An Indexed Bibliography of Genetic Algorithms in Power Engineering

compiled by

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Trademarks

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 *.

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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 currently contains over 3000 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
- CCA: *Computer & Control Abstracts:* Jan. 1992 – Dec. 1994
- CTI: *Current Technology Index* Jan./Feb. 1993 – Jan./Feb. 1994
- DAI: *Dissertation Abstracts International:* Vol. 53 No. 1 – Vol. 55 No. 4 (1994)
- EEA: *Electrical & Electronics Abstracts:* Jan. 1991 – Dec. 1994
- P: *Index to Scientific & Technical Proceedings:* Jan. 1986 – Feb. 1995 (except Nov. 1994)
- EI A: *The Engineering Index Annual:* 1987 – 1992
- EI M: *The Engineering Index Monthly:* Jan. 1993 – Dec. 1994

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, 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, 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 table 1.1 gives the queries that have been used to extract this bibliography.

string	*field*	*class*
`engineering /power`	`ANNOTE`	Power engineering
`Power`	`JOURNAL`	Power engineering journal article

Table 1.1: Queries used to extract this subbibliography from the main one.

This bibliography 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 in power engineering research community and others who are interested in this rapidly growing area of genetic algorithms.

1.1 How to get this report via Internet?

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

media	*country*	*site*	*directory*	*file*
`ftp`	Finland	`ftp.uwasa.fi`	`/cs/report94-1`	`gaPOWERbib.ps.Z`
`www`	Finland	`http://www.cs.hut.fi`	`~ja/gaPOWERbib`	`gaPOWERbib.html`

Observe that these versions may be somewhat different and perhaps reduced as compared to this volume that you are now reading.

1.2 Acknowledgement

The editor wants to acknowledge all who have kindly supplied references, papers and other information on genetic algorithms in power engineering literature. The editor also wants to acknowledge Elizabeth Heap-Talvela for her kind proofreading of the manuscript of this bibliography.

Chapter 2

Statistical summaries

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

References to each engineering area are listed below:

- **Power engineering** 44 references ([7]-[50])
- **Power engineering journal article** 5 references ([51]-[55])

Observe that each reference is included (by the computer) only to one class (see also the queries for classification in table 1.1).

2.1 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 2.1 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*
part of a collection	1
journal article	24
proceedings article	20
report	2
PhD thesis	1
MSc thesis	1
total	49

Table 2.1: Distribution of publication type.

2.2 Annual distribution

Table 2.2 gives the number of genetic algorithms in power engineering papers published annually. The annual distribution is also shown in fig. 2.1. The average annual growth of GA papers has been approximately 40 % during almost the last twenty years.

year	*items*	*year*	*items*
1978	1	1979	0
1980	0	1981	0
1982	1	1983	0
1984	0	1985	1
1986	0	1987	1
1988	0	1989	0
1990	1	1991	4
1992	4	1993	17
1994	18	1995	1
total			49

Table 2.2: Annual distribution of contributions.

2.3 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 2.3.

engineering /power	41
optimization	5
CAD	5
others	99

Table 2.3: The most popular subjects.

2.4 Authors

Table 2.4 gives the most productive authors.

total number of authors	86
1 author	4
4 authors	3
8 authors	2
72 authors	1

Table 2.4: The most productive genetic algorithms in power engineering authors.

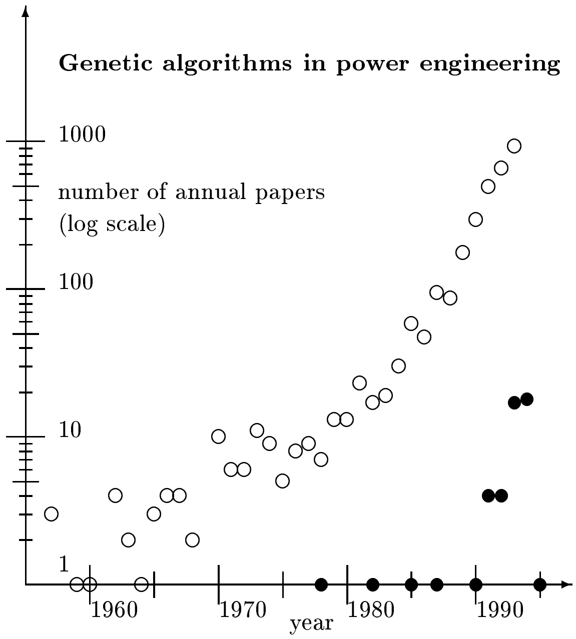

Figure 2.1: The number of **genetic algorithms in power engineering** (•) ∘ = total GA papers.

2.5 Conclusions and future

The editor believes that this bibliography contains references to most genetic algorithms in power engineering contributions upto and including the year 1994 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 3

Indexes

3.1 Books

The following list contains all items classified as books.

- none

3.2 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.

Electr. Power Syst. Res. (Switzerland), [21]

Electric Power Systems Research, [52]

IEE Proc., Gener. Transm. Distrib. (UK), [8]

IEE Proceedings, Generation, Transmission and Distrib. (UK), [13, 24]

IEEE Transaction on Power Systems, [12]

IEEE Transactions of Power Delivery, [34]

IEEE Transactions on Energy Conversion, [15]

IEEE Transactions on Power Delivery, [51]

IEEE Transactions on Power Systems, [22, 31, 53, 54]

Intelligent Systems Engineering, [40]

International Journal of Electrical Power Energy Systems (UK), [30]

Journal of Computing in Civil Engineering, [35]

Journal of Engineering for Power, [55]

Journal of Wind Engineering and Industrial Aerodynamics, [19]

Proc. CSEE (China), [10, 16]

Transactions of the ASME, [36]

Transactions of the Institute of Electrical Engineers of Japan B, [9, 38]

Transactions of the Institute of Electrical Engineers of Japan C, [45]

total 24 articles in 18 journals

3.3 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.

3.3.1 PhD theses

Case Western Reserve University, [23]

3.3.2 Master's theses

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

Auburn University, [32]

3.4 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.

Linköping University, [29]

Technische Universität der Berlin, [41]

total 2 reports in 2 institutes

3.5 Patents

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

- none

3.6 Crossreferences

The following table contains the references to the proceedings having genetic algorithms in power engineering articles and references to these articles.

in [56],	[17, 18]
in [57],	[49]
in [58],	[48]

3.7 Authors

The following list contains all genetic algorithms in power engineering authors and references to their known contributions.

Adermann, H.-J.,	[26]
Akimoto, Y.,	[27]
Axelsson, Jakob,	[28, 29]
Bakirtzis, A. G.,	[25]
Bakirtzis, A.,	[8, 7]
Boone, G.,	[30]
Chiang, Hsiao-Dong,	[30]
Chu, K. H.,	[14]
Dasgupta, Dipankar,	[24, 33]
Dinjiang, Huang,	[16]
Diviacco, B.,	[19]
El-Hawary, M. E.,	[31]
Fukuyama, Y.,	[9]
Fushuan, Wen,	[10]
Germay, Noël,	[52]
Goldberg, David E.,	[35]
Gregory, B. A.,	[36]
Haida, T.,	[27]
Heine, Steffen,	[11]
Horiguchi, T.,	[43, 44]
Iba, Kenji,	[12, 38, 39]
Inoue, T.,	[49]
Inuiguchi, M.,	[49]
Ishihara, Toshihisa,	[53]
Izui, Y.,	[37]
Jinjiang, Yu,	[16]
Kazarlis, S.,	[7]
Kazarlis, Spyros,	[8]
Kazarlis, Syros A.,	[25]
Kierman, L.,	[40]
Kitagawa, Minoru,	[46, 53, 47]
Kuo, Chie Hsiung,	[35]
Kurosaka, S.,	[45]
Lai, L. L.,	[14]
Lansberry, John E.,	[15]
Liutao, Wei,	[16]
Ma, J. T.,	[17, 20]
Maifeld, T. T.,	[21]
Markwich, P.,	[41]
McGregor, Douglas R.,	[24]
Menth, Stefan,	[28]
Miyamoto, Y.,	[45]
Miyatake, T.,	[45]
Mori, Hiroyuki,	[18, 42, 43, 44]
Mori, Y.,	[45]
Mosetti, G.,	[19]
Nara, Koichi,	[46, 53, 47]
Ndeh-Che, F.,	[14]
Neumann, Ingo,	[11]
Pahwa, Anil,	[22]
Parks, G. T.,	[48]
Petridis, V.,	[8, 7, 25]
Poloni, C.,	[19]
Poon, P. W.,	[48]
Qingchuan, Zeng,	[16]
Rahman, Saifur,	[54]
Richards, G. G.,	[34]
Richards, Gill G.,	[51]
Sakawa, M.,	[49]
Satoh, T.,	[46]
Semmler, Klaus,	[28]
Sheble, G. B.,	[21]
Sheble, Gerald B.,	[31]
Shiose, Atsushi,	[53]
Shiromaru, I.,	[49]
Sonnenschein, H.,	[55]
Suginohara, N.,	[49]
Sundhararajan, Srinivasan,	[22]
Swarup, K. S.,	[37]
Takeda, K.,	[42]
Tiebing, Jiang,	[16]
Tong, Siu Shing,	[36]
Ueki, Y.,	[9]
Utaka, J.,	[49]
Walters, David C.,	[31, 32]
Warwick, Kevin,	[40]
Wong, K. P.,	[13]
Wong, Y. W.,	[13]
Wozniak, L.,	[15]
Wright, Ted,	[23]
Wu, Q. H.,	[17, 20]
Yang, Hanqing Q.,	[51]
Yang, H.,	[34]
Yin, Xiaodong,	[52, 50]
Yoshimi, M.,	[37]
Zhenxiang, Han,	[10]

total 49 articles by 86 different authors

3.8 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.

3.9 Annual index: 1957-1994

The following table gives references to the contributions published during the period 1957-1994.

1978,	[41]
1982,	[55]
1985,	[26]
1987,	[35]
1990,	[36]
1991,	[27, 32, 52, 46]
1992,	[42, 43, 53, 48]
1993,	[28, 29, 30, 31, 33, 51, 34, 37, 38, 39, 40, 44, 45, 47, 54, 49, 50]
1994,	[7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24]
1995,	[25]

Chapter 4

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.

[40] **Adaptive** alarm processor for fault diagnosis on power transmission networks
[15] • hydrogenerator governor tuning with a GA
[40] **alarm** Adaptive • processor for fault diagnosis on power transmission networks
[39] **allocation** Opt. VAr • by GA
[10] **annealing** Fault section estimation in power syst. using GA and simulated •
[16] **application** A new heuristic GA and its • in solution of the unit commitment
[9] – An • of GA to service restoration in distr. syst.
[32] – An • of GAs to the economic dispatch of power generation
[17] • of evol. prog. to opt. reactive power dispatch
[50] • of GAs to multiple load flow solution problem in electrical power syst.
[54] **Artificial intelligence** in electric power syst. : a survey of the Japanese industry
[36] – Turbine preliminary design using • and numerical opt.
[55] **balance** A modular opt. calculation method of power station energy • and plat efficiency
[55] **calculation** A modular opt. • method of power station energy balance and plat efficiency
[22] **capacitors** Opt. sel. of • for radial distributions syst. using a GA
[30] **capasitor** Opt. • placement in distribution syst. by GA
[41] **Clausius-Rankine-Prozesses** Der thermische Wasserstrahlanrieb auf der Grundlage des offenen •
[7] **commitment** A GA solution to the unit • problem
[16] – A new heuristic GA and its appl. in solution of the unit •
[26] – Treatment of integral contingent conditions in optimum power plant •
[33] – Unit • in thermal power generation using GAs
[26] **conditions** Treatment of integral contingent • in optimum power plant commitment
[26] **contingent** Treatment of integral • conditions in optimum power plant commitment
[47] **copper** Distribution syst. • and iron loss minimization by GA
[48] **core** Opt. PWR reload • design
[42] **decomposition** Power syst. • using a simulated evol. technique
[34] **design** Distribution syst. harmonic worst case • using a GA
[51] – Distribution-syst. harmonic worst-case • using a GA
[28] – GAs in industrial •
[14] – Modelling, • and simulation of generator excitation syst. by using object-oriented techniques and GAs
[48] – Opt. PWR reload core •
[36] – Turbine preliminary • using artificial intelligence and numerical opt.
[29] – Turbine preliminary • using GAs
[40] **diagnosis** Adaptive alarm processor for fault • on power transmission networks
[32] **dispatch** An appl. of GAs to the economic • of power generation
[17] – Appl. of evol. prog. to opt. reactive power •
[8] – GA solution to the economic • problem
[13] – Gen. and gen. /simulated-annealing appr. to economic •
[20] – Gen. search for opt. reactive power • of power syst.
[37] – Opt. economic power • using GAs
[44] **dispatching** A GA based appr. to economic load •
[43] – A method for economic load • using a GA
[9] **distributed** An appl. of GA to service restoration in • syst.
[53] **distribution** Impl. of GA for • syst. loss minimum re-configuration
[34] • syst. harmonic worst case design using a GA
[30] – Opt. capasitor placement in • syst. by GA
[47] **Distribution systems** copper and iron loss minimization by GA
[46] • loss minimum re-configuration by GA
[22] **distributions** Opt. sel. of capacitors for radial • syst. using a GA
[51] **Distribution-system** harmonic worst-case design using a GA
[45] **dynamic** A parameter tuning for • simulation of power plants using GAs
[44] **economic** A GA based appr. to • load dispatching
[43] – A method for • load dispatching using a GA
[32] – An appl. of GAs to the • dispatch of power generation
[8] – GA solution to the • dispatch problem
[13] – Gen. and gen. /simulated-annealing appr. to • dispatch
[37] – Opt. • power dispatch using GAs
[31] **economic-dispatch** GA solution of • with valve point loading
[55] **efficiency** A modular opt. calculation method of power station energy balance and plat •
[54] **electric** Artificial intelligence in • power syst. : a survey of the Japanese industry
[18] **electric power** A GA-based method for opt. topological observability index in • networks
[50] **electrical** Appl. of GAs to multiple load flow solution problem in • power syst.
[55] **energy** A modular opt. calculation method of power station • balance and plat efficiency
[10] **estimation** Fault section • in power syst. using GA and SA
[42] **evolution** Power syst. decomposition using a simulated • technique
[11] **evolutionary** Opt. load forecast models using an • alg.
[17] **evolutionary programming** Appl. of • to opt. reactive power dispatch
[14] **excitation** Modelling, design and simulation of generator • syst. by using object-oriented techniques and GAs
[21] **expert system** Unit commitment by GA and •
[40] **fault** Adaptive alarm processor for • diagnosis on power transmission networks
[10] • section estimation in power syst. using GA and SA
[50] **flow** Appl. of GAs to multiple load • solution problem in electrical power syst.
[52] – Investigations on solving the load • problem by GAs
[49] **fuzzy** Hot parts operating schedule of gas turbines by GAs and • satisficing methods

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] S. Kazarlis, A. Bakirtzis, and V. Petridis. A genetic algorithm solution to the unit commitment problem. In *Proceedings of the IEEE PES Winter 94-95 Meeting*, page ?, ?, ? 1994. IEEE, New York. (accepted for publication in)†(Petridis) ga94Kazarlis.

[8] A. Bakirtzis, V. Petridis, and Spyros Kazarlis. Genetic algorithm solution to the economic dispatch problem. *IEE Proc., Gener. Transm. Distrib. (UK)*, 141(4):377–382, July 1994. (available via anonymous ftp cite elecserv directory /pub file dispatch.ps.Z) ga94aBakirtzis.

[9] Y. Fukuyama and Y. Ueki. An application of genetic algorithm to service restoration in distributed system. *Transactions of the Institute of Electrical Engineers of Japan B*, 114-B(4):361–366, April 1994. (in Japanese)†(EEA 78080/94) ga94aFukuyama.

[10] Wen Fushuan and Han Zhenxiang. Fault section estimation in power systems using genetic algorithm and simulated annealing. *Proc. CSEE (China)*, 14(3):29–35, May 1994. (in Chinese)†(EI M172021/94 EEA 77822/94) ga94aFushuan.

[11] Steffen Heine and Ingo Neumann. Optimizing load forecast models using an evolutionary algorithm. In *Proceedings of the Second European Congress on Intelligent Techniques and Soft Computing (EUFIT'94)*, volume 3, pages 1690–1694, Aachen (Germany), 20.-23. September 1994. ELITE-Foundation. ga94aHeine.

[12] Kenji Iba. Reactive power optimization by genetic algorithm. *IEEE Transaction on Power Systems*, 9(2):685–692, May 1994. ga94aIba.

[13] K. P. Wong and Y. W. Wong. Genetic and genetic/simulated-annealing approaches to economic dispatch. *IEE Proceedings, Generation, Transmission and Distrib. (UK)*, 141(5):507–513, September 1994. ga94aKPWong.

[14] L. L. Lai, F. Ndeh-Che, and K. H. Chu. Modelling, design and simulation of generator excitation system by using object-oriented techniques and genetic algorithms. In ?, editor, *Proceedings of the First International Power Electronics and Motion Control Conference (IPEMC'94)*, volume 2, pages 1099–1104, Beijing (China), 27.-30. June 1994. International Academic Publishers, Beijing (China). †(EEA 100079/94) ga94aLai.

[15] John E. Lansberry and L. Wozniak. Adaptive hydrogenerator governor tuning with a genetic algorithm. *IEEE Transactions on Energy Conversion*, 9(1):179–185, March 1994. ga94aLansberry.

[16] Wei Liutao, Zeng Qingchuan, Jiang Tiebing, Yu Jinjiang, and Huang Dinjiang. A new heuristic genetic algorithm and its application in solution of the unit commitment. *Proc. CSEE (China)*, 14(2):67–72, March 1994. (in Chinese)†(EEA 53701/94) ga94aLiutao.

[17] J. T. Ma and Q. H. Wu. Application of evolutionary programming to optimal reactive power dispatch. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [56], pages 730–735. ga94aMa.

[18] Hiroyuki Mori. A GA-based method for optimizing topological observability index in electric power networks. In *Proceedings of the First IEEE Conference on Evolutionary Computation* [56], pages 565–568. ga94aMori.

[19] G. Mosetti, C. Poloni, and B. Diviacco. Optimization of wind turbine positioning in large windfarms by means of genetic algorithm. *Journal of Wind Engineering and Industrial Aerodynamics*, 51(1):105–116, January 1994. †(EI M089713/94 CC ET et AS Vol. 25 No. 14 /94) ga94aMosetti.

[20] Q. H. Wu and J. T. Ma. Genetic search for optimal reactive power dispatch of power systems. In *International Conference on Control'94*, volume 1, pages 717–722, Coventry (UK), 21.-24. March 1994. IEE, London. †(CCA 53057/94) ga94aQHWu.

[21] G. B. Sheble and T. T. Maifeld. Unit commitment by genetic algorithm and expert system. *Electr. Power Syst. Res. (Switzerland)*, 30(2):115–121, July-August 1994. †(EEA 99420/94) `ga94aSheble`.

[22] Srinivasan Sundhararajan and Anil Pahwa. Optimal selection of capacitors for radial distributions systems using a genetic algorithm. *IEEE Transactions on Power Systems*, 9(3):1499–1507, August 1994. `ga94aSundhararajan`.

[23] 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`.

[24] Dipankar Dasgupta and Douglas R. McGregor. Thermal unit commitment using genetic algorithms. *IEE Proceedings, Generation, Transmission and Distrib. (UK)*, 141(5):459–465, September 1994. `ga94cDasgupta`.

[25] Syros A. Kazarlis, A. G. Bakirtzis, and V. Petridis. A genetic algorithm solution to the unit commitment problem. In *Proceedings of the IEEE Power Engineering Winter Meeting*, volume ?, page ?, New York, January 1995. IEEE, New York. (available via anonymous `ftp` cite `elecserv.eng.auth.gr` directory `/pub` file `unitcom.ps.Z`) `ga95aKazarlis`.

[26] H.-J. Adermann. Treatment of integral contingent conditions in optimum power plant commitment. In H. J. Wacker, editor, *Applied Optimization Techniques in Energy Problems*, pages 1–18. Teubner, Stuttgart, 1985. †([6]) `ga:Adermann85`.

[27] T. Haida and Y. Akimoto. Genetic algorithms approach to voltage optimization. In M. A. El-Sharkawi and R. J. Marks, editors, *Proceedings of the First International Forum on Applications of Neural Networks to Power Systems (ANNPS'91)*, pages 139–143, Seattle, WA, 23.-26. July 1991. IEEE, New York. †(CCA 20368/93 EEA 26255/93) `ga:Akimoto91`.

[28] Jakob Axelsson, Stefan Menth, and Klaus Semmler. Genetic algorithms in industrial design. In *Proceedings, Fifth International Conference on Tools with Artificial Intelligence TAI'93*, pages 64–67, Boston, MA, 8.-11. November 1993. IEEE Computer Society Press, Los Alamitos, CA. `ga:Axelsson93a`.

[29] Jakob Axelsson. Turbine preliminary design using genetic algorithms. Technical Report LiTH-IDA-Ex-9302, Linköping University, Sweden, 1993. `ga:Axelsson93b`.

[30] G. Boone and Hsiao-Dong Chiang. Optimal capasitor placement in distribution systems by genetic algorithm. *International Journal of Electrical Power Energy Systems (UK)*, 15(3):155–162, June 1993. †(EEA 58103/93 EI 093088/94) `ga:Boone93a`.

[31] David C. Walters, Gerald B. Sheble, and M. E. El-Hawary. Genetic algorithm solution of economic-dispatch with valve point loading. *IEEE Transactions on Power Systems*, 8(3):1325–1332, 1993. (Proceedings of the 1992 Summer Meeting of the Power-Engineering-Society of IEEE, Seattle, WA, 12.-16. Jul. 1992) `ga:DCWalters93a`.

[32] David C. Walters. An application of genetic algorithms to the economic dispatch of power generation. Master's thesis, Auburn University, 1991. †(Walters93a) `ga:DCWaltersMSthesis`.

[33] Dipankar Dasgupta. Unit commitment in thermal power generation using genetic algorithms. In P. W. H. Chung, G. Lovegrove, and M. Ali, editors, *Proceedings of the Sixth International Conference on Industrial & Engineering Applications of Artificial Intelligence and Expert Systems (IEA/AIE-93)*, pages 374–383, Edinburgh, Scotland, 1.-4. June 1993. Gordon and Breach Science, Langhorne. †(P62941/95) `ga:Dasgupta93a`.

[34] G. G. Richards and H. Yang. Distribution system harmonic worst case design using a genetic algorithm. *IEEE Transactions of Power Delivery*, 8(3):1484–1491, July 1993. `ga:GGRichards93a`.

[35] David E. Goldberg and Chie Hsiung Kuo. Genetic algorithms in pipeline optimization. *Journal of Computing in Civil Engineering*, 1(2):128–141, April 1987. `ga:Goldberg87i`.

[36] Siu Shing Tong and B. A. Gregory. Turbine preliminary design using artificial intelligence and numerical optimization. *Transactions of the ASME*, 90-GT-148(?):?, ? 1990. †(Axelsson90a) `ga:Gregory90a`.

[37] M. Yoshimi, K. S. Swarup, and Y. Izui. Optimal economic power dispatch using genetic algorithms. In *Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems (ANNPS'93)*, pages 157–162, Yokohama (Japan), April 1993. IEEE, New York. †(EEA 24770/94) `ga:Izui93a`.

[38] Kenji Iba. Reactive power planning in large power systems using genetic algorithms. *Transactions of the Institute of Electrical Engineers of Japan B*, 113-B(8):865–872, August 1993. (in Japanese)†(EEA 24858/94) `ga:KIba93b`.

[39] Kenji Iba. Optimal VAr allocation by genetic algorithm. In *Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems (ANNPS'93)*, pages 163–168, Yokohama (Japan), April 1993. IEEE, New York. †(EEA 24861/94) `ga:KIba93c`.

[40] L. Kierman and Kevin Warwick. Adaptive alarm processor for fault diagnosis on power transmission networks. *Intelligent Systems Engineering*, 2(1):25–37, 1993. †(EI M106851/93 EEA 52391/93) `ga:KWarwick93b`.

[41] P. Markwich. Der thermische Wasserstrahlanrieb auf der grundlage des offenen Clausius-Rankine-Prozesses. Technical report, Technische Universität der Berlin, 1978. †(BackBib) `ga:Markwich78`.

[42] Hiroyuki Mori and K. Takeda. Power system decomposition using a simulated evolution technique. In *Proceedings of the Second International Conference on Automation, Robotics and Computer Vision (ICARCV'92)*, volume 3, pages INV 11.2/1–5, Singapore, 16.-18. September 1992. Nanyang Technol. University, Singapore. †(CCA 18640/93 EEA 24734/94) `ga:Mori92a`.

[43] Hiroyuki Mori and T. Horiguchi. A method for economic load dispatching using a genetic algorithm. In *Proceedings of the Second International Conference on Automation, Robotics and Computer Vision (ICARCV'92)*, volume 3, pages INV 11.4/1–5, Singapore, 16.-18. September 1992. Nanyang Technol. University, Singapore. †(EEA 24736/94) `ga:Mori92b`.

[44] Hiroyuki Mori and T. Horiguchi. A genetic algorithm based approach to economic load dispatching. In *Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems (ANNPS'93)*, pages 145–150, Yokohama (Japan), April 1993. IEEE, New York. †(Mori93a EEA 24770/94) `ga:Mori93b`.

[45] Y. Miyamoto, T. Miyatake, S. Kurosaka, and Y. Mori. A parameter tuning for dynamic simulation of power plants using genetic algorithms. *Transactions of the Institute of Electrical Engineers of Japan C*, 113-D(12):1410–1415, December 1993. (in Japanese)†(EEA 60089/94 CCA 57025/94) `ga:Mori93c`.

[46] Koichi Nara, T. Satoh, and Minoru Kitagawa. Distribution systems loss minimum re-configuration by genetic algorithm. In ?, editor, *Proceedings of the 3rd Conference on Expert Systems Application to Power Systems*, pages 724–730, ?, ? 1991. ? †([?]) `ga:Nara91a`.

[47] Koichi Nara and Minoru Kitagawa. Distribution systems copper and iron loss minimization by genetic algorithm. In *Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems (ANNPS'93)*, pages 151–156, Yokohama (Japan), April 1993. IEEE, New York. †(EEA 24913/94) `ga:Nara93a`.

[48] P. W. Poon and G. T. Parks. Optimizing PWR reload core design. In Männer and Manderick [58], pages 371–380. `ga:Poon92a`.

[49] M. Sakawa, J. Utaka, M. Inuiguchi, I. Shiromaru, N. Suginohara, and T. Inoue. Hot parts operating schedule of gas turbines by genetic algorithms and fuzzy satisficing methods. In IJCNN'93 [57], pages 746–749. `ga:Sakawa93a`.

[50] Xiaodong Yin. Application of genetic algorithms to multiple load flow solution problem in electrical power systems. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, volume 4, pages 3734–3738, San Antonio, TX, 15.-17. December 1993. IEEE Control Systems Society. `ga:Yin93a`.

[51] Gill G. Richards and Hanqing Q. Yang. Distribution-system harmonic worst-case design using a genetic algorithm. *IEEE Transactions on Power Delivery*, 8(3):1484–1491, 1993. (in Proceedings of 1992 Summer Meeting of IEEE / Power-Engineering-Society, Seattle, WA, 12.-16. Jul.) `ga:GGRichards92b`.

[52] Xiaodong Yin and Noël Germay. Investigations on solving the load flow problem by genetic algorithms. *Electric Power Systems Research*, 22(3):151–163, December 1991. `ga:Germay91a`.

[53] Koichi Nara, Atsushi Shiose, Minoru Kitagawa, and Toshihisa Ishihara. Implementation of genetic algorithm for distribution systems loss minimum re-configuration. *IEEE Transactions on Power Systems*, 7(3):1044–1051, August 1992. `ga:Nara92a`.

[54] Saifur Rahman. Artificial intelligence in electric power systems: a survey of the Japanese industry. *IEEE Transactions on Power Systems*, 8(3):1211–1218, August 1993. `ga:Rahman93a`.

[55] H. Sonnenschein. A modular optimization calculation method of power station energy balance and plat efficiency. *Journal of Engineering for Power*, 104(?):255–259, 1982. †(BackBib) `ga:Sonnenschein82a`.

[56] IEEE. *Proceedings of the First IEEE Conference on Evolutionary Computation*, volume 2, Orlando, FL, 27.-29. June 1994. IEEE. `ga94ICCIEC2`.

[57] *IJCNN'93-NAGOYA Proceedings of 1993 International Joint Conference on Neural Networks*, Nagoya (Japan), 25.-29. October 1993. IEEE. `ga:IJCNN93`.

[58] R. Männer and B. Manderick, editors. *Parallel Problem Solving from Nature, 2*, Brussels, 28.-30. September 1992. Elsevier Science Publishers, Amsterdam. `ga:PPSN2`.

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.