An Indexed Bibliography of Genetic Algorithms with Lasers

compiled by

Jarmo T. Alander

Department of Electrical Engineering and Automation

University of Vaasa P.O. Box 700, FIN-65101 Vaasa, Finland
phone: +358-6-324 8444, fax: +358-6-324 8467

Dedicated to **Donald G. Burkhard and David L. Shealy**

Report Series No. 94-1-LASER

(DRAFT 2008/08/27 10:08)

available via anonymous ftp: site `ftp.uwasa.fi` directory `cs/report94-1` file `gaLASERbib.pdf`

Copyright © 1994-2008 Jarmo T. Alander

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

List of Tables

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 (August 27, 2008) contained 20566 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 and databases have been used systematically

- A: *International Aerospace Abstracts:* Jan. 1995 – Sep. 1998
- ACM: *ACM Guide to Computing Literature:* 1979 – 1993/4
- BA: *Biological Abstracts:* July 1996 - Aug. 1998
- CA: *Computer Abstracts:* Jan. 1993 – Feb. 1995
- CCA: *Computer & Control Abstracts:* Jan. 1992 – Dec. 1999 (except May -95)
- ChA: *Chemical Abstracts:* Jan. 1997 - Dec. 2000
- CTI: *Current Technology Index* Jan./Feb. 1993 – Jan./Feb. 1994
- DAI: *Dissertation Abstracts International:* Vol. 53 No. 1 – Vol. 56 No. 10 (Apr. 1996)
- EEA: *Electrical & Electronics Abstracts:* Jan. 1991 – Apr. 1998
- EI A: *The Engineering Index Annual:* 1987 – 1992
- EI M: *The Engineering Index Monthly:* Jan. 1993 – Apr. 1998 (except May 1997)
- Esp@cenet *patents* – Apr. 2002
- IEEE: *IEEE and IEE Journals* – Fall 2002
- N: *Scientific and Technical Aerospace Reports:* Jan. 1993 - Dec. 1995 (except Oct. 1995)
- NASA *NASA ADS www bibliography database:* – Dec. 2002
- P: *Index to Scientific & Technical Proceedings:* Jan. 1986 – Dec 1999 (except Nov. 1994)
- PA: *Physics Abstracts:* Jan. 1997 – June 1999
- PubMed: *National Library of Medicine* Jan. 2000 – Oct. 2000
- SPIE Web *The International Society for Optical Engineering* – June 2002

1.1 Your contributions erroneous or missing?

The bibliography database is updated on a regular basis and certainly contains many errors and inconsistences. 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 with lasers 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. Please, 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 the `key` appearing as the last item of the reference entry 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.

For further instructions and information see `ftp.uwasa.fi/cs/GAbib/README`.

1.1.1 How to cite this report?

You can use the BiBTEX file `GASUB.bib`, which is available in our ftp site `ftp.uwasa.fi` in directory `cs/report94-1` and contains records for GA subbibliographies for citing with LATEX/BibTEX.

1.2 How to get this report via `Internet`?

Versions of this bibliography are available via anonymous `ftp` or `www` from the following site:

media	*country*	*site*	*directory*	*file*
`ftp`	Finland	`ftp.uwasa.fi`	`/cs/report94-1`	`gaLASERbib.pdf`

The directory also contains some other indexed GA bibliographies shown in table B.1. In case you do not find a proper one please let us know: it may be easy to tailor a new one.

1.3 Acknowledgement

The editor wants to acknowledge all who have kindly supplied references, papers and other information on genetic algorithms with lasers 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, Helio J. C. Barbosa, Hans-Georg Beyer, Christian Bierwirth, Peter Bober Joachim Born, Ralf Bruns, I. L. Bukatova, Thomas Bäck, Chhandra Chakraborti, Nirupam Chakraborti, David E. Clark, Carlos A. Coello Coello, Yuval Davidor, Dipankar Dasgupta, Marco Dorigo, J. Wayland Eheart, Bogdan Filipič, Terence C. Fogarty, David B. Fogel, Toshio Fukuda, Hugo de Garis, Robert C. Glen, David E. Goldberg, Martina Gorges-Schleuter, Hitoshi Hemmi, Vasant Honavar, Jeffrey Horn, Aristides T. Hatjimihail, Heikki Hyötyniemi Mark J. Jakiela, Richard S. Judson, Bryant A. Julstrom, Charles L. Karr, Akihiko Konagaya, Aaron Konstam, John R. Koza, Kristinn Kristinsson, Malay K. Kundu, D. P. Kwok, Jouni Lampinen, Jorma Laurikkala, Gregory Levitin, Carlos B. Lucasius, Timo Mantere, Michael de la Maza, John R. McDonnell, J. J. Merelo, Laurence D. Merkle, Zbigniew Michalewics, Melanie Mitchell, David J. Nettleton, Volker Nissen, Ari Nissinen, Tatsuya Niwa, Tomasz Ostrowski, Kihong Park, Jakub Podgórski, Timo Poranen, Nicholas J. Radcliffe, Colin R. Reeves, Gordon Roberts, David Rogers, David Romero, Sam Sandqvist, Ivan Santibáñez-Koref, Marc Schoenauer, Markus Schwehm, Hans-Paul Schwefel, Michael T. Semertzidis, Davil L. Shealy, Moshe Sipper, William M. Spears, Donald S. Szarkowicz, El-Ghazali Talbi, Masahiro Tanaka, Leigh Tesfatsion,

Peter M. Todd, Marco Tomassini, Andrew L. Tuson, Kanji Ueda, Jari Vaario, Gilles Venturini, Hans-Michael Voigt, Roger L. Wainwright, D. Eric Walters, James F. Whidborne, Stefan Wiegand, Steward W. Wilson, Xin Yao, Xiaodong Yin, and Ljudmila A. Zinchenko.

The editor also wants to acknowledge Elizabeth Heap-Talvela for her kind proofreading of the manuscript of this bibliography and Tea Ollanketo and Sakari Kauvosaari for updating the database. Prof. Timo Salmi and the Computer Centre of University of Vaasa is acknowledged for providing and managing the online ftp site `ftp.uwasa.fi`, where these indexed bibliographies are located.

Chapter 2

Introduction

> "Many scientist, possibly most scientist, just do science without thinking too much about it. They run experiments, make observations, show how certain data conflict with more general views, set out theories, and so on. Periodically, however, some of us—scientists included—step back and look at what is going on in science."
>
> *David L., Hull,* [7]

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 [8] have been implemented by the author mainly as sets of simple `awk` and `gawk` programs [9, 10].

string	*field*	*class*
`laser`	`ANNOTE`	Lasers
`Laser`	`TITLE`	Lasers

Table 2.1: Queries used to extract this subbibliography from the source database.

You might also find bibliographies [11] including all nanotechnology, [12] including all physics, and [13] including all optics references interesting.

Chapter 3

Statistical summaries

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

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

- **Lasers** 56 references ([14]-[69])

Observe that each reference is included (by the computer) only to one of the above classes (see the queries for classification in table 2.1; the textual order in the query gives priority for classes).

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.

type	*number of items*
section of a book	1
journal article	28
proceedings article	24
report	2
MSc thesis	1
total	56

Table 3.1: Distribution of publication type.

3.2 Annual distribution

Table 3.2 gives the number of genetic algorithms with lasers 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 late 70's - early 90's.

year	*items*	*year*	*items*
1991	1	1992	1
1993	2	1994	0
1995	0	1996	3
1997	6	1998	6
1999	0	2000	10
2001	9	2002	1
2003	2	2004	7
2005	4	2006	2
2007	1	2008	1
total			56

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.

Total	55
optics	33
lasers	25
manufacturing	6
hybrid	5
engineering	5
others	135

Table 3.3: The most popular subjects.

3.4 Authors

Table 3.4 gives the most productive authors.

total number of authors	162
19 authors	2
143 authors	1

Table 3.4: The most productive genetic algorithms with lasers authors.

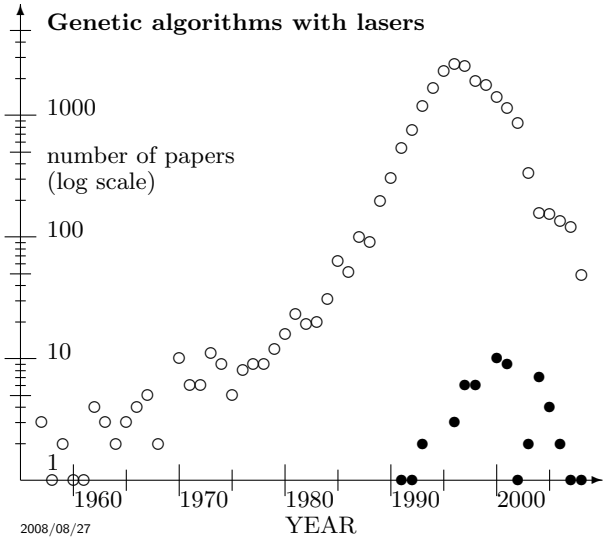

Figure 3.1: The number of papers applying **genetic algorithms with lasers** (•, $N = 57$) and total GA papers (∘, $N = 20566$). Observe that the last few years are most incomplete in the database.

3.5 Geographical distribution

Table 3.5 gives the geographical distribution of authors, when the country of the author was known. Over 80% of the references of the GA source database are classified by country.

2008/08/27	*special*		*comparison*		*all*	
country	n	%	δ[%]	Δ[%]	N	%
Total	54	100.00			19388	100.00
United States	23	42.59	+14.81	+53	5386	27.78
China	10	18.52	+13.71	+285	933	4.81
Japan	6	11.11	−1.29	−10	2404	12.40
Finland	2	3.70	−0.05	−1	727	3.75
Germany	2	3.70	−3.28	−47	1353	6.98
Poland	2	3.70	+2.81	+316	173	0.89
Singapore	2	3.70	+2.88	+351	159	0.82
Switzerland	2	3.70	+2.82	+320	170	0.88
Argentina	1	1.85	+1.76	+1956	18	0.09
France	1	1.85	−0.68	−27	491	2.53
Italy	1	1.85	−1.03	−36	559	2.88
Lithuania	1	1.85	+1.83	+9150	4	0.02
Mexico	1	1.85	+1.28	+225	110	0.57

Table 3.5: The geographical distribution of the authors working on genetic algorithms with lasers (n) compared (δ and Δ) to all authors in the field of GAs (N). In the *comparison* column: $\delta\% = \%special - \%all$ and $\Delta = (1 - \frac{nN_{Total}}{Nn_{Total}}) \times 100\%$. Δ is the relative (%) deviation from the expected number of special papers. Observe that joint papers may have authors from several countries and that not all authors have been attributed to a country.

3.6 Conclusions and future

The editor believes that this bibliography contains references to most genetic algorithms with lasers contributions upto and including the year 1998 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.

ACES Journal, [15]

Acta Physica Sinica, [14, 45]

AIAA Journal, [46]

AIAA Journal on Disc, [47]

Applied Physics B Lasers and Optics, [20]

Appl. Phys. B, Lasers Opt. (Germany), [48]

Cailiao Yanjiu Xuebao, [55]

Chemical Physics Letters, [32]

Chinese Optics Letters, [34]

IEEE Transactions on Electronics Packaging Manufacturing, [39]

IEEE Transactions on Neural Networks, [51]

International Journal of Machine Tools & Manufacture, [37]

Journal of the Optical Society of America A: Optics, Image Science, and Vision, [27]

Materials Science and Engineering C, [29]

Optical and Quantum Electronics, [25, 53]

Optical Express, [62]

Optics and Laser Technology, [24]

Optics Communications, [31]

Optics Express, [41, 44]

Phys. Chem. News, [40]

Physical Review Letters, [59]

Review of Scientific Instruments, [33]

Rev. Sci. Instrum. (USA), [57]

Surface and Coatings Technology, [56]

The International Journal of Advanced Manufacturing Technology, [23]

total 28 articles in 25 series

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

- none

4.3.2 Master's theses

This list includes also "Diplomarbeit", "Tech. Lic. Theses", etc.

Massachusetts Institute of Technology, [49]

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.

Institute of Naval Medicine, [61]

University of Vaasa, [60]

total 2 reports in 2 institutes

4.5 Patents

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

- none

4.6 Authors

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

Akiyama, Mamory, [68]
Alander, Jarmo T., [60]
Ao, MingWu, [44]
Ausas, Roberto F., [35]
Aye, Tin M., [17, 19]
Baumert, T., [48]
Beach, Nicole M., [54]
Biles, William E., [50]
Bonetti, G., [57]
Brixner, T., [48]
Bucksbaum, P. H., [22]
Busgaclia, Gustavo C., [35]
Carcelli, M., [57]
Carpenter, S. D., [52]
Carroll, David L., [46, 47]
Chang, Zenghu, [41]
Chan, Yuen-Chuen, [27]
Cheng, C., [24]
Cheng, Cheng, [14, 25]
Cheng, J. Gary, [37]
Chen, Jun-Ben, [45]
Chen, Zhanqing, [34]
Corkum, Paul, [26]
Cyran, Krzysztof A., [63]
Dargys, A., [31]
Dickey, Fred M., [30]
Dowd, Philip, [27]
Efimov, A., [20]
Efimov, Anatoly, [54]
Erni, Daniel, [15, 53]
Erwin, Daniel A., [17]
Evans, Neal C., [18, 21]
Fan, Qingwu, [43]
Ferrari, F., [57]
Fröhlich, Jürg, [15, 53]
Fruehauf, Norbert, [17]
Fuentes, Olac, [64]
Gerber, G., [48]
Hafner, Christian, [15]
Hajima, Ryoichi, [68]
He, Sailing, [14, 25]
He, S., [24]
Higuchi, Tetsuya, [16]
Higuchi, T., [36]
Holswade, Scott C., [30]
Huang, W. D., [56]
Huang, Weidong, [55]
Hunziker, Stephan, [15]
Ikonen, Ilkka, [50]
Itatani, Taro, [16]
Itatani, T., [36]
Jai, Mohammed, [35]
Jaroszewicz, Leszek R., [63]
Jiang, WenHan, [44]
Jian, Shuisheng, [62]
Ji, Yang, [45]
Judson, Richard S., [59]
Kano, Satoru S., [32, 33]
Kasai, Yuji, [16]
Kikkawa, Hideaki, [16]
Kim, Dai Hyun, [19]
Kirihara, S., [67]
Kostrzewski, Andrew A., [19]
Krause, Jeffrey L., [58]
Krause, J. L., [20]
Krauss, Jeffrey L., [54]
Lam, Yee-Loy, [27]
Légaré, François, [26]
Li, B., [23]
Li, Jun, [43]
Lin, C. D., [41]
Lipson, Hod, [65, 66]
Lipson, Michal, [65, 66]
Liu, Ming, [34]
Liu, Yuan, [44]
Loose, Rich, [17]
Lorincz, A., [52]
Maul, C., [40]
May, Gary S., [38, 39]
Ma, Y., [24]
Mei, B., [20]
Mizoguchi, R., [32, 33]
Moores, Mark D., [54]
Moores, M. D., [20]
Moreno, Esteban, [15]
Mrozek, Adam, [63]
Murakawa, Masahiro, [16]
Murakawa, M., [36]
Noguchi, H., [36]
Nosato, H., [36]
Oakley, E. H. N., [61]
Ohashi, Hirotada, [68]
Onda, K., [33]
Ostrowski, Tomasz, [69]
Oswald, Benedikt, [15]
Pan, Qingyue, [55]
Pan, Q. Y., [56]
Parikh, Jo Ann, [42]
Pergantis, Charles G., [19]
Peter, J., [52]
Preble, Stefan, [66]
Rabitz, Herschel, [59]
Reitze, David H., [54]
Reitze, D. H., [20]
Robinson, Jacob T., [65]
Roh, Hyoung Ho, [38]
Saito, H., [67]
Sanchez-Escobar, J., [64]
Savant, Gajendra D., [17, 19]
Schafer, Kenneth J., [58]
Setia, Ronald, [38, 39]
Seyfried, V., [48]
Sharma, Nimmi C. Parikh, [42]
Shealy, David L., [18, 21]

total 56 articles by 162 different authors

4.7 Subject index

All subject keywords of the papers given by the editor of this bibliography are shown next.

4.8 Annual index

The following table gives references to the contributions by the year of publishing.

4.9 Geographical index

The following table gives references to the contributions by country.

- Argentina: [35]
- China: [45, 55, 56, 25, 29, 34, 62, 43, 44, 23]
- Finland: [50, 60]
- Germany: [48, 40]
- Italy: [57]
- Japan: [67, 32, 33, 36, 16]
- Lithuania: [31]
- Mexico: [64]
- Poland: [69, 63]
- Singapore: [27, 28]
- Switzerland: [53, 15]
- United States: [59, 61, 46, 47, 49, 51, 52, 54, 58, 17, 18, 19, 20, 21, 22, 30, 37, 38, 39, 65, 41, 66, 42]
- Unknown country: [24, 26]

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.

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` site `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] David L. Hull. Uncle Sam wants you. *Science*, 284(5417):1131–1133, 14. May 1999.

[8] Leslie Lamport. *LaTeX: A Document Preparation System. User's Guide and Reference manual*. Addison-Wesley Publishing Company, Reading, MA, 2 edition, 1994.

[9] Alfred V. Aho, Brian W. Kernighan, and Peter J. Weinberger. *The AWK Programming Language*. Addison-Wesley Publishing Company, Reading, MA, 1988.

[10] Diane Barlow Close, Arnold D. Robbins, Paul H. Rubin, and Richard Stallman. *The GAWK Manual*. Cambridge, MA, 0.15 edition, April 1993.

[11] Jarmo T. Alander. Indexed bibliography of genetic algorithms in nanotechnology. Report 94-1-NANO, University of Vaasa, Department of Electrical Engineering and Automation, 2008. (`ftp.uwasa.fi/cs/report94-1/gaNANObib.pdf`) `gaNANObib`.

[12] Jarmo T. Alander. Indexed bibliography of genetic algorithms in physical sciences. Report 94-1-PHYS, University of Vaasa, Department of Information Technology and Production Economics, 1995. (Previously included in [70]; available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/report94-1` file `gaPHYSbib.ps.Z`) `gaPHYSbib`.

[13] Jarmo T. Alander. Indexed bibliography of genetic algorithms in optics and image processing. Report 94-1-OPTICS, University of Vaasa, Department of Information Technology and Production Economics, 1995. (available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/report94-1` file `gaOPTICSbib.ps.Z`) `gaOPTICSbib`.

[14] Cheng Cheng and Sailing He. Optimization and elimination of 'black center' of a large-bore copper vapor laser. *Acta Physica Sinica*, 49(7):1267–1272, July 2000. (in Chinese) * A01-15613 `ga00aChengCheng`.

[15] Daniel Erni, Dorothea Wiesmann, Michael M. Spühler, Stephan Hunziker, Esteban Moreno, Benedikt Oswald, Jürg Fröhlich, and Christian Hafner. Application of evolutionary optimization algorithms in computational optics. *ACES Journal*, 15(2):43–60, ? 2000. `ga00aDanielErni`.

[16] Masahiro Murakawa, Taro Itatani, Yuji Kasai, Hideaki Kikkawa, and Tetsuya Higuchi. An evolvable laser system for generating femtosecond pulses. pages 636–642, 2000. `ga00aMasahiroMurakawa`.

[17] Mingjun M. Zhao, Tin M. Aye, Norbert Fruehauf, Gajendra D. Savant, Daniel A. Erwin, Brayton E. Smoot, and Rich Loose. High-energy laser plasma diagnostic system. In Todd D. Steiner and Paul H. Merritt, editors, *Laser Weapons Technology*, volume SPIE-4034, pages 90–99, ?, July 2000. The International Society for Optical Engineering. * www/SPIE Web `ga00aMMZhao`.

[18] Neal C. Evans and David L. Shealy. Design of a gradient-index beam shaping system via a genetic algorithms. In Fred M. Dickey and Scott C. Holswade, editors, *Laser Beam Shaping*, volume SPIE-4095, pages 26–39, San Diego, CA, 2. -4. August 2000. The International Society for Optical Engineering, Bellingham, WA. `ga00aNCEvans`.

[19] Yunlu Zou, Tin M. Aye, Gajendra D. Savant, Andrew A. Kostrzewski, Dai Hyun Kim, and Charles G. Pergantis. Noncontact laser metrology with real-time detection and high-speed processing for material analysis. In Gary W. Kamerman, Upendra N. Singh, Christian H. Werner, and Vasyl V. Molebny, editors, *Laser Radar Technology and Applications V*, volume SPIE-4035, pages 254–265, ?, September 2000. The International Society for Optical Engineering. * www/SPIE Web `ga00aYZou`.

[20] A. Efimov, M. D. Moores, B. Mei, J. L. Krause, C. W. Siders, and D. H. Reitze. Minimization of dispersion in an ultrafast chirped pulse amplifier using adaptive learning. *Applied Physics B Lasers and Optics*, 70(7):S113–S141, ? 2000. * www /Springer `ga00bAEfimov`.

[21] Neal C. Evans and David L. Shealy. *5. Optimization-based techniques for laser shaping optics*, pages 215–248. Marcel Dekker, Inc., New York, 2000. `ga00bNCEvans`.

[22] T. C. Weinacht, J. L. White, and P. H. Bucksbaum. Learning how to control vibrations in multimode molecules. In *Proceedings of the Quantum Electronics and Laser Science Conference (QELS 2000)*, volume 1, page 221, ?, 7.-12. May 2000. IEEE, Piscataway, NJ. `ga00bTCWeinacht`.

[23] B. Li and B. W. Shiu. Principle and simulation of fixture configuration design for sheet metal assembly with laser welding. part 2: Optimal configuration with the genetic algorithm. *The International Journal of Advanced Manufacturing Technology*, 18(4):276–284, 2001. `ga01aBLi`.

[24] C. Cheng, Y. Ma, and S. He. Optimization of a sealed-off CO_2 laser resonator by utilizing a genetic algorithm. *Optics and Laser Technology*, 33(8):601–604, November 2001. †NASA ADS `ga01aCCheng`.

[25] Cheng Cheng and Sailing He. Optimal design for a copper vapor laser with a maximum output by using a genetic algorithm. *Optical and Quantum Electronics*, 33(1):83–98, 1. January 2001. †EBSCO `ga01aChengCheng`.

[26] François Légaré, David Villeneuve, and Paul Corkum. Optimization of high-energy short laser pulses using a genetic algorithm. In ?, editor, *American Physical Society, DAMOP Meeting*, volume ?, page ?, London, Ontario (Canada), 16.-19. May 2001. ? †NASA ADS `ga01aFLegare`.

[27] Guangya Zhou, Xiaocong Yuan, Philip Dowd, Yee-Loy Lam, and Yuen-Chuen Chan. Design of diffractive phase elements for beam shaping: hybrid approach. *Journal of the Optical Society of America A: Optics, Image Science, and Vision*, 18(4):791–800, April 2001. `ga01aGuangyaZhou`.

[28] Jianyu Ye, XiaoCong Yuan, and Guangya Zhou. Genetic algorithm for optimization design of diffractive optical elements in laser beam shaping. In Marek Osinski, Soo Jin Chua, and Akira Ishibashi, editors, *Design, Fabrication, and Characterization of Photonic Devices II*, volume SPIE-4594, pages 118–127, ?, October 2001. The International Society for Optical Engineering. * www/SPIE Web `ga01aJYe`.

[29] R. G. Song and Q. Z. Zhang. Heat treatment optimization for 7175 aluminium alloy by genetic algorithm. *Materials Science and Engineering C*, 17(?):133–137, ? 2001. `ga01aRGSong`.

[30] Scott C. Holswade and Fred M. Dickey. Laser beam shaping via conventional design software. In Fred M. Dickey, Scott C. Holswade, and David L. Shealy, editors, *Laser Beam Shaping II*, volume SPIE-4443, pages 36–46, ?, October 2001. The International Society for Optical Engineering. * www/SPIE Web `ga01aSCHolswade`.

[31] A. Dargys. Optimized intervalence band transitions and population inversion patterns in k-space induced by femtosecond infrared pulses. *Optics Communications*, 206(1-3):123–134, May 2002. †NASA ADS `ga02bADargys`.

[32] R. Mizoguchi, Satoru S. Kano, and A. Wada. Optical control of excited states of -perylene crystal using optimized pulse shaping method. *Chemical Physics Letters*, 378(?):319–324, September 2003. * homepage `ga03aRMizoguchi`.

[33] R. Mizoguchi, K. Onda, Satoru S. Kano, and A. Wada. Thinning-out in optimized pulse shaping method using genetic algorithm. *Review of Scientific Instruments*, 74(?):2670–2674, May 2003. * homepage `ga03bRMizoguchi`.

[34] Chen Tang, Ming Liu, Haiqing Yan, Guimin Zhang, and Zhanqing Chen. The improved genetic algorithm for digital image correlation method. *Chinese Optics Letters*, 2(10):574–577, ? 2004. * www /Google NASA `ga04aChenTang`.

[35] Gustavo C. Busgaclia, Roberto F. Ausas, and Mohammed Jai. Optimization tools in the analysis of micro-textured lubricated devices. In ?, editor, *Proceedings of Inverse Problems, Design and Optimization Symposium*, page ?, Rio de Janeiro (Brazil), ? 2004. ? `ga04aGCBuscaglia`.

[36] H. Nosato, T. Itatani, M. Murakawa, T. Higuchi, and H. Noguchi. Automatic wave-front correction of a femtosecond laser using genetic algorithm. In *Proceedings of the 2004 IEEE International Conference on Systems, Man, and Cybernetics*, volume 4, pages 3675–3679, ?, 10.-13. October 2004. IEEE, Piscataway, NJ. * www /IEEE `ga04aHNosato`.

[37] J. Gary Cheng and Y. Lawrence Yao. Process synthesis of laser forming by genetic algorithm. *International Journal of Machine Tools & Manufacture*, 44(?):1619–1628, ? 2004. `ga04aJGaryCheng`.

[38] Ronald Setia, Gary S. May, Venky Sundaram, Rao R. Tummala, and Hyoung Ho Roh. Sensitivity analysis and optimization of excimer laser ablation for microvia formation using neural network and genetic algorithms. In *Proceedings of the 2004 IEEE/CPMT/SEMI 29th International Symposium on Electronics Manufacturing Symposium*, pages 131–139, ?, 14.-15. July 2004. IEEE, Piscataway, NJ. `ga04aRSetia`.

[39] Ronald Setia and Gary S. May. Modeling and optimization of via formation in dielectrics by laser ablation using neural networks and genetic algorithms. *IEEE Transactions on Electronics Packaging Manufacturing*, 27(2):133–144, April 2004. `ga04bRSetia`.

[40] C. Maul. Line shapes and reaction dynamics: application of genetic algorithm. *Phys. Chem. News*, 21(?):73–78, January 2005. `ga05aCMaul`.

[41] Z. X. Zhao, Zenghu Chang, X. M. Tong, and C. D. Lin. Circularly-polarized laser-assisted photoionization spectra of argon for attosecond pulse measurements. *Optics Express*, 13(6):1966–1977, 21. March 2005. `ga05aZXZhao`.

[42] Jo Ann Parikh and Nimmi C. Parikh Sharma. Aerosol layer distrimination using laser radar and genetic algorithms. In *Proceedings of the 2006 IEEE International Conference on Geoscience and Remote Sensing Symposium IGARSS 2006*, volume ?, pages 3683–3686, ?, 31. July-4. August 2006. IEEE, Piscataway, NJ. `ga06aJAParikh`.

[43] Qingwu Fan, Pu Wang, Lianbao Zhang, and Jun Li. The research of expert system of laser quenching based on genetic-neural network. In *Proceedings of the 6th World Congress on Intelligent Control and Automation*, volume ?, pages 7969–7972, Dalian (China), 21-23. June 2006. IEEE, Piscataway, NJ. `ga06aQingwuFan`.

[44] Ping Yang, MingWu Ao, Yuan Liu, Bing Xu, and WenHan Jiang. Intracavity transverse modes controlled by a genetic algorithm based on Zernike mode coefficients. *Optics Express*, 15(25):17051–17058, 10. December 2007. `ga07aPingYang`.

[45] Jing-Juan Zhang, Yang Ji, De-Cheng Yao, and Jun-Ben Chen. Application of genetic algorithm to laser beam reshaping. *Acta Physica Sinica*, 45(5):789–795, 1996. †A96-42591 `ga96aJ-JZhang`.

[46] David L. Carroll. Chemical laser modeling with genetic algorithms. *AIAA Journal*, 34(2):338–346, 1996. `ga96bCarroll`.

[47] David L. Carroll. Chemical laser modeling with genetic algorithms. *AIAA Journal on Disc*, 1(1), 1996. (also as [46]) †A96-18965 `ga96cCarroll`.

[48] T. Baumert, T. Brixner, V. Seyfried, M. Strehle, and G. Gerber. Femtosecond pulse shaping by an evolutionary algorithm with feedback. *Appl. Phys. B, Lasers Opt. (Germany)*, B65(6):779–782, 1997. †PA42287/98 `ga97aBaumert`.

[49] H. Shimizu. A heating process algorithm for metal forming by a moving heat source. Master's thesis, Massachusetts Institute of Technology, 1997. †[37] `ga97aHShimizu`.

[50] Ilkka Ikonen and William E. Biles. A genetic algorithm with 3-dimensional chromosome for packing non-convex parts for selective laser sintering. In Jarmo T. Alander, editor, *Proceedings of the Third Nordic Workshop on Genetic Algorithms and their Applications (3NWGA)*, pages 83–96, Helsinki (Finland), 18.-22. August 1997. Finnish Artificial Intelligence Society (FAIS). (available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/3NWGA` file `Ikonen.ps.Z`) `ga97aIkonen`.

[51] Phillip D. Stroud. Learning and adaptation in an airborne laser fire controller. *IEEE Transactions on Neural Networks*, 8(5):1078–1089, September 1997. `ga97aPDStroud`.

[52] S. D. Carpenter, P. M. Weber, J. Peter, G. Szabo, T. Szakacs, and A. Lorincz. Self-learning optical-system based on a genetic algorithm driven spatial light-modulator. In *Proceedings of the Second GR-I International Conference on New Laser Technologies and Applications*, volume SPIE-, pages 130–134, Olympia, Greece, 1.-4. June 1997. SPIE – International Society for Optical Engineering, Bellingham. †P82955 `ga97aSDCarpenter`.

[53] Daniel Erni, Michael M. Spühler, and Jürg Fröhlich. Evolutionary optimization of non-periaodic coupled-cavity semiconductor laser diodes. *Optical and Quantum Electronics*, 30(5/6):287–303, May 1998. †[15] `ga98aDanielErni`.

[54] David H. Reitze, Anatoly Efimov, Nicole M. Beach, Mark D. Moores, and Jeffrey L. Krauss. Adaptive control of lasers and their interactions with matter. In *Proceedings of the Laser and Electro-Optics Society Annual Meeting, LEOS'98*, volume 1, page 58, ?, ? 1998. IEEE. `ga98aDHReitze`.

[55] Qingyue Pan, Renguo Song, Qizhi Zhang, Weidong Huang, and Yaohe Zhou. Optimization of laser surface melting technology for 1Cr18Ni9Ti stainless steel based on artificial neural networks/genetic algorithm. *Cailiao Yanjiu Xuebao*, 12(3):251–256, 1998. †ChA345711m/98 `ga98aQingyPan`.

[56] Q. Y. Pan, W. D. Huang, R. G. Song, Y. H. Zhou, and G. L. Zhang. The improvement of localized corrosion resistance in sensitized stainless steel by laser surface remelting. *Surface and Coatings Technology*, 102(?):245–255, ? 1998. `ga98aQYPan`.

[57] C. Viappiani, G. Bonetti, M. Carcelli, F. Ferrari, and A. Sternieri. Study of proton transfer processes in solution using the laser induced pH-jump: a new experimental setup and an improved data analysis based on genetic algorithms. *Rev. Sci. Instrum. (USA)*, 69(1):270–276, 1998. †PA38105/98 `ga98aViappian`.

[58] Jeffrey L. Krause and Kenneth J. Schafer. Laser control of stark wave packets. In ?, editor, *American Physical Society, Southeastern Section Meeting*, volume ?, page ?, Miami, FL, 13.-15. November 1998. American Physical Society. †NASA ADS `ga98cJLKrause`.

[59] Richard S. Judson and Herschel Rabitz. Teaching lasers to control molecules. *Physical Review Letters*, 68(10):1500–1503, 1992. `ga:Judson92c`.

[60] Jarmo T. Alander. Indexed bibliography of genetic algorithms lasers. Report 94-1-LASER, University of Vaasa, Department of Electrical Engineering and Automation, 2008. (available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/report94-1` file `gaLASERbib.pdf`) `gaLASERbib`.

[61] E. H. N. Oakley. Signal filtering and data processing for laser rheometry. Technical report ?, Institute of Naval Medicine, 1993. †Langdon/bib `ga:Oakley93a`.

[62] Huai Wei, Zhi Tong, and Shuisheng Jian. Use of a genetic algorithm to optimize multistage erbium-doped fiber-amplifier system with complex structures. *Optical Express*, 12(4):531–544, 23. February 2004. `ge04aHuaiWei`.

[63] Krzysztof A. Cyran, Leszek R. Jaroszewicz, and Adam Mrozek. Optical fiber and genetically optimised computer-generated hologram force detection and classification. In Wieslaw L. Wolinski and Zdzislaw Jankiewicz, editors, *Laser Technology VI: Applications*, volume SPIE-4238, pages 234–238, ?, November 2000. The International Society for Optical Engineering. * www/SPIE Web `ga00aKCyran`.

[64] Sergio Vazquez-Montiel, Olac Fuentes, and J. Sanchez-Escobar. Obtaining the phase of noisy synthetic interferogram using an evolution strategy. In Vera L. Brudny, Silvia A. Ledesma, and Mario C. Marconi, editors, *4th Iberoamerican Meeting on Optics and 7th Latin American Meeting on Optics, Lasers, and Their Applications*, volume SPIE-4419, pages 261–264, ?, August 2001. The International Society for Optical Engineering. * www/SPIE Web `ga01aSVazquez-Montiel`.

[65] Jacob T. Robinson, Hod Lipson, and Michal Lipson. Strong light confinement in novel compact pseudo-random structures designed via evolutionary algorithms. In ?, editor, *Proceedings of the 2005 Quantum Electronics and Laser Science Conference (QELS)*, volume ?, pages 966–968, ?, 22.-27. May 2005. ? `ga05aJTRobinson`.

[66] Stefan Preble, Hod Lipson, and Michal Lipson. Using evolutionary algorithms for designing photonic crystals. In ?, editor, *Proceedings of the 2005 Conference on Lasers & Electro-Optics (CLEO)*, volume ?, pages 1485–1487, ?, May 2005. ? `ga05bSPreble`.

[67] H. Saito and S. Kirihara. Obtaining polyhedral model by integration of multiview images via genetic algorithms. In Kevin S. Harding and Donald J. Svetkoff, editors, *Three-Dimensional Imaging and Laser-Based Systems for Metrology and Inspection III*, volume SPIE-3204, pages ?–?, Pittsburgh, PA, 14. -15. October 1997. The International Society for Optical Engineering, Bellingham, WA. †prog. `ga97aHSaito`.

[68] Ryoichi Hajima, Nobukazu Takeda, Hirotada Ohashi, and Mamory Akiyama. Optimization of Wiggler magnets ordering using genetic algorithms. In *13th International Conference on Free Electron Laser*, volume 318 of *Nuclear Instruments & Methods in Physics Research Sector A-Accelerators, Spectrometers, Detectors and Associated Equipment*, pages 822–824, Santa Fe, NM, 25.-30. August 1991. `ga:Akiyama91a`.

[69] Tomasz Ostrowski. Adaptive filters design using genetic algorithm. In ?, editor, *Laser Technology IV*, volume SPIE-2202, pages 590–594, Szczecin-Swinoujscie (Poland), 26. -30. September 1993. The International Society for Optical Engineering, Bellingham, WA. * A95-26130 `ga:Ostrowski93a`.

[70] Jarmo T. Alander. Indexed bibliography of genetic algorithms in chemistry and physics. Report 94-1-CHEMPHYS, University of Vaasa, Department of Information Technology and Production Economics, 1995. (Subdivided 2002 into [71, 12]; available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/report94-1` file `gaCHEMPHYSbib.ps.Z`) `gaCHEMPHYSbib`.

[71] Jarmo T. Alander. Indexed bibliography of genetic algorithms in chemical sciences. Report 94-1-CHEM, University of Vaasa, Department of Engineering Sciences, 2002. (Previously included in [70]; available via anonymous `ftp` site `ftp.uwasa.fi` directory `cs/report94-1` file `gaCHEMbib.ps.Z`) `gaCHEMbib`.

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, BA = Biological 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, PA = Physics Abstracts, PubMed = National Library of Medicine, 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.

Vaasa Genetic Algorithm Bibliography

Search & Optimise

Main features:

- **Over 20,000 references to published papers**
- **by over 20,000 researchers.**
- **Available as over 70 special bibliographies online:** `ftp://ftp.uwasa.fi/cs/report94-1/ga*bib.pdf` **files.**
- **Covers all sciences and engineering fields, from basic theory to applications.**
- **Several indexes and statistical summaries.**
- **See what problems evolution can solve for you!**

Global optimisation and search heuristics called genetic algorithm mimics evolution in nature using recombination and selection from a set of solution trials called population. One of the most prominent attractive features of genetic algorithms from the practical point of view of software techniques is their simplicity, which makes them easy to implement and tailor to solve practical search and optimisation problems.

In spite of the seemingly simple processing, the genetic algorithms are good at solving some problems that are known to be hard. The simplicity, generality, flexibility, parallelism, and the good problem solving capability have made genetic algorithm very popular among various disciplines desperately searching methods to solve difficult optimisation problems.

Observe that our server has also a selection of our papers on genetic algorithms and other compuational topics. See our bibliographies or file `ftp.uwasa.fi/cs/README` for further details.

file	# refs	*updated*	*contents*
ga90bib.ps.Z			GA in 1990
⋮	⋮	⋮	⋮
ga02bib.ps.Z	557		GA in 2002
gaACOUSTICSbib.pdf	181	2008/03/19	GA in acoustics (**new: March 2008**)
gaAIbib.pdf	2402	2007/11/01	GA in artificial intelligence
gaAERObib.pdf	784	2004/06/01	GA in aerospace
gaAGRObib.pdf	102	2006/02/06	GA in agriculture (**new**)
gaALIFEbib.pdf	171	2003/07/09	GA in artificial life
gaARTbib.pdf	142	2003/07/09	GA in art and music
gaAUSbib.pdf	659	2008/05/22	GA in Australia and New Zealand
gaBASICSbib.pdf	1040	2008/08/13	Basics of GA
gaBIObib.pdf	1358	2008/08/11	GA in biosciences including medicine
gaCADbib.pdf	1314	2008/08/18	GA in Computer Aided Design
gaCHEMbib.pdf	886	2004/09/20	GA in chemical sciences ; previously in gaCHEMPHYSbib.ps.Z
gaCHEMPHYSbib.ps.Z	2277		GA in chemistry and physics; divided into gaCHEMbib.ps.Z and gaPHY
gaCIVILbib.pdf	1007	2008/03/20	GA in civil, structural, and mechanical engineering
gaCODEbib.pdf	377	2008/03/20	GA coding
gaCOEVObib.ps.Z	220	2006/03/27	co- and differential evolution GA(**new**)
gaCONTROLbib.ps.Z	1766	2008/03/12	GA in control and process engineering
gaCSbib.ps.Z	1453	2008/03/20	GA in comp. sci. (incl. databases, /mining, software testing and GP)
gaEARLYbib.ps.Z	723	2008/03/12	GA in yearly yeas (upto 1989) **new**
gaEAST-EURObib.ps.Z	679	2003/07/09	GA in the Eastern Europe
gaECObib.pdf	1503	2008/03/20	GA in economics and finance
gaECOLbib.pdf	124	2008/08/21	GA in ecology and biodiversity (**new:** 1.8.2008)
gaELMAbib.pdf	481	2008/03/20	GA in electromagnetics
gaESbib.pdf	464	2008/08/13	Evolution strategies
gaFAR-EASTbib.ps.Z	2066	2003/07/09	GA in the Far East (excl. Japan)
gaFEMbib.pdf	73	2008/08/18	GA & FEM (**new May 2008**)
gaFRAbib.ps.Z	462	2003/07/09	GA in France
gaFTPbib.ps.Z	1353	2003/07/09	GA papers available via web (ftp and www)
gaFUZZYbib.ps.Z	1453	2008/03/11	GA and fuzzy logic
gaGEObib.ps.Z	312	2005/06/30	GA in geosciences
gaGERbib.ps.Z	1586	2004/09/22	GA in Germany, Austria, and Switzerland
gaGPbib.ps.Z	971	2008/08/13	genetic programming
gaIMPLEbib.ps.Z	1291	2003/07/09	implementations of GA
gaINDIAbib.ps.Z	276	2003/05/23	GA in India
gaINVERSEbib.ps.Z	244	2008/08/11	GA in inverse problems (**new: Aug 2007**)
gaISbib.ps.Z	81	2007/11/01	immune systems
gaJAPANbib.ps.Z	2404	2008/05/22	GA in Japan
gaLCSbib.ps.Z	211	2008/08/13	Learning Classifier Systems
gaLASERbib.ps.Z	57	2008/08/27	GA and lasers (**new: April 2008**)
gaLATINbib.ps.Z	649	2003/07/09	GA in Latin America, Portugal & Spain
gaLOGISTICSbib.ps.Z	630	2003/07/09	GA in logistics (incl. TSP)
gaMANUbib.ps.Z			GA in manufacturing
gaMATHbib.ps.Z	770	2003/07/09	GA in mathematics
gaMEDICINEbib.ps.Z	540	2008/07/17	GA in medicine (**new: Nov 2007**)
gaMEDITERbib.ps.Z	1810	2003/07/09	GA in the Mediterranean
gaMICRObib.ps.Z	83	2008/03/31	GA in microscopy & microsystems (**new: March 2008**) gaMILbib.ps
111	2005/01/25	GA in military applications	
gaMLbib.ps.Z	897	2007/11/02	GA in machine learning **new**
gaMSEbib.ps.Z	490	2008/06/11	GA in materials **new**
gaNANObib.ps.Z	109	2008/04/07	GA in nanotechnology **new**
gaNIRbib.ps.Z	163	2007/08/23	GA in NIRS (spectroscopy) **new**
gaNNbib.ps.Z	1800	2008/03/12	GA in neural networks
gaNORDICbib.ps.Z	940	2008/08/21	GA in Nordic countries
gaOPTICSbib.ps.Z	1643	2008/07/28	GA in optics and image processing
gaOPTIMIbib.ps.Z	923	2003/07/09	GA and optimization (only a few refs)
gaORbib.ps.Z	1662	2008/08/14	GA in operations research

...table continues on the next page...

file	# refs	*updated*	*contents*
`gaPARAbib.ps.Z`	766	2003/12/16	Parallel and distributed GA
`gaPARETObib.ps.Z`	406	2003/07/09	Pareto optimization
`gaPATENTbib.ps.Z`	458	2003/07/09	GA patents
`gaPATTERNbib.ps.Z`	1528	2007/11/06	GA in pattern recognition incl. LCS (**new**)
`gaPHYSbib.ps.Z`	2313	2008/04/07	GA in physical sciences ; previously in `gaCHEMPHYSbib.ps.Z`
`gaPIEZObib.ps.Z`	51	2008/03/26	GA & piezo (**new: March 2008)**
`gaPOWERbib.ps.Z`	940	2008/08/21	GA in power engineering
`gaPROTEINbib.ps.Z`	491	2008/03/12	GA in protein research
`gaQCbib.ps.Z`	539	2008/03/11	quantum computing
`gaREMOTEbib.pdf`	275	2008/08/11	GA in remote sensing (**new:** 1.8.2008)
`gaROBOTbib.pdf`	745	2007/11/01	GA in robotics
`gaSAbib.pdf`	307	2003/07/09	GA and simulated annealing
`gaSCHEDULINGbib.pdf`	785	2006/09/06	GA in scheduling
`gaSELECTIONbib.ps.Z`	273	2007/09/20	Selection in GAs (**new**)
`gaSIGNALbib.ps.Z`	2230	2008/03/11	GA in signal and image processing
`gaSIMULAbib.ps.Z`	939	2003/07/09	GA in simulation
`gaTELEbib.ps.Z`	784	2004/02/26	GA in telecom
`gaTHEORYbib.ps.Z`	2483	2008/08/13	Theory and analysis of GA
`gaTHESESbib.ps.Z`	556	2008/03/12	PhD etc theses
`gaUKbib.ps.Z`	1998	2008/05/22	GA in United Kingdom
`gaVLSIbib.ps.Z`	806	2008/04/07	GA in electronics, VLSI design and testing

Table B.1: Indexed genetic algorithm special bibliographies available online in directory `ftp://ftp.uwasa.fi/cs/report94-1`. New updates also as `.pdf` files.