** An evol. • alg. and the NHL sch. problem
- [176] — GAs versus • for instruction sch.

- [60] **Tag** Massiv par. e genetische Algorithmen, Beiträge zum • der Informatik Erlangen 1993
- [132] **talent** A GA for the • sch. problem
- [265] **task** A GA for • allocation in multiprocessor syst.
- [200] – A hybrid GA for • allocation in multicompilers
- [217] – A par. GA for functional • distribution
- [126] – GA for dynamic • sch.
- [266] • allocation using a GA in multicompilers syst.
- [114] • sch. and resource management in ship repair using a GA
- [208] • sch. for flexible manufacturing syst. based on GAs
- [209] **Taskgraph** mapping using a GA: a comparison of fitness functions
- [205] **tasks** A gen. appr. for sch. non-preemptive • with precedence and deadline constraints
- [133, 184] – Dynamic sch. of computer • using GAs
- [118] – Sch. • in multiprocessor syst. using evol. strategies
- [216] – Using GAs to schedule distr. • on a bus-based syst.
- [86] **techniques** Info resource matrix for production and intelligent manufacturing using GA •
- [56] – Keyboard opt. using gen. •
- [226, 227] **term** Short • unit-commitment using GAs
- [46] **theorem** Opt. of the layout of trusses combining strategies based on Mitchell's • and on the biological principles of evol.
- [288] **time** Effect of gen. sectoring on vehicle routing problems with • windows
- [225] – Minimizing flow • variance in a single machine syst. using GA
- [117, 147] – Solving job-shop sch. problem with fuzzy processing • using GA
- [142] **times** A GA for flow shop sch. with travel • between machines
- [113] **tool** A GA for improved • supply
- [47] – New appr. for the nesting of two-dimensional shapes for press • design
- [272] **tools** Stochastic opt. • for genomic sequence assembly
- [270] **topology** Simultaneous opt. of chemical flowshop sequencing and • using GAs
- [167] **train** Par. isation of a GA for the computation of efficient • schedules
- [90] **trained** Process cntr. using gen. • neural networks
- [289] **trajectory** Dynamic • routing using an adaptive search method
- [291] **transportation** A GA for the linear • problem
- [285] – A nonstandard GA for the nonlinear • problem
- [279] – Demand/supply relationship in • network design problems: A GA appr.
- [290] – GAs for the • problem
- [284] – Konzepte genetischer Algorithmen und ihre Anwendung auf das FrachtOpt. problem im gewerblichen Güterfernverkehr [GAs concepts and their appl. to freight minimization in commercial long distance freight •
- [292] – Opt. of • network design problems using a cumulative GA and neural networks
- [278] **transportation problem** Evol. prog. for bicriteria •
- [282] – Fuzzy multi-objective solid • via evolutive prog.
- [280] – Solving bicriteria solid • by GA
- [287] **transshipment** MICAH: a GA syst. for multi-commodity • problems
- [142] **travel** A GA for flow shop sch. with • times between machines
- [261] **traveling salesmen** Sch. problems and • The gen. edge recombination operator
- [38] **tree** Evol. design for the opt. layout of • networks
- [51] – Opt. layout of • networks using GAs
- [17] **truck** Using a multi chromosome GA to pack a •
- [46] **trusses** Opt. of the layout of • combining strategies based on Mitchell's theorem and on the biological principles of evol.
- [107] **Tuning** computer CPU sch. alg. using EP
- [47] **two-dimensional** New appr. for the nesting of • shapes for press tool design
- [65] **unequal** GA opt. appl. to variations of the • area facilities layout problem
- [30] **unification** SAGA: a • of the GA with simulated annealing and its appl. to macro-cell placement
- [198, 199] **unit** Enhancing gen. search to schedule a production •
- [226, 227] **unit-commitment** Short term • using GAs
- [45] **Untersuchungen** zur Anwendung einer grundlegenden Entwurfstheorie auf praktische Probleme der Leichtbaukonstruktion
- [225] **variance** Minimizing flow time • in a single machine syst. using GA
- [65] **variations** GA opt. appl. to • of the unequal area facilities layout problem
- [288] **vehicle** Effect of gen. sectoring on • routing problems with time windows
- [286] **vehicle routing** Microcomputer-based • and sch.
- [281] **vehicle routing problems** Co-operative simulated annealing and GAs for •
- [277] – GAs for •
- [163] **vehicle-fleet** Combination of GAs and CLP in the • sch. problem
- [24] **visual** Automating the layout of network diagrams with specified • organization
- [99] **Vorbild** PERPLEX: Produktionsplanung nach dem • der Evolution
- [153] **weights** A GA for job sequencing problems with distinct due and general early-tardy penalty •
- [288] **windows** Effect of gen. sectoring on vehicle routing problems with time •
- [53, 54] **Wolverines** standard cell placement on a network of workstations
- [101] **working** Computer-assisted opt. of • points in plastics processing
- [159] **workloads** Using GAs to characterize •
- [57] **workplace** A knowledge-based syst. for opt. • layouts using a GA
- [53, 54] **workstations** Wolverines: standard cell placement on a network of •

Bibliography

- [1] John H. Holland. Genetic algorithms. *Scientific American*, 267(1):44–50, 1992. `ga:Holland92a`.
- [2] Jarmo T. Alander. *An indexed bibliography of genetic algorithms: Years 1957-1993*. Art of CAD Ltd., Vaasa (Finland), 1994. (over 3000 GA references).
- [3] David E. Goldberg, Kelsey Milman, and Christina Tidd. Genetic algorithms: A bibliography. IlliGAL Report 92008, University of Illinois at Urbana-Champaign, 1992. `ga:Goldberg92f`.
- [4] N. Saravanan and David B. Fogel. A bibliography of evolutionary computation & applications. Technical Report FAU-ME-93-100, Florida Atlantic University, Department of Mechanical Engineering, 1993. (available via anonymous ftp cite `magenta.me.fau.edu` directory `/pub/ep-list/bib` file `EC-ref.ps.Z`) `ga:Fogel93c`.
- [5] Thomas Bäck. Genetic algorithms, evolutionary programming, and evolutionary strategies bibliographic database entries. (personal communication) `ga:Back93bib`, 1993.
- [6] Thomas Bäck, Frank Hoffmeister, and Hans-Paul Schwefel. Applications of evolutionary algorithms. Technical Report SYS-2/92, University of Dortmund, Department of Computer Science, 1992. `ga:Schwefel92d`.
- [7] Leslie Lamport. *TEX: A Document Preparation System*. Addison-Wesley, Reading, 1986.
- [8] Alfred V. Aho, Brian W. Kernighan, and Peter J. Weinberger. *The AWK Programming Language*. Addison-Wesley Publishing Company, Reading, MA, 1988.
- [9] Edward J. Anderson and Michael C. Ferris. Genetic algorithms for combinatorial optimization: The assembly line balancing problem. *ORSA Journal on Computing*, 6(2):161–173, Spring 1994. †`ga94aAnderson`.
- [10] Nobuo Sannomiya, Hitoshi Iima, and N. Akatsuka. Genetic algorithm approach to a production ordering problem in an assembly process with constant use of parts. *Int. J. Syst. Sci. (UK)*, 25(9):1461–1472, September 1994. †(CCA 76964/94) `ga94aSannomiya`.
- [11] Al J. Underbrink, Jr. and George P. Williams, Jr. Genetic algorithms applied to assembly operations. In Wray Buntine, Moffett Field, and Doug H. Fisher, editors, *Knowledge-Based Artificial Intelligence Systems in Aerospace and Industry*, volume SPIE-2244, pages 32–42, Orlando, FL, 4.-6. April 1994. The International Society for Optical Engineering. †(A95-12929 P61331/94) `ga94aUnderbrink`.
- [12] Hans-Peter Wiendahl. Decentral production scheduling of assembly systems with genetic algorithm. *CIRP Ann.*, 43(1):389–395, ? 1994. †(EI M163624/94) `ga94aWiendahl`.
- [13] T. Yoshikawa, Takeshi Furuhashi, and Yoshiki Uchikawa. A study on application of genetic algorithm to automatic placement of parts on printed circuit boards. *Transactions of the Institute of Electrical Engineers of Japan C*, 114-D(4):387–392, April 1994. (in Japanese) †(CCA 74495/94) `ga94aYoshikawa`.
- [14] Edward J. Anderson and Michael C. Ferris. Genetic algorithms for combinatorial optimization: The assembly line balancing problem. *Operations Research / Management Sciences*, 34(5):523–525, September-October 1994. (Abstract of [9]) †`ga94bAnderson`.
- [15] Ming C. Leu, Hermean Wong, and Zhiming Ji. Genetic algorithm for solving printed circuit board assembly planning problems. In *Proceedings of the 1992 Japan-USA Symposium on Flexible Automation*, volume 2, pages 1579–1586, San Francisco, USA, 13.-15. July 1992. ASME, New York. †(EI 022844/93) `ga:Leu92a`.
- [16] Ming C. Leu and Hermean Wong. Planning of component placement/insertion sequence and feeder setup in PCB assembly using genetic algorithm. *Transactions of ASME, Journal of Electronics Packaging*, 115(4):424–432, December 1993. †(EEA 27376/94 CCA 25689/94) `ga:Leu93a`.
- [17] Kate Juliff. Using a multi chromosome genetic algorithm to pack a truck. Technical Report RMIT CS TR 92-2, Royal Melbourne Institute of Technology, Department of Computer Science, 1992. †(BackBib) `ga:Juliff92a`.
- [18] Kate Juliff. A multi-chromosome genetic algorithm for pallet loading. In Forrest [293], pages 467–473. `ga:Juliff93a`.

- [19] P. Prosser. A hybrid genetic algorithm for pallet loading. In *Proceedings of the Eighth European Conference on Artificial Intelligence*, pages 159–164, ?, ? 1988. Pitman, London. † [ga:Prosser88](#).
- [20] Reena Agarwal and Indranil Sen Gupta. On the synthesis of gate matrix layout. In *Proceedings of the 7th International Conference on VLSI Design*, pages 203–206, Calcutta (India), 5.-8. January 1994. IEEE Computer Society Press, Los Alamitos, CA. †(EI M141914/94) [ga94aAgarwal](#).
- [21] Daniel G. Conway and M. A. Venkataramanan. Genetic search and the dynamic facility layout problem. *Computers & Operations Research*, 21(8):955–960, October 1994. [ga94aConway](#).
- [22] Inoue. A module placement using genetic algorithms. *Transaction of the Institute of Electronics, Information and Communication Engineers A (Japan)*, J77-A(8):1189–1191, August 1994. (in Japanese) †(CCA 93545/94) [ga94aInoue](#).
- [23] K. C. Chan and H. Tansri. Study of genetic crossover operations on the facilities layout problem. *Computers & Industrial Engineering*, 26(3):537–550, July 1994. †(CCA 64979/94 EI M179458/94) [ga94aKCCChan](#).
- [24] Corey Kosak, Joe Marks, and Stuart Shieber. Automating the layout of network diagrams with specified visual organization. *IEEE Transactions on Systems, Man, and Cybernetics*, (?):?, 1994. (to appear) †(Fogel/bib) [ga94aKosak](#).
- [25] A. İrfan Oyman and Cem Ersoy. Solving concentrator location-problems using genetic algorithms. In *Proceedings of the 7th Mediterranean Electrotechnical Conference (MELECON94)*, volume 3, pages 1341–1344, Antalya (Turkey), 12.-14. April 1994. IEEE, New York. [ga94aOyman](#).
- [26] M. Rebaudengo and Matteo Sonza Reorda. A genetic algorithm for floorplan area optimization. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [294], pages 93–96. [ga94aRebaudengo](#).
- [27] Khushro Shahookar, W. Khamisani, Pinaki Mazumder, and S. M. Reddy. Genetic beam search for gate matrix layout. *IEE Proceedings, Computers and Digital Techniques*, 141(2):123–128, March 1994. [ga94aShahookar](#).
- [28] Mary Lou Maher and S. Kundu. Adaptive design using a genetic algorithm. *IFIP Trans. B, Appl. Technol. (Netherlands)*, B-18:245–262, ? 1994. (Proceedings of IFIP TC5/WG5.2 Workshop: Formal Design Methods for CAD, Tallinn (Estonia), 16.-19. Jun. 1994) †(CCA 86086/94) [ga94bMaher](#).
- [29] S. Yeralan and C.-S. Lin. Genetic search and the dynamic facility layout problem. *Comput. Oper. Res. (UK)*, 21(8):955–960, October 1994. †(CCA 75442/94) [ga94bYeralan](#).
- [30] Henrik Esbensen and Pinaki Mazumder. SAGA: a unification of the genetic algorithm with simulated annealing and its application to macro-cell placement. In *Proceedings of the Seventh International Conference on VLSI Design*, pages 211–214, Calcutta (India), 5.-8. January 1994. IEEE Computer Society Press, Los Alamitos, CA. †(EEA 41583/94) [ga94cEsbensen](#).
- [31] J. W. Davidson and I. C. Goulter. Evolution program for design of rectilinear branched networks. *J. Comput. Civ. Eng.*, 9(2):112–121, April 1995. †(EI M090009/95) [ga95aDavidson](#).
- [32] Kazuhiro Kado, Dave Corne, and Peter Ross. A study of genetic algorithm hybrids for facility layout problems. In Smith [295], page ? †(prog) [ga95aKado](#).
- [33] James P. Cohoon, Shailesh U. Hegde, and Worthy N. Martin. Floorplan design using distributed genetic algorithms. Technical Report TR-88-12, University of Virginia, Computer Science Department, 1988. †(Baluja93a) [ga:Cohoon88a](#).
- [34] James P. Cohoon, Shailesh U. Hegde, Worthy N. Martin, and Dana S. Richards. Distributed genetic algorithms for the floorplan design problem. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 10(4):483–492, April 1991. [ga:Cohoon91c](#).
- [35] Michael P. Fourman. Compaction of symbolic layout using genetic algorithms. In Grefenstette [296], pages 141–153. [ga:Fourman85a](#).
- [36] Michael P. Fourman. Evolving layout. *IEE Colloquium on VLSI Design Methodologies*, Digest No. 41:3/1–3/4, 1985. † [ga:Fourman85b](#).
- [37] Kikuo Fujita, Shinsuke Akagji, and Noriyasu Kirokawa. Hybrid approach for optimal nesting using a genetic algorithm and a local minimization algorithm. In *Proceedings of the 19th Annual ASME Design Automation Conference*, volume 1, pages 477–484, Albuquerque, NM, 19.-22. September 1993. ASME, New York. †(EI Jan 94) [ga:Fujita93a](#).
- [38] G. A. Walters. Evolutionary design for the optimal layout of tree networks. Report 93/11, University of Exeter, Centre for Systems and Control Engineering, 1993. †(News/Savic) [ga:GAWalters93a](#).
- [39] David E. Glover. *Experimentation with an adaptive search strategy for solving a key-board design/configuring problem*. PhD thesis, University of Iowa, 1986. (University Microfilms No. DA86-22767) †(DAI Vol 47/2996B) [ga:GloverThesis](#).

- [40] U. Hegde and B. Ashmore. A feasibility study of genetic placement. *Texas Instrument Technology Journal*, 9(6):72–82, November-December 1992. †([297]) **ga:Hegde92a**.
- [41] Klaus Glasmacher, Axel Heß, and Gerhard Zimmermann. A genetic algorithm for global improvement of macrocell layouts. In *IEEE International Conference on Computer-Design: VLSI in Computers and Processors*, pages 306–313, Cambridge, MA, 14. - 16. October 1991. IEEE Computer Society Press. **ga:Hess91**.
- [42] S. Koakutsu, Y. Sugai, and H. Hirata. Block placement by improved simulated annealing based on genetic algorithm. *Transactions of the Institute of Electronics, Information and Communication Engineers (Japan)*, J73A(1):87–94, January 1990. (in Japanese) †(Fogel/bib) **ga:Hirata90a**.
- [43] S. Koakutsu, Y. Sugai, and H. Hirata. Floorplanning by improved simulated annealing based on genetic algorithms. *Transactions of the Institute of Electrical Engineers of Japan C*, 112-C(7):411–416, July 1992. (in Japanese) †(CCA 17950/93 EEA 14193/93) **ga:Hirata92a**.
- [44] S. Koakutsu, Y. Sugai, and H. Hirata. Block placement by improved simulated annealing based on genetic algorithm. In *5th Conference on Modelling and Optimization*, volume 180 of *Lecture Notes in Control and Information Sciences*, pages 648–656, Zürich, Switzerland, 2.-6. September 1992. Springer-Verlag, Berlin. †(P57524) **ga:Hirata92b**.
- [45] A. Höfler, U. Leyßner, and J. Wiedemann. Untersuchungen zur Anwendung einer grundlegenden Entwurfstheorie auf praktische Probleme der Leichtbaukonstruktion. In *Zwischenbericht zum forschungsvorhaben*, pages 32/11–32/16, Berlin, April 1971. Technische Universität der Berlin, Institut für Luftfahrzeugbau. †(BackBib) **ga:Hofler71**.
- [46] A. Höfler, U. Leyßner, and J. Wiedemann. Optimization of the layout of trusses combining strategies based on Mitchell’s theorem and on the biological principles of evolution. In *Second Symposium on Structural Optimization, AGARD Conference Proceedings*, pages A1–A8, Milan (Italy), 2.-4. April 1973. ? † **ga:Hofler73**.
- [47] H. S. Ismail and K. K. B. Hon. New approaches for the nesting of two-dimensional shapes for press tool design. *International Journal of Production Research*, 30(4):825–837, April 1992. **ga:Ismail92a**.
- [48] Corey Kosak, Joe Marks, and Stuart Shieber. A parallel genetic algorithm for network-diagram layout. In Belew and Booker [298], pages 458–465. **ga:JMarks91**.
- [49] R.-M. King and P. Banerjee. ESP: A new standard cell placement package using simulated evolution. In *Proceedings of the 24th ACM/IEEE Design Automation Conference*, pages 60–66, ?, ? 1987. IEEE, New York. † **ga:King87**.
- [50] R.-M. King and P. Banerjee. Optimization by simulated evolution with applications to standard cell placement. In *Proceedings of the 27th ACM/IEEE Design Automation Conference*, pages 20–25, Orlando, FL, 24.-28. June 1990. IEEE, New York. †(EEA 61846/91) **ga:King90**.
- [51] G. A. Walters and T. K. Lohbeck. Optimal layout of tree networks using genetic algorithms. *Engineering Optimization*, 22(?):27–48, ? 1993. †(News/Savic) **ga:Lohbeck93a**.
- [52] T. Masui. Graphic object layout with interactive genetic algorithms. In *Proceedings of the 1992 IEEE Workshop on Visual Languages*, pages 74–80, Seattle, WA, 15.-18. September 1992. IEEE Computer Society Press, Los Alamitos, CA. †(CCA 61297/93) **ga:Masui92a**.
- [53] S. Mohan and Pinaki Mazumder. Wolverines: standard cell placement on a network of workstations. In *EURO-DAC '92 European Design Automation Conference EURO-VHDL '92*, pages 46–51, Hamburg, 7. -10. September 1992. IEEE Computer Society Press, Los Alamitos, California. †(EEA 65857/93) **ga:Mazumder92a**.
- [54] S. Mohan and Pinaki Mazumder. Wolverines: standard cell placement on a network of workstations. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 12(9):1312–1326, September 1993. **ga:Mazumder93a**.
- [55] B. J. Oommen, J. S. Valveti, and J. R. Zgierski. Application of gas to the keyboard optimization problem. Technical Report No. SCS-TR-162, Carleton University, Ottawa, Canada, 1989. † **ga:Oommen89**.
- [56] B. J. Oommen and J. R. Zgierski. Keyboard optimization using genetic techniques. In *Proceedings of the 10th Annual International Phoenix Conference on Computers and Communications*, pages 726–732, Scottsdale, AZ, 27.-30. March 1991. IEEE. **ga:Oommen91**.
- [57] D. T. Pham and H. H. Onder. A knowledge-based system for optimizing workplace layouts using a genetic algorithm. *Ergonomics*, 35(12):1479–1497, 1992. †(EI M065184/93) **ga:Pham92a**.
- [58] Youssef G. Saab and Vasant B. Rao. Stochastic evolution: a fast effective heuristics for some generic layout problems. In *Proceedings of the 27th ACM/IEEE Design Automation Conference*, pages 26–31, Orlando, FL, 24.-28. June 1990. IEEE, New York. †(EEA 61847/91) **ga:Saab90**.

- [59] Youssef G. Saab and Vasant B. Rao. Combinatorial optimization by stochastic evolution. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 10(4):525–535, 1991. [ga:Saab91a](#).
- [60] Markus Schwehm, Karl Dieter Reinartz, Thomas Walter, Sönke-Sonnich Gold, Christoph Schäffner, Thilo Opaterny, Alexander Ost, and Norbert Engst. Massiv parallele genetische Algorithmen, Beiträge zum Tag der Informatik Erlangen 1993. Interner Bericht IMMD VII - 8/93, Friedrich-Alexander-Universität Erlangen-Nürnberg, Institut für Mathematische Maschinen und Datenverarbeitung, 1993. (in German) [ga:Schwehm93b](#).
- [61] Heming Chan, Pinaki Mazumder, and Khushro Shahookar. Macro-cell and module placement by genetic adaptive search with bitmap-represented chromosome. *Integration, the VLSI Journal*, 12(1):49–77, November 1991. [ga:Shahookar91b](#).
- [62] Kar Yan Tam. Genetic algorithms, function optimization, and facility design. *European Journal of Operational Research*, 63(2):322–346, December 1992. [ga:Tam92a](#).
- [63] Kar Yan Tam. A genetic algorithm approach to the facility layout problem. In K. H. Phua, C. M. Wang, W. Y. Yeong, T. Y. Leong, H. T. Loh, K. C. Tan, and F. S. Chou, editors, *Optimization Techniques and Applications (ICOTA'92)*, *Proceedings*, volume 2, pages 976–981, Singapore, 3.-5. June 1992. World Scientific, Singapore. [ga:Tam92b](#).
- [64] H. Tansri and K. C. Chan. A quantitative approach to the plant layout problem using genetic algorithms. In P. W. H. Chung, G. Lovegrove, and M. Ali, editors, *Proceedings of the Sixth International Conference in Industrial and Engineering Applications of Artificial Intelligence and Expert Systems*, pages 403–406, Edinburgh, Scotland, 1.-4. June 1993. Gordon and Breach Science, Langhorne. †(P62941/95) [ga:Tansri93a](#).
- [65] David M. Tate and Alice E. Smith. Genetic algorithm optimization applied to variations of the unequal area facilities layout problem. In D. A. Mitta, L. I. Burke, J. R. English, J. Gallimore, G. A. Klutke, and G. L. Tonkay, editors, *2nd Industrial Engineering Research Conference Proceedings*, pages 335–339, Los Angeles, CA, 26.-27. May 1993. Industrial Engineering & Management Press. †(P57840/93 EI M067946/94) [ga:Tate93c](#).
- [66] Yu Hen Hu and Chi-Yu Mao. Solving gate-matrix layout problems by simulated evolution. In *1993 IEEE International Symposium on Circuits and Systems (ISCAS 93)*, volume 3, pages 1873–1876, Chicago, IL, 3.-6. May 1993. IEEE, New York. [ga:YHHu93a](#).
- [67] Youngtak Kim, Yuongjo Jang, and Myunghwan Kim. Stepwise-overlapped parallel annealing and its application to floorplan design. *Computer Aided Design*, 23(2):133–144, March 1991. †(EEA 37425/91) [ga:YKim91](#).
- [68] P. P. C. Yip and Yoh-Han Pao. A new optimizer for the facility layout problem. In *IJCNN'93 [299]*, pages 1573–1576. †(CCA 36476/95) [ga:Yip93b](#).
- [69] Emanuel Falkenauer and A. Delchambre. A genetic algorithm for bin packing and line balancing. In *Proceedings of the 1992 IEEE International Conference on Robotics and Automation*, volume 2, pages 1186–1192, Nice, France, 12. - 14. May 1992. IEEE Robotics and Automation Society, IEEE Computer Society Press, Los Alamitos, California. [ga:Falkenauer92a](#).
- [70] Bahaa Awadth. *A manufacturing process planning model using genetic algorithms*. PhD thesis, The University of Manitoba, 1994. †(DAI Vol. 55 No. 11) [ga94aAwadth](#).
- [71] Haldun Aytug, Gary J. Koehler, and Jane L. Snowdon. Genetic learning of dynamic scheduling within a simulation environment. *Computers & Operations Research*, 21(8):909–925, October 1994. [ga94aAytug](#).
- [72] K. K. B. Hon and H. Chi. New approach of group technology part families optimization. *CIRP Ann.*, 43(1):425–428, ? 1994. †(EI 159501/M) [ga94aHon](#).
- [73] T. Murayama, F. Oba, and S. Abe. Assembly partitioning by genetic algorithm for generating assembly sequences efficiently. In E. Usui, editor, *Advancement of Intelligent Production, Proceedings of the 7th International Conference on Production / 4th International Conference on High Technology*, volume 1 of *JSPE Publication Series*, pages 695–700, Chiba (Japan), 15.-17. September 1994. Elsevier Science Publishers, Amsterdam. †(P63669/95) [ga94aMurayama](#).
- [74] Mukesh Taneja and N. Viswanadham. Inspection allocation in manufacturing systems: A genetic algorithm approach. In *Proceedings of the 1994 IEEE International Conference on Robotics and Automation*, volume 4, pages 3537–3542, San Diego, CA, 8.-13. May 1994. IEEE Computer Society Press, Los Alamitos, CA. [ga94aTaneja](#).
- [75] A. G. Williamson and K. Watson. Optimizing flexible manufacturing system layout with genetic algorithms. In *Proceedings of the 4th International Conference on Factory 2000 – Advanced Factory Automation*, pages 12–18, York (UK), 3.-5. October 1994. IEE, Stevenage (UK). †(EI M042334/95) [ga94aWilliamson](#).
- [76] Masata Yoshimura and Atsushi Kimura. Evolutional optimization of product design based on concurrent processing of design and manufacturing information. In *A Collection of Papers, 5th AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization*, volume 1, pages 434–442, Panama City, FL, 7.-9. September 1994. American Institute of Aeronautics and Astronautics (AIAA). [ga94aYoshimura](#).

- [77] B. Awadh, N. Sepehri, and O. Hawaleshka. A computer-aided process planning model based on genetic algorithms. *Computers & Operations Research*, 22(8):841–856, September 1995. **ga95aAwadh**.
- [78] W. Mergenthaler, W. Stadler, H. Wilbertz, and N. Zimmer. Optimizing automotive manufacturing sequences using simulated annealing and genetic algorithms. *Control Engineering Practise*, 3(4):569–573, April 1995. †(CCA 37458/95) **ga95aMergenthaler**.
- [79] Frank Vavak, Terence C. Fogarty, and Philip Cheng. Use of the genetic algorithm for load balancing of sugar beet presses. In Smith [295], page ? †(prog) **ga95aVavak**.
- [80] T. Watanabe, Y. Hashimoto, I. Nishikawa, and H. Tokumaru. Line balancing using a genetic evolution model. *Control Eng. Pract.*, 3(1):69–76, January 1995. †(EI M75519/95) **ga95aWatanabe**.
- [81] Royce O. Bowden. *Genetic algorithm based machine learning applied to the dynamic routing of discrete parts*. PhD thesis, Mississippi State University, 1992. †(DAI Dec. 93) **ga:BowdenThesis**.
- [82] Nobuo Sannomiya and Hitoshi Iima. Genetic algorithm approach to a production ordering problem in an assembly process with buffers. In *Selected Papers from the 7th IFAC/IFIP/IFORS/IMACS/ISPE Symposium*, pages 403–408, Toronto (Canada), 25.–28. May 1992 1993. Pergaman, Oxford. †(CCA 10469/93) **ga:Iima93b**.
- [83] K. Bourdon, P. Breuer, M. Haupt, D. Hunold, M. Lauterbach, and T. Robers. Prozeßmodelle — der Schlüssel zur Qualitätsverbesserung beim Spritzgießen. In *15. Kunststofftechnisches Kolloquium des IKV*, pages 332–357, Aachen (Germany), 14.–16. March 1990. ? †([6]) **ga:MHaupt90a**.
- [84] Jozsef Vancza and András Márkus. Optimization of process plans by genetic algorithms. In ?, editor, *Proceedings of the Third Conference on Artificial Intelligence*, pages 117–122, Budapest (Hungary), 6.–8. April 1993. John von Neumann Society for Computer Science, Budapest. †(CCA 31034/94) **ga:Markus93b**.
- [85] V. Venugopal and T. T. Narendran. A genetic algorithm approach to the machine-component grouping problem with multiple objectives. *Computers & Industrial Engineering*, 22(4):469–480, October 1992. †(CA 5613 Vol. 37 No. 7/8; CCA 1291/93) **ga:Narendran92a**.
- [86] Janardan Kulkarni and Hamid R. Parsaei. Information resource matrix for production and intelligent manufacturing using genetic algorithm techniques. *Computers & Industrial Engineering*, 23(1-4):483–485, 1992. (14th Annual Conference on Computers and Industrial Engineering) †(CA 5617 Vol. 37 No. 7/8; P55316 EI M051506/93 ACM/93) **ga:Parsaei92**.
- [87] R. F. Tenga, J. F. Faccenda, and D. G. Rhoads. Use of a genetic algorithm for economic optimization of a manufacturing system. In A. B. Clymer and V. Amico, editors, *Proceedings of the 5th Simulators Conference of the Society for Computer Simulation*, volume (Simulation Series, Vol. 19, No. 4), pages 282–287, Orlando, FL, 18.–21. Apr. 1988. The Society for Computer Simulation International. **ga:Tenga88**.
- [88] Yejin Zhou. *Genetic algorithm with qqualitative knowledge enchancement for layout design under continuous space formulation*. PhD thesis, University of Illinois at Chicago, 1993. †(DAI 54/12) **ga:YZhouThesis**.
- [89] Jean-Michel Renders, Jean-Pierre Nordvik, and Hugues Bersini. Genetic algorithms for process control: A survey. In H. B. Verbruggen and M. G. Rodd, editors, *Artificial Intelligence in Real-Time Control 1992*, volume 17 of *Annual Review in AUtomatic Programming*, pages 579–584, Delft (Netherlands), 16.–18. June 1992 1993. Pergamon Press Ltd., Oxford. †(P59845/94 CCA 53204/94) **ga:Bersini92d**.
- [90] M. Eaton. Process control using genetically trained neural networks. *Journal of Microcomputer Applications*, 16(2):137–145, April 1993. †(CA 5529 Vol. 37 No. 7/8; ACM/93) **ga:Eaton93a**.
- [91] Terence C. Fogarty. Rule-based optimization of combustion in multiple-burner furnaces and boiler plants. *Engineering Applications of Artificial Intelligence*, 1:203–209, 1988. **ga:Fogarty88**.
- [92] John J. Grefenstette. A system for learning control strategies with genetic algorithms. In Schaffer [300], pages 183–190. **ga:Grefenstette89a**.
- [93] Charles L. Karr. An adaptive system for process control using genetic algorithm. In H. B. Verbruggen and M. G. Rodd, editors, *Artificial Intelligence in Real-Time Control 1992*, volume 17 of *Annual Review in Automatic Programming*, pages 585–590, Delft (Netherlands), 16.–18. June 1992 1993. Pergamon Press Ltd., Oxford. †(P59845/94 CCA 46522/94) **ga:Karr92e**.
- [94] Charles R. Karr. Genetic algorithms for modelling, design, and process control. In B. Bhargava, T. Finin, and Y. Yesha, editors, *Proceedings of the Second International Conference on Information and Knowledge Management*, pages 233–238, Washington, DC, 1.–5. November 1993. ACM Press, New York. †(ACM/93) **ga:Karr93i**.
- [95] D. A. Linkens and H. Okola Nyongesa. Real-time acquisition of fuzzy rules using genetic algorithms. In H. B. Verbruggen and M. G. Rodd, editors, *Artificial Intelligence in Real-Time Control 1992*, volume 17 of *Annual Review in AUtomatic Programming*, pages 335–339, Delft (Netherlands), 16.–18. June 1992 1993. Pergamon Press Ltd., Oxford. †(P59845/94 CCA 45639/94) **ga:Linkens92b**.

- [96] Jean-Pierre Nordvik and Jean-Michel Renders. Genetic algorithms and their potential for use in process control: A case study. In Belew and Booker [298], pages 480–486. **ga:Nordvik91**.
- [97] Steven R. Leclair, Hilmi N. Kamhawi, and C. L. Philip Chen. Feature sequencing in the rapid design system using a genetic algorithm. In ?, editor, *Proceedings of the NAMRC XXII Conference*, pages MS94–146/1–6, Evanston, IL, 25.-27. May 1994. SME, Dearborn, MI. †(EI M169978/94) **ga94aLeclair**.
- [98] Jozsef Vancza and András Márkus. Genetic algorithms in process planning. *Computers in Industry*, 17(2-3):181–184, November 1991. †(EI A027360/92) **ga:Markus91b**.
- [99] E. Schöneburg and F. Heinzmann. PERPLEX: Produktionsplanung nach dem Vorbild der Evolution. *Wirtschaftsinformatik*, 34(2):224–232, April 1992. **ga:Heinzmann92a**.
- [100] Philip Husbands. An ecosystems model for integrated production planning. *International Journal on Computer Integrated Manufacturing*, 6(1&2):74–86, 1993. †(Back/bib/unp) **ga:Husbands93a**.
- [101] M. Haupt. Computer-assisted optimization of working points in plastics processing. Technical report, RWTH Aachen, Institut für Kunststoffverarbeitung, 1988. †([6]) **ga:MHaupt88a**.
- [102] C. Blume and W. Jacob. Produktionsplanung und -optimierung durch Simulation, genetische Algorithmen und Parallelisierung. In ?, editor, *Proceedings of the 8th Symposium Simulationstechnik of the AG Simulation in der GI-ASIM*, page ?, Berlin, 28.-30. September 1993. ? †(refereed article) **ga:WJacob93a**.
- [103] Sami Leino. Skedulointiongelma [scheduling and ga]. Number TKO-C53, chapter 8, pages 95–104. 1992. (in Finnish) **GA:Leino92**.
- [104] L. A. Abbott. Comparison of a constraint directed search to a genetic algorithm in a scheduling application. In F. D. Anger, R. V. Rodriguez, and M. Ali, editors, *Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (Proceedings of the 7th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE 94))*, pages 407–412, Austin, TX, May 31.- June 3. 1994. Gordon and Breach Science Publishers, Langhorne. †(P64739/95) **ga94aAbbott**.
- [105] Akeel Al-Attar. A hybrid GA-heuristic search strategy. *AI Expert*, 9(9):34–37, September 1994. **ga94aAl-Attar**.
- [106] Shahid Ali, Sadiq M. Sait, and Muhammed S. T. Benten. GSA: scheduling and allocation using genetic algorithm. In *Proceedings EURO-DAC '94 with EURO-VHDL '94*, pages 84–89, Grenoble (France), 19.-23. September 1994. IEEE, New York. **ga94aAli**.
- [107] B. Andersen. Tuning computer CPU scheduling algorithms using evolutionary programming. In A. V. Sebald and Lawrence J. Fogel, editors, *Proceedings of the Fourth Annual Conference on Evolutionary Programming (EP94)*, page ?, San Diego, CA, 24.-26. February 1994. ? †(conf.prog) **ga94aAndersen**.
- [108] James C. Bean. Genetic algorithms and random keys for sequencing and optimization. *ORSA Journal on Computing*, 6(2):154–160, Spring 1994. †(CCA 60943/94) **ga94aBean**.
- [109] Christian Blume. Planning and optimization of scheduling in industrial production by genetic algorithms and evolutionary strategy. In I. I. Esat, S. W. E. Earles, and A. Ertas, editors, *Proceedings of the 2nd Biennial European Joint Conference on Engineering, Systems Design, and Analysis*, volume 64 No. 5 of *ASME Pet. Div. Publ. PD*, pages 427–433, London (UK), 4.-7. July 1994. ASME, New York. †(EI M181015/94) **ga94aBlume**.
- [110] H. M. Cartwright and A. L. Tuson. Genetic algorithms and flowshop scheduling: towards the development of a real-time process control system. In Terence C. Fogarty, editor, *Evolutionary Computing. Selected Papers of the AISB Workshop*, pages 277–290, Leeds (UK), 11.-14. April 1994. Springer-Verlag, Berlin. †(CCA 12864/95) **ga94aCartwright**.
- [111] Runwei Cheng and Mitsuo Gen. Evolution program for resource constrained project scheduling problem. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [301], pages 736–741. **ga94aCheng**.
- [112] James John Davern. *An architecture for job shop scheduling with genetic algorithms*. PhD thesis, University of Central Florida, 1994. †(DAI Vol. 55 No. 4) **ga94aDavern**.
- [113] Martin Eblenkamp. A genetic algorithm for improved tool supply. In *Proceedings of the Second European Congress on Intelligent Techniques and Soft Computing (EUFIT'94)*, volume 1, pages 182–185, Aachen (Germany), 20.-23. September 1994. ELITE-Foundation. **ga94aEblenkamp**.
- [114] Bogdan Filipič and Alira Srdoč. Task scheduling and resource management in ship repair using a genetic algorithm. In J. Brodda and K. Johansson, editors, *Proceedings of the 8th International Conference on Computer Applications in Shipbuilding*, volume 2, pages 15.17–15.28, Bremen (Germany), 5.-9. September 1994. IFIP. **ga94aFilipic**.
- [115] T. F. Fwa, C. Y. Tan, and W. T. Chan. Road maintenance planning using genetic algorithms. II: Analysis. *Transportation Engineering*, 120(5):710–722, September-October 1994. †(EI M007046/95) **ga94aFwa**.

- [116] Gyoung H. Kim and C. S. George Lee. An evolutionary approach to the job-shop scheduling problem. In *Proceedings of the 1994 IEEE International Conference on Robotics and Automation*, volume 1, pages 501–506, San Diego, CA, 8.-13. May 1994. IEEE Computer Society Press, Los Alamitos, CA. [ga94aGHKim](#).
- [117] Mitsuo Gen, Yasuhiro Tsujimura, and Erika Kubota. Solving job-shop scheduling problem with fuzzy processing time using genetic algorithm. In *Proceedings of the Second European Congress on Intelligent Techniques and Soft Computing (EUFIT'94)*, volume 3, page 1363, Aachen (Germany), 20.-23. September 1994. ELITE-Foundation. [ga94aGen](#).
- [118] Garrison W. Greenwood, Ajay Gupta, and Kelly McSweeney. Scheduling tasks in multiprocessor systems using evolutionary strategies. In *Proceedings of the First IEEE Conference on Evolutionary Computation [294]*, pages 345–349. [ga94aGreenwood](#).
- [119] H. Kim and K. Nara. A method for maintenance scheduling using GA combined with SA. *Computers & Industrial Engineering*, 27(1-4):477–480, September 1994. (Proceedings of the 16th Annual Conference on Computers and Industrial Engineering, Ashikaga (Japan), 7.-9. Mar.) †(CCA 18179/95) [ga94aHKim](#).
- [120] Edwin S. H. Hou, Nirwan Ansari, and Hong Ren. A genetic algorithm for multiprocessor scheduling. *IEEE Transactions on Parallel and Distributed Systems*, 5(2):113–120, February 1994. [ga94aHou](#).
- [121] B. S. Huppe and I. Okutani. Application of genetic algorithm to manpower scheduling problem. *Transactions of the Institute of Electrical Engineers of Japan C*, 114-C(4):450–455, April 1994. (in Japanese) †(CCA 67148/94) [ga94aHuppe](#).
- [122] Philip Husbands. Distributed coevolutionary genetic algorithms for multi-criteria and multi-constraint optimization. In Terence C. Fogarty, editor, *Proceedings of the AISB Workshop on Evolutionary Computation; Selected Papers*, pages 150–165, Leeds (UK), 11.-13. April 1994. Springer-Verlag, Berlin. †(CCA 11913/95) [ga94aHusbands](#).
- [123] James P. Ignizio and Cavalier. ? In James P. Ignizio and Cavalier, editors, *Linear Programming*, pages 480–486. Prentice-Hall, New York, 1994. †(News/Ignizio) [ga94aIgnizio](#).
- [124] T. Iwata. Scheduling method using genetic algorithm for multipurpose batch plant operation. *Mitsui Zosen Tech. Rev. (Japan)*, (152):11–17, June 1994. (in Japanese) †(CCA 78399/94) [ga94aIwata](#).
- [125] Leon V. Jorge, Wu S. David, and Robert H. Storer. Robustness measures and robust scheduling for job shops. *IIE Trans.*, 26(5):32–43, September 1994. †(EI M030938/95) [ga94aJorge](#).
- [126] Michelle D. Kidwell and Diane J. Cook. Genetic algorithm for dynamic task scheduling. In *Proceedings of the 1994 IEEE 13th Annual International Phoenix Conference on Computers and Communications*, pages 61–67, Phoenix, AZ, 12.-15. April 1994. IEEE, New York. [ga94aKidwell](#).
- [127] Thomas D. Logan. An electronic card production line loading program - an evolutionary algorithm implementation. In *Proceedings of the First IEEE Conference on Evolutionary Computation [294]*, pages 206–210. [ga94aLogan](#).
- [128] D. C. Mattfeld, H. Kopfer, and Christian Bierwirth. Control of parallel population dynamics by social-like behavior of GA-individuals. In Yuval Davidor, Hans-Paul Schwefel, and Reinhard Manner, editors, *Parallel Problem Solving from Nature – PPSN III*, volume 866 of *Lecture Notes in Computer Science*, pages 16–25, Jerusalem (Israel), 9.-14. October 1994. Springer-Verlag, Berlin. †(CCA 36478/95) [ga94aMattfeld](#).
- [129] C. McCulley and C. L. Bloebaum. Optimal sequencing for complex engineering systems using genetic algorithms. In *A Collection of Papers, 5th AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization*, volume 1, pages 718–730, Panama City, FL, 7.-9. September 1994. American Institute of Aeronautics and Astronautics (AIAA). [ga94aMcCulley](#).
- [130] Masaharu Munetomo, Yoshiaki Takai, and Yoshiharu Sato. A genetic approach to dynamic load balancing in a distributed computing system. In *Proceedings of the First IEEE Conference on Evolutionary Computation [294]*, pages 418–421. [ga94aMunetomo](#).
- [131] Tadahiko Murata and Hisao Ishibuchi. Performance evaluation of genetic algorithms for flowshop scheduling problems. In *Proceedings of the First IEEE Conference on Evolutionary Computation [301]*, pages 812–817. [ga94aMurata](#).
- [132] Anna-Lena Nordström and Suleyman Tufekci. A genetic algorithm for the talent scheduling problem. *Computers & Operations Research*, 21(8):927–940, October 1994. [ga94aNordstrom](#).
- [133] Carlos Alberto Gonzalez Pico and Roger L. Wainwright. Dynamic scheduling of computer tasks using genetic algorithms. In *Proceedings of the First IEEE Conference on Evolutionary Computation [301]*, pages 829–833. [ga94aPico](#).
- [134] Alexandru Seibulescu. Instruction scheduling on multiprocessors using a genetic algorithm. page ?, Stanford, CA, Fall 1994. Stanford Bookstore. †(conf.prog) [ga94aSeibulescu](#).

- [135] Chang-Yun Shen, Yoh-Han Pao, and Percy P. C. Yip. Scheduling multiple job problems with guided evolutionary simulated annealing approach. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [301], pages 702–706. [ga94aShen](#).
- [136] Sinchai Sittisathanchai. *Genetic-neuro scheduler*. PhD thesis, University of Missouri - Rolla, 1994. †(DAI Vol. 55 No. 2) [ga94aSittisathanchai](#).
- [137] J. Sridhar and C. Rajendran. A genetic algorithm for family and job scheduling in a flowline-based manufacturing cell. *Computers & Industrial Engineering*, 27(1-4):469–472, September 1994. (Proceedings of the 16th Annual Conference on Computers and Industrial Engineering, Ashikaga (Japan), 7.-9. Mar.) †(CCA 12778/95) [ga94aSridhar](#).
- [138] T. Sutoh, H. Suzuki, and N. Nagai. Large-scale generator maintenance scheduling using simulated evolution. In ?, editor, *Proceedings of the International Conference on Intelligent System Application to Power Systems*, page ?, Montpellier (France), 5.-9. September 1994. ? †(prog.) [ga94aSutoh](#).
- [139] J. Tuoma, Nobuo Sannomiya, and S. Kawai. Genetic algorithm approach to an operation assignment problem. *Trans. Inst. Syst. Control Inf. Eng. (Japan)*, 7(10):443–445, October 1994. (in Japanese) †(EEA 222/95) [ga94aTuoma](#).
- [140] W. T. Chan, T. F. Fwa, and C. Y. Tan. Road maintenance planning using genetic algorithms. I: Formulation. *Transportation Engineering*, 120(5):693–709, September-October 1994. †(EI M007045/95) [ga94aWTChan](#).
- [141] Ted Wright. *A genetic algorithm approach to scheduling resources for a space power system*. PhD thesis, Case Western Reserve University, 1994. †(DAI Vol. 55 No. 4) [ga94aWright](#).
- [142] X. Cai and Lee Ka-Wai. A genetic algorithm for flow shop scheduling with travel times between machines. In *Proceedings of the Second European Congress on Intelligent Techniques and Soft Computing (EUFIT'94)*, volume 1, pages 186–188, Aachen (Germany), 20.-23. September 1994. ELITE-Foundation. [ga94aXCai](#).
- [143] M. Yagiura and T. Ibaraki. On genetic crossover operators for sequencing problems. *Transactions of the Institute of Electrical Engineers of Japan C*, 114-C(6):713–720, June 1994. (in Japanese) †(CCA 999/95) [ga94aYagiura](#).
- [144] Sencer Yeralan and Chen-Sin Lin. Genetic search with dynamic operating disciplines. *Computers & Operations Research*, 21(8):941–954, October 1994. [ga94aYeralan](#).
- [145] Joseph P. Baumgartner and Diane J. Cook. A genetic algorithm for load balancing in parallel computers. In F. D. Anger, R. V. Rodriguez, and M. Ali, editors, *Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (Proceedings of the 7th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE 94))*, pages 619–628, Austin, TX, May 31.- June 3. 1994. Gordon and Breach Science Publishers, Langhorne. †(P64739/95) [ga94bBaumgartner](#).
- [146] Theron Randy Fennel, A. J. Underbrink, Jr., and George P. W. Williams, Jr. Scheduling with genetic algorithms. In ?, editor, *Proceedings of the Third International Conference on Artificial Intelligence, Robotics, and Automation for Space*, pages 435–438, ?, October 1994. JPL. †(N95-23762) [ga94bFennel](#).
- [147] Mitsuo Gen, Yasuhiro Tsujimura, and Erika Kubota. Solving job-shop scheduling problem with fuzzy processing time using genetic algorithm. In *Proceedings of the Second European Congress on Intelligent Techniques and Soft Computing (EUFIT'94)*, volume 3, pages 1540–1547, Aachen (Germany), 20.-23. September 1994. ELITE-Foundation. [ga94bGen](#).
- [148] V. Gorrini and Marco Dorigo. An application of evolutionary algorithms to the scheduling of robotic operations. Technical Report IRIDIA/94-24, Université Libre de Bruxelles, 1994. †(Bersini) [ga94bGorrini](#).
- [149] Mitsuo Gen, Yasuhiro Tsujimura, and Erika Kubota. Solving job-shop scheduling problem using genetic algorithm. In *Proceedings of the 16th International Conference on Computers and Industrial Engineering*, pages 576–579, ?(Japan), ? 1994. ? †([147]) [ga94cGen](#).
- [150] F. Seredynski. Dynamic mapping and load balancing with parallel genetic algorithms. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [301], pages 834–839. [ga94cSeredynski](#).
- [151] Mitsuo Gen, Yasuhiro Tsujimura, and Erika Kubota. Genetic algorithm for multiprocessor scheduling problems. In *Proceedings of the 10th Fuzzy System Symposium*, pages 43–46, ?(Japan), ? 1994. ? (in Japanese) †([147]) [ga94dGen](#).
- [152] Chuen-Lung Chen, Venkateswara S. Vempati, and Nasser Aljaber. An application of genetic algorithms for flow shop problem. *European Journal of Operations Research*, 80(2):389–396, January 1995. [ga95aCLChen](#).
- [153] Chae Y. Lee and Jae Young Choi. A genetic algorithm for job sequencing problems with distinct due and general early-tardy penalty weights. *Computers & Operations Research*, 22(8):857–869, September 1995. [ga95aCYLee](#).

- [154] Zhang Changshui and Yan Pingfan. A genetic algorithm of solving job-shop scheduling problem. *Chin. J. Electron. (China)*, 4(1):48–52, January 1995. †(CCA 12831/95) **ga95aChangshui**.
- [155] Mark Clarkson. Moody's evolving help desk. *Byte*, 20(2):4pp, February 1995. †(EI M072224/94) **ga95aClarkson**.
- [156] Joanna Józefowska, Rafał Różycki, and J. Weglarz. A genetic algorithm to some discrete-continuous scheduling problems. In ? [302], pages 273–276. **ga95aJozefowska**.
- [157] C. H. M. van Kemenade, C. F. W. Hendriks, and Joost N. Kok. Evolutionary computation in air traffic control planning. In Smith [295], page ? †(prog) **ga95aKemenade**.
- [158] Shigenobu Kobayashi, Isao Ono, and Masayuki Yamamura. An efficient genetic algorithm for job shop scheduling problems. In Smith [295], page ? †(prog) **ga95aKobayashi**.
- [159] Chrisila C. Pettey, Thomas D. Wagner, and Lawrence W. Dowdy. Using GAs to characterize workloads. In Smith [295], page ? †(prog) **ga95aPettey**.
- [160] Paul A. Rubin and Gary L. Ragatz. Scheduling in a sequence dependent setup environment with genetic search. *Computers & Operations Research*, 22(1):85–100, 1995. †(TKK/paa) **ga95aRubin**.
- [161] Nicoletta Sangalli, Quirico Semeraro, and Tullio Tolio. Performance of genetic algorithms in the solution of permutation flowshop problems. In ? [302], pages 495–498. **ga95aSangalli**.
- [162] Markus Schwehm. Optimierung der Partitionierung und Kanban-Zuordnung bei JIT-Fertigungsstraßen. In Jochen Kuhl and Volker Nissen, editors, *Evolutionäre Algorithmen in Management-Anwendungen*, pages 11–20, Göttingen (Germany), 23. February 1995. Georg-August-Universität Göttingen. (in Germany) **ga95aSchwehm**.
- [163] E. Stefanitsis, N. Christodoulou, and J. Psarras. Combination of genetic algorithms and clp in the vehicle-fleet scheduling problem. In ? [302], pages 22–25. **ga95aStefanitsis**.
- [164] Anthony Wren and David O. Wren. A genetic algorithm for public transport driver scheduling. *Computers & Operations Research*, 22(1):101–110, 1995. †(TKK/paa) **ga95aWren**.
- [165] Andrew J. Mason. *Genetic Algorithms and Job Scheduling*. PhD thesis, University of Cambridge, Department of Engineering, 1992. †(Fogel/bib) **ga:AJMasonThesis**.
- [166] Luis Rabelo, Yuehwen Yih, Albert Jones, and Jay-Shinn Tsai. Intelligent scheduling for flexible manufacturing systems. In *Proceedings of the 1993 IEEE International Conference on Robotics and Automation*, volume 3, pages 810–815, Atlanta, GA, 2.-6. May 1993. IEEE Computer Society Press, Los Alamitos, CA. †(EI 128322/93) **ga:AJones93a**.
- [167] David Abramson, Graham Mills, and Sonya Perkins. Parallelisation of a genetic algorithm for the computation of efficient train schedules. In D. Arnold, R. Christie, J. Day, and P. Roe, editors, *Parallel Computing and Transputers*, volume 37 of *Transputer and Occam Engineering Series*, pages 139–149, Brisbane (Australia), 3.-4. November 1993. IOS Press. (available via anonymous ftp cite ftp.cit.gu.edu.au directory pub/D.Abramson file Trains.ps.Z) **ga:Abramson93a**.
- [168] J. Abela, David Abramson, M. Krishnamoorthy, A. De Silva, and Graham Mills. Computing optimal schedules for landing aircraft. In ?, editor, *Proceedings of the 12th National Conference of the Australian Society for Operations Research*, page ?, Adelaide (Australia), 7.-9. July 1993. ? (available via anonymous ftp cite ftp.cit.gu.edu.au directory pub/D.Abramson file GAaircraft.ps.Z) **ga:Abramson93b**.
- [169] T. Chockalingam and S. Arunkumar. A randomized heuristics for the mapping problem: The genetic approach. *Parallel Computing*, 18(10):1157–1165, 1992. **ga:Arunkumar92**.
- [170] Laurent Atlan, Jérôme Bonnet, and Martine Naillon. Learning distributed reactive strategies by genetic programming for the general job shop problem. In ?, editor, *Proceedings of the Seventh Annual Florida Artificial Intelligence Research Symposium*, page ?, ?, ? 1993. ? (to be published; available via anonymous ftp cite ftp.ens.fr directory /pub/reports/biologie file disgajsp.ps.Z) **ga:Atlan93b**.
- [171] Fam Quang Bac and V. L. Perov. New evolutionary genetic algorithms for NP-complete combinatorial optimization problems. *Biological Cybernetics*, 69(3):229–234, 1993. **ga:Bac93a**.
- [172] Sugato Bagchi, Serdar Uckun, Yutaka Miyabe, and Kazuhiko Kawamura. Exploring problem-specific recombination operators for job shop scheduling. In Belew and Booker [298], pages 10–17. **ga:Bagchi91**.
- [173] Serdar Uckun, Sugato Bagchi, Kazuhiko Kawamura, and Yutaka Miyabe. Managing genetic search in job shop scheduling. *IEEE Expert*, 8(5):15–24, October 1993. **ga:Bagchi93a**.
- [174] James C. Bean and B. A. Norman. Random keys for job shop scheduling. Technical Report TR No. 93-7, University of Michigan, Ann Arbor, Department of Industrial and Operations Engineering, 1993. †(Back/bib/unpub) **ga:Bean93a**.

- [175] Steven J. Beaty. Genetic algorithms and instruction scheduling. In Y. K. Malaiya, editor, *Proceedings of the 24th Annual International Symposium (MICRO'24)*, pages 206–211, Albuquerque, NM, 18.-20. November 1991. ACM Press, New York. †(ACM/91 CCA 19617/93) **ga:Beaty91a**.
- [176] Steven J. Beaty. Genetic algorithms versus tabu search for instruction scheduling. In Albrecht et al. [303], pages 496–501. **ga:Beaty93a**.
- [177] Steven J. Beaty. *Instruction scheduling using genetic algorithms*. PhD thesis, Colorado State University, Fort Collins, CO, 1991. † **ga:BeatyThesis**.
- [178] John E. Biegel and James John Davern. Genetic algorithms and job shop scheduling. *Computers & Industrial Engineering*, 19(1-4):81–91, March 1990. (Proceedings of the 12th Annual Conference on Computers and Industrial Engineering, Orlando, FL, 12.-14. March)* **ga:Biegel90**.
- [179] S. Stöppler and Christian Bierwirth. The application of parallel genetic algorithm to the n/m7P/Cmax flowshop problem. In G. Fandl, Th. Gulledge, and A. Jones, editors, *New Directions for Operations Research in Manufacturing*, pages 161–175. Springer-Verlag, Berlin, 1992. †(Bierwirth) **ga:Bierwirth92a**.
- [180] Christian Bierwirth. *Flowshop Scheduling mit Parallelen Genetischen Algorithmen – Eine problemorientierten Analyse genetischer Suchstrategien*. PhD thesis, Universität der Bremen, 1993. †(Bierwirth) **ga:BierwirthThesis**.
- [181] Ralf Bruns. Incorporating of a knowledge-based scheduling system into a genetic algorithm. In Winfried Göke, Hermann Rininsland, and Max Syrbe, editors, *Information als Produktionsfaktor, Proceedings of the 22. GI-Jahrestagung*, pages 547–553, Karlsruhe, 28. September- 2. October 1992. Springer-Verlag, Berlin. **ga:Bruns92a**.
- [182] Ralf Bruns. Direct chromosome representation and advanced genetic operators for production scheduling. In Forrest [293], pages 352–359. **ga:Bruns93a**.
- [183] Ralf Bruns. Knowledge-augmented genetic algorithm for production scheduling. In *IJCAI-93 Workshop on Knowledge-Based Production Planning, Scheduling, and Control*, pages 49–58, Chambéry (France), 29. August 1993. AAAI. **ga:Bruns93b**.
- [184] Carlos Gonzalez. Dynamic scheduling of computer tasks using genetic algorithms. Master's thesis, University of Tulsa, Tulsa, OK, 1993. †(Wainwright) **ga:CGonzalezMSThesis**.
- [185] Hugh M. Cartwright and Gregory F. Mott. Looking around: Using clues from the data space to guide genetic algorithm search. In Belew and Booker [298], pages 108–114. **ga:Cartwright91**.
- [186] Kevin Richard Caskey. *Genetic algorithms and neural networks applied to manufacturing scheduling*. PhD thesis, University of Washington, 1993. †(DAI V. 54 N. 8 (Feb 94)) **ga:CaskeyThesis**.
- [187] Gary A. Cleveland and Stephen F. Smith. Using genetic algorithms to schedule flow shop releases. In Schaffer [300], pages 160–169. **ga:Cleveland89**.
- [188] L. J. M. Cluitmans. Using genetic algorithms for scheduling data flow graphs. Technical Report EUT Report 92-E-266, Eindhoven University of Technology, 1992. †(EEA 14194/93 [304]) **ga:Cluitmans92**.
- [189] Daniel Costa. An evolutionary tabu search algorithm and the NHL scheduling problem. Technical Report ORWP 92/11, Ecole Polytechnique Fédérale de Lausanne, Département de Mathématiques, Chaire de Recherche Opérationnelle, 1992. **ga:Costa92**.
- [190] Paula S. Gabbert, Donald E. Brown, Christopher L. Huntley, Bernard P. Markowicz, and David E. Sappington. A system for learning routes and schedules with genetic algorithm. In Belew and Booker [298], pages 422–429. **ga:DEBrown91a**.
- [191] C. Dagli and Sinchai Sittisathanchai. Genetic neuro-scheduler for job shop scheduling. *Computers & Industrial Engineering*, 25(1-4):267–270, 1993. †(CCA 6856/94) **ga:Dagli93a**.
- [192] Lawrence Davis. Job shop scheduling with genetic algorithms. In Grefenstette [296], pages 136–140. **ga:Davis85**.
- [193] Lawrence Davis. Scheduling the 1992 Paralympic games with a genetic algorithm. *Advanced Technology for Developers*, 2(?):8–11, January 1993. **ga:Davis93d**.
- [194] Fred F. Easton and Nashat Mansour. A distributed genetic algorithm for employee staffing and scheduling problems. In Forrest [293], pages 360–367. **ga:Easton93a**.
- [195] Emanuel Falkenauer and S. Bouffouix. A genetic algorithm for job shop. In *Proceedings of the 1991 IEEE International Conference on Robotics and Automaton*, volume 1, pages 824–829, Sacramento, CA, 9.-11. April 1991. IEEE Computer Society Press, Los Alamitos, CA. †(EI A119336/92) **ga:Falkenauer91a**.
- [196] Dave Corne, Hsiao-Lan Fang, and C. Mellish. Solving the module exam scheduling problem with genetic algorithms. In P. W. H. Chung, G. Lovegrove, and M. Ali, editors, *Proceedings of the Sixth International Conference in Industrial and Engineering Applications of Artificial Intelligence and Expert Systems*, pages 370–373, Edinburgh, Scotland, 1.-4. June 1993. Gordon and Breach Science, Langhorne. †(P62941/95) **ga:Fang93a**.

- [197] Hsiao-Lan Fang. Investigating GAs for scheduling. Master's thesis, University of Edinburgh, Department of Artificial Intelligence, 1992. †(GA FAQ) **ga:FangMSThesis**.
- [198] Bogdan Filipič. Enhancing genetic search to schedule a production unit. In Bernd Neumann, editor, *ECAI 92 10th European Conference on Artificial Intelligence*, pages 603–607, Vienna (Austria), 3.-7. August 1992. John Wiley & Sons. **ga:Filipic92a**.
- [199] Bogdan Filipič. Enhancing genetic search to schedule a production unit. In *Scheduling of Production Processes*, pages 61–69. Ellis Horwood, Chichester (England), 1993. †(ACM/93) **ga:Filipic93c**.
- [200] Nashat Mansour and Geoffrey C. Fox. A hybrid genetic algorithm for task allocation in multicomputers. In Belew and Booker [298], pages 466–473. **ga:Fox91a**.
- [201] Mitsuo Gen, Yasuhiro Tsujimura, Erika Kubota, and I. Chang. A genetic algorithm for flow shop problem. In ?, editor, *Proceedings of the JIMA Fall Meeting*, pages 43–44, ?, ? 1993. ? (in Japanese) †([147]) **ga:Gen93a**.
- [202] Xiaodong Yin and Noël Gerday. Investigations on solving the load flow problem by genetic algorithms. *Electric Power Systems Research*, 22(3):151–163, December 1991. **ga:Gerday91a**.
- [203] N. Wehn, M. Held, and M. Glesner. A novel scheduling/allocation approach for datapath synthesis based on genetic algorithms. In *Proceedings of the IFIP TC10/WG10.5 Workshop on Logic and Architecture Synthesis*, pages 47–56, Paris, 30. May - . June 1990. North-Holland, Amsterdam. †(EEA 35656/92) **ga:Glesner90**.
- [204] Frédéric C. Gruau. Genetic synthesis of modular neural networks. In Forrest [293], pages 318–325. **ga:Gruau93a**.
- [205] H. Mitra and P. Ramanathan. A genetic approach for scheduling non-preemptive tasks with precedence and deadline constraints. In Trevor N. Mudge, Veljko Milutionovic, and Lawrence Hunter, editors, *Proceedings of the 26th Hawaii International Conference on Systems Science (HICSS-26)*, volume 1, pages 556–564, Wailea, HI, 5.-8. January 1993. IEEE Computer Society press, Los Alamitos, CA. †(CCA 24784/94) **ga:HMitra93a**.
- [206] Clyde W. Holsapple, Varghese S. Jacob, Ramakrishnan Pakath, and Jigish S. Zaveri. A genetic-based hybrid scheduler for generating static schedules in flexible manufacturing contexts. *IEEE Transactions on Systems, Man, and Cybernetics*, 23(4):953–972, 1993. **ga:Holsapple93a**.
- [207] Edwin S. H. Hou, R. Hong, and Nirwan Ansari. Efficient multiprocessor scheduling based on genetic algorithms. In *Proceedings of the 16th Annual Conference of IEEE Industrial Electronic Society (IECON'90)*, volume II, pages 1239–1243, Pacific Grove, 27.-30. Nov. 1990. IEEE. **ga:Hou90**.
- [208] Edwin S. H. Hou and H. Y. Li. Task scheduling for flexible manufacturing systems based on genetic algorithms. In *Proceedings of the 1991 IEEE International Conference on Systems, Man and Cybernetics*, pages 397–402, Charlottesville, VA, 13.-16. October 1991. IEEE, New York. †(Fogel/bib) **ga:Hou91a**.
- [209] S. Hurley. Taskgraph mapping using a genetic algorithm: a comparison of fitness functions. *Parallel Computing*, 19(11):1313–1217, November 1993. †(CA 1613 Vol. 38 No. 3/4) **ga:Hurley93a**.
- [210] Hitoshi Iima and Nobuo Sannomiya. Genetic algorithm approach to a production ordering problem. *Transactions of the Society of Instrument and Control Engineers (Japan)*, 28(11):1337–1344, November 1992. (in Japanese) †(CCA 19960/93) **ga:Iima92**.
- [211] Hitoshi Iima and Nobuo Sannomiya. A solution of modified flowshop scheduling problem by using genetic algorithm. *Transaction of Systems, Control and Information*, 6(10):437–445, October 1993. (in Japanese) †(CCA 10541/93 news/Ylinen) **ga:Iima93a**.
- [212] T. Fukuda, K. Mori, and M. Tsukiyama. Immune networks using genetic algorithm for adaptive production scheduling. In G. C. Goodwin and R. J. Evans, editors, *Automatic Control – World Congress 1993*, volume 4, pages 353–356, Sydney (Australia), 18.-23. July 1993. Pergamon Press ltd, London. †(P64070/95) **ga:KMori93b**.
- [213] Nagesh Kadaba and Kendall E. Nygard. Improving the performance of genetic algorithms in automated discovery of parameters. In Bruce Porter and Raymond Mooney, editors, *Machine Learning: Proceedings of the Seventh International Conference*, pages 140–148, University of Texas, 21. - 23. June 1990. Morgan Kaufmann Publishers, Inc. **ga:Kadaba90**.
- [214] John J. Kanet and V. Sridharan. PROGENITOR: A genetic algorithm for production scheduling. *Wirtschaftsinformatik*, 33(4):332–336, August 1991. **ga:Kanet91**.
- [215] John J. Kanet and V. Sridharan. PROGENITOR: A genetic algorithm for production scheduling (reply). *Wirtschaftsinformatik*, 34(2):256, April 1992. **ga:Kanet92**.
- [216] Michelle D. Kidwell. Using genetic algorithms to schedule distributed tasks on a bus-based system. In Forrest [293], pages 368–374. **ga:Kidwell93a**.

- [217] Michelle D. Kidwell. A parallel genetic algorithm for functional task distribution. In ?, editor, *Proceedings of the Federation of North Texas Universities Computer Science Conference*, page ?, ?, ? 1993. ? †([126]) **ga:Kidwell93b**.
- [218] H. Kopfer. PROGENITOR - a genetic algorithm for production scheduling (comments). *Wirtschaftsinformatik*, 34(2):255–256, April 1992. **ga:Kopfer92b**.
- [219] Mahesh C. Gupta, Yash P. Gupta, and Anup Kumar. Genetic algorithms application in a machine scheduling problem. In Stan C. Kwasny and John F. Buck, editors, *Proceedings of the 21st Annual ACM Computer Science Conference*, pages 372–377, Indianapolis, IN, 16.-18. February 1993. ACM, New York. †(EI M083458/94 ACM/93) **ga:Kumar93b**.
- [220] George Lawton. Genetic algorithms for schedule optimization. *AI Expert*, 7(5):23–27, May 1992. **ga:Lawton92**.
- [221] M. R. Hilliard, Gunar E. Liepins, Mark R. Palmer, Michael Morrow, and Jon T. Richardson. A classifier based system for discovering scheduling heuristics. pages 231–235, MIT, Cambridge, MA, 28. - 31. July 1987. Lawrence Erlbaum Associates: Hillsdale, New Jersey. **ga:Liepins87b**.
- [222] M. R. Hilliard, Gunar E. Liepins, and Mark R. Palmer. The computer as a partner in algorithmic design: Automated discovery of parameters for a multiobjective scheduling heuristic. In *Proceedings of the Impact of Recent Computer Advances on Operations Research*, pages 321–331, ?, ? 1988. ? † **ga:Liepins88a**.
- [223] M. R. Hilliard, Gunar E. Liepins, and Mark R. Palmer. Machine learning applications to job shop scheduling. In M. Ali, editor, *Proceedings: The First International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems (IEA/AIE-88)*, pages 728–737, University of Tennessee, Space Institute, Tullahoma, TN, 1.-3. June 1988. ACM, New York. † **ga:Liepins88b**.
- [224] M. R. Hilliard, Gunar E. Liepins, G. Rangarajan, and Mark R. Palmer. Learning decision rules for scheduling problems. In *Proceedings of the Sixth International Workshop on Machine Learning*, pages 188–200, Cornell University, Ithaca, NY, June 1989. Morgan Kaufman, San Mateo, CA. † **ga:Liepins89b**.
- [225] Mahesh C. Gupta, Yash P. Gupta, and Anup Kumar. Minimizing flow time variance in a single machine system using genetic algorithm. *European Journal of Operations Research*, 70(3):289–303, November 1993. **ga:McGupta93a**.
- [226] Dipankar Dasgupta and Douglas R. McGregor. Short term unit-commitment using genetic algorithms. In *Proceedings, Fifth International Conference on Tools with Artificial Intelligence TAI'93*, pages 240–247, Boston, MA, 8.-11. November 1993. IEEE Computer Society Press, Los Alamitos, CA. also as [227] **ga:McGregor93c**.
- [227] Dipankar Dasgupta and Douglas R. McGregor. Short term unit-commitment using genetic algorithms. Technical Report IKBS-16-93, University of Strathclyde, Department of Computer Science, Galsgow, 1993. (a version of [226]; available via anonymous ftp cite reports-ftp.cs.strath.ac.uk directory /researchreports file ikbs-16-93.ps.Z) **ga:McGregor93cc**.
- [228] Philip Husbands, Frank Mill, and S. Warrington. Genetic algorithms, production plan optimization, and scheduling. volume 496 of *Lecture Notes in Computer Science*, pages 80–84, Dortmund (Germany), 1.-3. October 1991. Springer-Verlag, Berlin. **ga:Mill90**.
- [229] Philip Husbands and Frank Mill. Simulated co-evolution as the mechanism for emergent planning and scheduling. In Belew and Booker [298], pages 264–270. **ga:Mill91**.
- [230] H. Mulkens. Revisiting the Johnson algorithm for flowshop scheduling with genetic algorithms. In E. Ezelke and R. M. Kerr, editors, *Knowledge-Based Reactive Scheduling*, volume 15 of *IFIP Transactions B - Applications in Technology*, pages 69–80, Athens (Greece), 1. October 1993. Elsevier Science Publ. B. V., Amsterdam. †(P60647/94 EI M163631/94) **ga:Mulkens93a**.
- [231] Ryohei Nakano. Conventional genetic algorithm for job shop problems. In Belew and Booker [298], pages 474–479. **ga:Nakano91**.
- [232] Takeshi Yamada and Ryohei Nakano. A genetic algorithm applicable to large-scale job-shop problems. In Männer and Manderick [305], pages 281–290. **ga:Nakano92a**.
- [233] Hsiao-Lan Fang, Peter Ross, and Dave Corne. A promising genetic algorithm approach to job-shop scheduling, re-scheduling and open-shop scheduling problems. In Forrest [293], pages 375–382. **ga:PRoss93a**.
- [234] Jan Paredis. Exploiting constraints as background knowledge for genetic algorithms - a case-study for scheduling. In Männer and Manderick [305], pages 229–238. † **ga:Paredis92a**.
- [235] Jan Paredis. Genetic state-space search for constrained optimization problems. In *IJCAI-93 Proceedings of the Thirteenth International Joint Conference on Artificial Intelligence*, volume 2, pages 967–972, Chambéry (France), 28. August - 3. September 1993. Morgan Kaufmann Publishers, Inc., San Mateo, CA. **ga:Paredis93a**.

- [236] Ulrich Dorndorf and Erwin Pesch. Evolution based learning in a job shop scheduling environment. Technical Report RM 92-019, Limburg University, Faculty of Economics, 1992. `ga:Pesch92a`.
- [237] C. Muller, E. H. Magill, P. Prosser, and D. G. Smith. Distributed genetic algorithms for resource allocation. In *Scheduling of Production Processes*, pages 70–78. Ellis Horwood, Chichester (England), 1993. †(ACM/93) `ga:Prosser93a`.
- [238] Colin R. Reeves. Recent algorithmic developments applied to scheduling problems. In *Proceedings of the 9th IASTED Symposium on Applied Informatics*, pages 155–158, Innsbruck (Austria), 18.-21. February 1991. ACTA Press, Anaheim, CA. † `ga:Reeves91b`.
- [239] Colin R. Reeves. A genetic algorithm approach to stochastic flowshop sequencing. volume Digest No. 1992/106, pages 131–134, London, 8. May 1992. IEE, London. † `ga:Reeves92a`.
- [240] Steven F. Roth and Stephen F. Smith. Intelligent support for human computer interaction and decision-making in distribution planning and scheduling systems. Final report ARO-29354.3-MA, Carnegie-Mellon University, 1993. †(N93-30124) `ga:SFSmith93a`.
- [241] Stephen P. Smith. An experimenta on using genetic algorithms to learn scheduling heuristics. In Gautam Biswas, editor, *Applications of Artificial Intelligence X: Knowledge-Based Systems*, volume SPIE-1707, pages 378–386, Orlando, FL, 22. - 24. April 1992. The International Society for Optical Engineering. `ga:SPSmith92`.
- [242] M. Sakawa, J. Utaka, M. Inuiguchi, I. Shiromaru, N. Suginoara, and T. Inoue. Hot parts operating schedule of gas turbines by genetic algorithms and fuzzy satisficing methods. In IJCNN'93 [299], pages 746–749. `ga:Sakawa93a`.
- [243] M. Sakawa et al. Hot parts operating schedule by genetic algorithms and fuzzy modeling. In ?, editor, *Proceedings of the 9th Fuzzy System Symposium*, page ?, Sapporo (Japan), May 1993. ? (in Japanese) †(Achilles/Fuzzy-Scheduling) `ga:Sakawa93b`.
- [244] J. W. Schulte and B.-D. Becker. Production scheduling using genetic algorithms. In *Selected Papers from the 7th IFAC/IFIP/IFORS/IMACS/ISPE Symposium*, pages 367–372, Toronto (Canada), 25.-28. May 1992 1993. Pergaman, Oxford. †(CCA 10553/93) `ga:Schulte93a`.
- [245] In Lee, Riyaz Sikora, and Michael J. Shaw. Joint lot sizing and sequencing with genetic algorithms for scheduling: evolving the chromosome structure. In Forrest [293], pages 383–389. `ga:Sikora93a`.
- [246] J. L. Sponsler. Genetic algorithms applied to the scheduling of the Hubble space telescope. In J. Rash, editor, *1989 Goddard Conference on Space Applications of Artificial Intelligence*, volume NASA Conference Publications, 3033, pages 391–, Greenbelt, MD, 16.-17. May 1989. NASA. †(P42743) `ga:Sponsler89a`.
- [247] J. L. Sponsler. Genetic algorithms applied to the scheduling of the Hubble space telescope. *Telematics and Informatics*, 6(3-4):181–190, 1989. † `ga:Sponsler89b`.
- [248] Timothy John Starkweather. *Optimization of sequencing problems using genetic algorithms*. PhD thesis, Colorado State University, 1993. †(DAI Dec. 93) `ga:StarkweatherThesis`.
- [249] Gilbert Syswerda and D. Gerys. Knowledge-based genetic search in schedule optimization. In *Proceedings of the Fourth International Conference: Expert Systems in Production and Operations Management*, pages 125–133, ?, ? 1990. ? † `ga:Syswerda90`.
- [250] Gilbert Syswerda and Jeff Palmucci. The application of genetic algorithms to resource scheduling. In Belew and Booker [298], pages 502–508. `ga:Syswerda91a`.
- [251] Gilbert Syswerda. Schedule optimization using genetic algorithms. In Davis [306], chapter 21, pages 332–349. `ga:Syswerda91b`.
- [252] Tai A. Ly and Jack T. Mowchenko. Applying simulated evolution to high level synthesis. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 12(3):389–409, March 1993. `ga:TALy93a`.
- [253] Traian Muntean and El-Ghazali Talbi. Méthodes de placement statique des processus sur architectures parallèles. *Technique et Science Informatique TSI*, 10(5):355–373, November 1991. (available via anonymous ftp cite `imag.fr` directory /pub/SYMPA file `talbi.TSI91.f.ps.Z`) `ga:Talbi91d`.
- [254] El-Ghazali Talbi. Etude expérimentale d'algorithmes de placement de processus. *Lettre du Transputer et des Calculateurs Distribués*, 15(?):7–26, September 1992. (in French; available via anonymous ftp cite `imag.fr` directory /pub/SYMPA file `talbi.LT92.e.ps.Z`) `ga:Talbi92b`.
- [255] Yoshikazu Nishikawa and Hisashi Tamaki. A neighborhood model of the genetic algorithm and its application to the jobshop scheduling. In *Proceedings of the 34th Japan Joint Automatic Control Conference*, pages 345–346, ?, ? 1991. ? † `ga:Tamaki91a`.
- [256] Yoshikazu Nishikawa and Hisashi Tamaki. A genetic algorithm as applied to the jobshop scheduling. *Transactions of the Society of Instrument and Control Engineers (Japan)*, 27(5):593–599, May 1991. (in Japanese) †(Fogel/bib) `ga:Tamaki91b`.

- [257] Hisashi Tamaki and Yoshikawa Nishikawa. A parallel genetic algorithm based on a neighborhood model and its application to the jobshop scheduling. In Männer and Manderick [305], pages 573–582. † **ga:Tamaki92a**.
- [258] Hisashi Tamaki, Yoshishige Hasegawa, Junji Kozasa, and Miyuhiko Araki. Application of search methods to scheduling problem in plastics forming plant: A binary representation approach. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, volume 4, pages 3845–3850, San Antonio, TX, 15.-17. December 1993. IEEE. †(EI M086345/94) **ga:Tamaki93b**.
- [259] Kojima Morikawa, Takeshi Furuhashi, and Yoshiaki Uchikawa. Single populated genetic algorithm and its application to jobshop scheduling. In *Proceedings of the 1992 International Conference on Industrial Electronics, Control, and Instrumentation*, volume 2, pages 1014–1018, San Diego, 9.-13. November 1992. IEEE Press. **ga:Uchikawa92a**.
- [260] Kojima Morikawa, T. Nakayama, Takeshi Furuhashi, and Yoshiaki Uchikawa. LSI assembly line scheduling using a genetic algorithm. *Transactions of the Institute of Electrical Engineers of Japan C*, 113-D(12):1416–1422, December 1993. (in Japanese) †(CCA 52159/94) **ga:Uchikawa93c**.
- [261] Darrell Whitley, Timothy John Starkweather, and D'Ann Fuquay. Scheduling problems and traveling salesmen: The genetic edge recombination operator. In Schaffer [300], pages 133–140. **ga:Whitley89c**.
- [262] Darrell Whitley, Timothy John Starkweather, and Daniel Shaner. Using simulations with genetic algorithms for optimizing schedules. In B. Svrcek and J. McRae, editors, *Proceedings of the 1990 Computer Simulations Conference*, pages 288–293, Calgary (Canada), 16.-18. July 1990. SCS, San Diego, CA. †(Fogel/bib) **ga:Whitley90e**.
- [263] Darrell Whitley, Timothy John Starkweather, and Daniel Shaner. Handbook of genetic algorithms. In Davis [306], chapter 22. The traveling salesman and sequence scheduling: Quality solutions using edge recombination, pages 350–372. **ga:Whitley91a**.
- [264] X. Wu and M. W. M. G. Dissanayake. An approach for supervised job-shop scheduling using genetic algorithms. In ?, editor, *ANZIS-93 Proceedings of the Inaugural Australian and New Zealand Conference on Intelligent Information Systems*, page ?, Perth (Australia), 1.-3. December 1993. ? (to appear) †(prog) **ga:XWu93a**.
- [265] Yei Chang Kim and Young Sik Hong. A genetic algorithm for task allocation in multiprocessor systems. *J. Korea Inf. Sci. Soc. (South Korea)*, 20(1):43–51, 1993. †(CCA 45968/93) **ga:YSHong93a**.
- [266] Yei Chang Kim and Young Sik Hong. Task allocation using a genetic algorithm in multicomputer system. In *Proceedings of the 1993 IEEE Region 10 Conference on Computer, Communication, Control and Power Engineering (TENCON'93)*, volume 1, pages 258–261, Beijing (China), 19.-21. October 1993. IEEE. **ga:YSHong93b**.
- [267] J. D. Walker, P. E. File, C. J. Miller, and W. B. Samson. A hybrid genetic algorithm application to a genetics sequencing problem. In *IEE Colloquium on 'Molecular Bioinformatics'*, volume IEE Digest No. 1993/029, pages 7/1–7/12, London, 28. February 1994. IEE, London. †(CCA 39721/94) **ga94aWalker**.
- [268] Colin R. Reeves. A genetic algorithm for flowshop sequencing. *Computers & Operations Research*, 22(1):5–13, 1995. †(TKK/paa) **ga95aReeves**.
- [269] James C. Bean. Genetics and random keys for sequencing and optimization. Technical Report 92-43, University of Michigan, Ann Arbor, Department of Industrial and Operations Engineering, 1992. † **ga:Bean92a**.
- [270] Hugh M. Cartwright and Robert A. Long. Simultaneous optimization of chemical flowshop sequencing and topology using genetic algorithms. *Industrial and Engineering Chemistry Research*, 32(11):2706–2713, November 1993. **ga:Cartwright93c**.
- [271] Rebecca Parsons, Stephanie Forrest, and Christian Burks. Genetic algorithms for DNA sequence assembly. In Lawrence Hunter, David Searls, and Jude Shavlik, editors, *Proceedings of the First International Conference on Intelligent Systems for Molecular Biology (ISMB-93)*, pages 310–318, Bethesda, MD, 6.-9. July 1993. AAAI Press, Menlo Park, CA. **ga:Forrest93a**.
- [272] Christian Burks, M. L. Engle, Stephanie Forrest, Rebecca Parsons, and C. A. Soderlund. Stochastic optimization tools for genomic sequence assembly. In J. C. Venter, editor, *Automated DNA Sequencing and Analysis Techniques*. Academic Press, 1993. (in press) †([271]) **ga:Forrest93b**.
- [273] B. R. Fox and M. B. McMahon. Genetic operators for sequencing problems. pages 284–300, Indiana University, 15.-18. July 1990 1991. Morgan Kaufmann: San Mateo, CA. **ga:Fox91b**.
- [274] Colin R. Reeves and Helen Karatza. Dynamic sequencing of a multi-processor system: A genetic algorithm approach. In Albrecht et al. [303], pages 491–495. **ga:Reeves93a**.
- [275] Timothy John Starkweather, S. McDaniel, C. Whitley, Keith Mathias, and Darrell Whitley. A comparison of genetic sequencing operators. In Belew and Booker [298], pages 69–76. **ga:Starkweather91**.

- [276] J. D. Walker, P. E. File, C. J. Miller, and W. B. Samson. THE GENIE PROJECT: A genetic algorithm application to a sequencing problem in the biological domain. In Albrecht et al. [303], pages 552–558. **ga:Walker93a**.
- [277] K. Uchimura, H. Sakaguchi, and T. Nakashima. Genetic algorithms for vehicle routing problems. In *1994 Vehicle Navigation and Information Systems Conference Proceedings*, pages 287–290, Yokohama (Japan), 31. August-2. September 1994. IEEE, New York. †(CCA 37495/95) **ga94aUchimura**.
- [278] Xiaofeng Yang. Evolution program for bicriteria transportation problem. *Computers & Industrial Engineering*, 27(1-4):481–484, September 1994. (Proceedings of the 16th Annual Conference on Computers and Industrial Engineering, Ashigaga (Japan), 7.-9. Mar.) †(EI M076176/95) **ga94aXYang**.
- [279] Yihua Xiong and Jerry B. Schneider. Demand/supply relationship in transportation network design problems: A genetic algorithm approach. In ?, editor, *Proceedings of the First Congress on Computing in Civil Engineering*, volume 1, pages 938–941, Washington, DC, 20.-22. June 1994. ASCE, New York. †(EI M034057/95) **ga94aXiong**.
- [280] Mitsua Gen, Kenichi Ida, and Yinzhen Li. Solving bicriteria solid transportation problem by genetic algorithm. In *Proceedings of the 1994 IEEE International Conference on Systems, Man, and Cybernetics*, volume 2, pages 1200–1207, San Antonio, TX, 2.-5. October 1994. IEEE, New York. †(EI M096126/95) **ga94eGen**.
- [281] C. Brind, C. Muller, and P. Prosser. Co-operative simulated annealing and genetic algorithms for vehicle routing problems. In ?, editor, *Proceedings of the 15th International Conference (AI'95)*, volume ?, page ?, Montpellier (France), 27.-30. June 1995. ? (to appear) †(prog) **ga95aBrind**.
- [282] F. Jiminez. Fuzzy multi-objective solid transportation problem via evolutive programming. In ?, editor, *Proceedings of the 15th International Conference (AI'95)*, volume ?, page ?, Montpellier (France), 27.-30. June 1995. ? (to appear) †(prog) **ga95aJiminez**.
- [283] Donald E. Brown, Christopher L. Huntley, Bernard P. Markowicz, and David E. Sappington. Rail network routing and scheduling using simulated annealing. In *Proceedings of the 1992 IEEE International Conference on Systems, Man, and Cybernetics*, volume 1, pages 589–592, Chicago, IL, 18.-21. October 1992. IEEE Computer Society Press, Los Alamitos, CA. †(CA 5865 Vol. 37 No. 9/10) **ga:DEBrown92a**.
- [284] H. Kopfer. Konzepte genetischer Algorithmen und ihre Anwendung auf das Frachtoptimierungsproblem im gewerblichen Güterfernverkehr [genetic algorithms concepts and their application to freight minimization in commercial long distance freight transportation]. *OR Spektrum*, 14(3):137–147, 1992. (in German) †(CCA 13705/93) **ga:Kopfer92a**.
- [285] Zbigniew Michalewicz, G. A. Vignaux, and Matthew F. Hobbs. A nonstandard genetic algorithm for the nonlinear transportation problem. *ORSA Journal on Computing*, 3(4):307–316, 1991. **ga:Michalewicz91a**.
- [286] Anon. Microcomputer-based vehicle routing and scheduling. Government report AD-A238755/3, Netrologic, Inc., 1991. †(CA 1665 Vol. 36 No. 3) **ga:Netrologic**.
- [287] Sam Rabindranath Thangiah and Kendall E. Nygard. MICAH: a genetic algorithm system for multi-commodity transshipment problems. In *Proceedings of the Eighth Conference on Artificial Intelligence for Applications*, pages 240–246, Monterey, CA, 2.-6. March 1992. IEEE Computer Society Press. †(CCA 375/93 EI M013201/93) **ga:Thangiah92b**.
- [288] Sam Rabindranath Thangiah and Ananda V. Gubbi. Effect of genetic sectoring on vehicle routing problems with time windows. In *IEEE International Conference on Developing and Managing Intelligent System Projects*, pages 146–153, Washington, DC, 29.-31. March 1993. IEEE Computer Society Press, Los Alamitos, CA. †(CCA 63711/93) **ga:Thangiah93b**.
- [289] Sam Rabindranath Thangiah and Kendall E. Nygard. Dynamic trajectory routing using an adaptive search method. In K. M. George Deaton and George Hedrick Hal. Berghel, editors, *Proceedings of the 1993 ACM/SIGAPP Symposium on Applied Computing*, pages 131–138, Indianapolis, IN, 14.-16. February 1993. ACM Press, New York. †(ACM/93) **ga:Thangiah93c**.
- [290] G. A. Vignaux and Zbigniew Michalewicz. Genetic algorithms for the transportation problem. In Z. Ras, editor, *Proceedings of the 4th International Symposium on Methodologies for Intelligent Systems*, pages 252–259, Charlotte, NC, 12.-14. October 1989. North-Holland, Amsterdam. †(Michalewicz92book) **ga:Vignaux89**.
- [291] G. A. Vignaux and Zbigniew Michalewicz. A genetic algorithm for the linear transportation problem. *IEEE Transactions on Systems, Man, and Cybernetics*, 21(2):445–452, 1991. **ga:Vignaux91**.
- [292] Y. Xiong. *Optimization of transportation network design problems using a cumulative genetic algorithm and neural networks*. PhD thesis, University of Washington, WA, 1992. †(ACM/93) **ga:XiongThesis**.
- [293] Stephanie Forrest, editor. *Proceedings of the Fifth International Conference on Genetic Algorithms*, Urbana-Champaign, IL, 17.-21. July 1993. Morgan Kaufmann, San Mateo, CA. **ga:GA5**.

- [294] IEEE. *Proceedings of the First IEEE Conference on Evolutionary Computation*, volume 1, Orlando, FL, 27.-29. June 1994. IEEE.
- [295] Robert Elliot Smith, editor. *Proceedings of the Sixth International Conference on Genetic Algorithms*, Pittsburgh, PA, 15.-19. July 1995. ? (to appear).
- [296] John J. Grefenstette, editor. *Proceedings of the First International Conference on Genetic Algorithms and Their Applications*, Pittsburgh, PA, 24. - 26. July 1985. Lawrence Erlbaum Associates: Hillsdale, New Jersey. **ga:GA1**.
- [297] M. J. O'Dare and T. Arslan. Generating test patterns for VLSI circuits using a genetic algorithm. *Electronics Letters*, 30(10):778–779, 12. May 1994.
- [298] Richard K. Belew and Lashon B. Booker, editors. *Proceedings of the Fourth International Conference on Genetic Algorithms*, San Diego, 13.-16. July 1991. Morgan Kaufmann Publishers. **ga:GA4**.
- [299] *IJCNN'93-NAGOYA Proceedings of 1993 International Joint Conference on Neural Networks*, Nagoya (Japan), 25.-29. October 1993. IEEE. **ga:IJCNN93**.
- [300] J. David Schaffer, editor. *Proceedings of the Third International Conference on Genetic Algorithms*, Georg Mason University, 4.-7. June 1989. Morgan Kaufmann Publishers, Inc. **ga:GA3**.
- [301] IEEE. *Proceedings of the First IEEE Conference on Evolutionary Computation*, volume 2, Orlando, FL, 27.-29. June 1994. IEEE.
- [302] ?, editor. *Proceedings of the ICANNGA '95*, Ales (France), 19.-21. April 1995. ? (to appear).
- [303] R. F. Albrecht, C. R. Reeves, and N. C. Steele, editors. *Artificial Neural Nets and Genetic Algorithms*, Innsbruck, Austria, 13. -16. April 1993. Springer-Verlag, Wien. **ga:ANNGA93**.
- [304] W. J. M. Philippsen and L. J. M. Cluitmans. Using a genetic algorithm to tune Potts neural networks. In Albrecht et al. [303], pages 650–657. **ga:Philippsen93a**.
- [305] R. Männer and B. Manderick, editors. *Parallel Problem Solving from Nature, 2*, Brussels, 28.-30. September 1992. Elsevier Science Publishers, Amsterdam. **ga:PPSN2**.
- [306] Lawrence Davis, editor. *Handbook of Genetic Algorithms*. Van Nostrand Reinhold, New York, 1991. **ga:Davis91book**.

Notations

†(ref) = the bibliography item does not belong to my collection of genetic papers.

(ref) = citation source code. ACM = ACM Guide to Computing Literature, EEA = Electrical & Electronics Abstracts, CCA = Computers & Control Abstracts, CTI = Current Technology Index, EI = The Engineering Index (A = Annual, M = Monthly), DAI = Dissertation Abstracts International, P = Index to Scientific & Technical Proceedings, BackBib = Thomas Bäck's unpublished bibliography, Fogel/Bib = David Fogel's EA bibliography, etc

* = only abstract seen.

? = data of this field is missing (BiBTeX-format).

The last field in each reference item in **Teletype** font is the BiBTeXkey of the corresponding reference.



Appendix A

Abbreviations

The following other abbreviations were used to compress the titles of articles in the permutation title index:

AI	= Artificial Intelligence
Alg.	= Algorithm(s)
AL	= Artificial Life
ANN(s)	= Artificial Neural Net(work)(s)
Appl.	= Application(s), Applied
Appr.	= Approach(es)
Cntr.	= Control, Controlled, Controlling, Controller(s)
Coll.	= Colloquium
Comb.	= Combinatorial
Conf.	= Conference
CS(s)	= Classifier System(s)
Distr.	= Distributed
Eng.	= Engineering
EP	= Evolutionary Programming
ES	= Evolutionsstrategie(n), Evolution(ary) strategies
Evol.	= Evolution, Evolutionary
ExS(s)	= Expert System(s)
FF(s)	= Fitness Function(s)
GA(s)	= Genetic Algorithm(s)
Gen.	= Genetic(s), Genetical(ly)
GP	= Genetic Programming
Ident.	= Identification
Impl.	= Implementation(s)
Int.	= International
ImPr	= Image Processing
JSS	= Job Shop Scheduling
ML	= Machine Learning
Nat.	= Natural
NN(s)	= Neural Net(work)(s)
Opt.	= Optimization, Optimal, Optimizer(s), Optimierung
OR	= Operation(s) Research
Par.	= Parallel, Parallelism
Perf.	= Performance
Pop.	= Population(s), Populational(ly)
Proc.	= Proceedings
Prog.	= Programming, Program(s), Programmed
Prob.	= Problem(s)
QAP	= Quadratic Assignment Problem
Rep.	= Representation(s), Representational(ly)
SA	= Simulated Annealing
Sch.	= Scheduling, Schedule(s)
Sel.	= Selection, Selectionism
Symp.	= Symposium
Syst.	= System(s)
Tech.	= Technical, Technology
TSP	= Travel(l)ing Salesman Problem

Appendix B

Bibliography entry formats

This documentation was prepared with \LaTeX and reproduced from camera-ready copy supplied by the editor. The ones who are familiar with \BIBTEX may have noticed that the references are printed using `abbrv` bibliography style and have no difficulties in interpreting the entries. For those not so familiar with \BIBTEX are given the following formats of the most common entry types. The optional fields are enclosed by "[]" in the format description. Unknown fields are shown by "?". † after the entry means that neither the article nor the abstract of the article was available for reviewing and so the reference entry and/or its indexing may be more or less incomplete.

Book

Author(s), *Title*, Publisher, Publisher's address, year.

Example

John H. Holland. *Adaptation in Natural and Artificial Systems*. The University of Michigan Press, Ann Arbor, 1975.

Journal article

Author(s), Title, *Journal*, volume(number): first page – last page, [month,] year.

Example

David E. Goldberg. Computer-aided gas pipeline operation using genetic algorithms and rule learning. Part I: Genetic algorithms in pipeline optimization. *Engineering with Computers*, 3(?):35–45, 1987. †.

Note: the number of the journal unknown, the article has not been seen.

Proceedings article

Author(s), Title, editor(s) of the proceedings, *Title of Proceedings*, [volume,] pages, location of the conference, date of the conference, publisher of the proceedings, publisher's address.

Example

John R. Koza. Hierarchical genetic algorithms operating on populations of computer programs. In N. S. Sridharan, editor, *Eleventh International Joint Conference on Artificial Intelligence (IJCAI-89)*, pages 768–774, Detroit, MI, 20.-25. August 1989. Morgan Kaufmann, Palo Alto, CA. †.

Technical report

Author(s), Title, type and number, institute, year.

Example

Thomas Bäck, Frank Hoffmeister, and Hans-Paul Schwefel. Applications of evolutionary algorithms. Technical Report SYS-2/92, University of Dortmund, Department of Computer Science, 1992.