

Erol Gelenbe *FIEEE FACM FIET*
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1 Degrees, Positions, Awards

- Turkish Citizen by birth, French Citizen by naturalisation.
- Degrees:
 - BSc.Eng. (High Honours), Middle East Technical University, Ankara,
 - MSc and PhD thesis on “Stochastic automata with structural restrictions”, New York University Polytechnic Institute (Brooklyn Poly), New York.
 - Doctorat d’État ès Sciences Mathématiques, with a thesis on “Modélisation de systèmes informatiques”, Université Pierre et Marie Curie (Paris VI), Jury: Jacques-Louis Lions (Chair), J. Arzac, R. Abrial, A. Bensoussan, A. Tortrat.
- Languages: Turkish, English, French, Italian.
- Professor at Imperial College, London (since March 2003), & Head of the Intelligent Systems and Networks Group which includes a Professor, two Emeritus Professors, a Visiting Professor, two Readers, two Senior Lecturers, one Lecturer, four Research Fellows, fifteen Research Assistants and some thirty PhD students.
- Recent consulting: General Dynamics UK Ltd (November 2003 – March 2009), Microsoft Research Cambridge (January-March 2009), BAE Systems Ltd (October – December 2009), Oxford University Press (since December 2007).
- Erol Gelenbe has mentored and graduated some 55 PhD students to date, of whom many are prominent in research and industry in Europe, North America, China, etc. (e.g. Francois Baccelli, Brigitte Plateau, Philippe Nain, Alain Jean-Marie, Andreas Stafylopatis, Jean-Michel Fourneau, Catherine Rosenberg, Xiaowen Mang, Rakesh Kushwaha, Zhen Liu, Yutao Feng, Anoop Ghanwani, Vijay Srinivasan). He has graduated seven PhD’s since joining Imperial College of whom three are in academia and four are in industry (three in the UK and one in the USA).
- Bibliometrics: Publish or Perish $h=43$ (some 6700 citations), Web of Science $h=27$ (some 1900 citations).
- Editorial Boards: Editor-in-Chief The Computer Journal, Editorial Board Member: *Proc. Royal Society A*, *Acta Informatica*, *Performance Evaluation*, *Computational Management Science*, Advisory Editor: *Operations Research*, *Annals of Telecommunications*, *Telecommunication Systems*. Former Editorial Boards: *IEEE Trans. on Software Engineering*, *Proceedings of the IEEE*.
- Previous positions:
 - University Chair Professor, Associate Dean of Engineering
Founding Director of the School of Electrical Engineering and Computer Science,
University of Central Florida, Orlando, 1998–2003.
 - Nello L. Teer (endowed Chair) Professor,
Electrical & Computer Engineering Dept. Head, Duke University, 1993–1998.
 - Advisor for Science and Technology,
French Minister for Universities, 1984–86.
 - Professor University of Paris-Orsay, the Paris-Descartes,
rising to top French rank (class exceptionnelle 2è échelon), 1979–2005
on leave of absence 1993–2005.

- Professeur Ordinaire (Chair Professor, Université de Liège, Belgium, 1974–1979.
- Directeur Scientifique, INRIA, 1972–1981.
- Election to Academies
 - Member of Turkish Academy of Sciences *http://www.tuba.gov.tr*
 - Member of Academia Europaea *http://www.acadeuro.org*
 - Member of French National Academy of Engineering (Académie des Technologies) *http://www.academie-technologies.fr*
- “Honoris Causa” Doctorates
 - *Doctorat en Sciences Honoris Causa*, Université Liège, Belgium, 2006.
 - *Honorary PhD*, Bogaziçi University, Istanbul, 2004.
 - *Dott. Ingegnere Honoris Causa in Ars Computandi*, University of Rome II, 1996.
- Scientific Prizes
 - *ACM SIGMETRICS Achievement Award* (2008), one of the ACM’s (Association for Computing Machinery) field awards. I am the first non-US citizen to receive this prize.
 - *Prix France-Telecom* (1996), one of the 10 “grand prix” of the French Academy of Science, awarded every two years. I was the first Computer Scientist to receive the award.
 - *Science Award of the Parlar Foundation* (1994), Ankara, Turkey.
- Decorations
 - Grande Ufficiale dell’Ordine della Stella della Solidarietà d’Italia (2007) *Knight Commander of the Order of the Star of Italy*
 - Commendatore all’Ordine del Merito della Repubblica (2005) (*Commander of Merit of the Republic of Italy*)
 - French honours of *Chevalier* (1992) and *Officier* (2001) *de l’Ordre National du Mérite*
 - French honour of *Chevalier de l’Ordre des Palmes Académiques* (2003).
- Fellowships and other awards
 - Fellow of ACM “In recognition of outstanding technical and professional achievements in information technology.”
 - Fellow IET (London)
 - Fellow IEEE “For leadership in the development of computer system performance evaluation.”
 - Other professional society awards: Silver Core Award (1980) of the International Federation of Information Processing Societies, IEEE Meritorious Service Award (1989), IEEE Computer Society Meritorious Service Award (1992), election to Sigma Xi, Eta Kappa Nu (Electrical Engineering Honor Society), Upsilon Pi Epsilon (Computer Science Honor Society).
 - Competitive Fellowships: Fulbright Fellow (1966-67), NATO Science Fellow (1967-68), Gordon McKay Fellow at Harvard (1974).

2 Research Activities and Grants at Imperial College 2003–2009

As Principal Investigator Received research grants including over £3.6 Million from UK sources with over £1.6 Million from EPSRC (similar to NSF), plus more than Euros 880,000 from the EU FP6 and FP7 programmes, including:

- UK Technology Strategy Board “SATURN: Self-organising Adaptive Technology underlying Resilient Networks”, (PI E.Gelenbe), £619,440: 1/11/2009-30/10/2012.

- EU FP7 “Fit4Green: Power Aware Cloud Computing”, (PI E. Gelenbe), *Euros* 350,000; 1/1/2010-6/30/2012.
- EU FP7 “DIESIS: Simulation of Distributed Infrastructures” (PI E. Gelenbe) *Euros* 200,000; 1/2/08-30/3/10.
- “Decentralised Data and Information Processing” (PI E. Gelenbe), EPSRC, funded at £1,095,031 (5 years starting 1/1/06) that develops probability models of systems of software agents.
- EPSRC CASE 06001308 “Quality of Information in Sensor Networks” (PI E. Gelenbe), £60,864 for 36 months starting 18/9/06.
- “Quality of Information in Sensor Networks” (PI E. Gelenbe). US-UK International Technology Alliance, in collaboration with IBM at £280,000 for 30 months starting 18/9/06.
- “HYPERION” (PI E. Gelenbe) funded by British Telecom with MoD within the DIF DTC Phase II at £453,000 for 36 months starting 1/4/06. It investigates the “Adaptive Network” techniques to provide stable and secure network infrastructures.
- “C2 Agents” (PI E. Gelenbe) funded by QinetiQ with MoD at £290,000 for 30 months starting on 1/10/06.
- “CASCADAS – Autonomic Communication Systems”, (PI: E. Gelenbe) European Union FP6, funded at Euros 450,000 (3 years starting 1/1/06).
- “Dynamic Infrastructure Protection – SATURN”, (PI: E. Gelenbe). BT and MoD funded £80,000 project (12 months, 1/5/2005 to 30/4/2006) that investigated techniques to help networks mitigate denial of service attacks.
- “Self-Aware Networks and Quality of Service” (PI: E. Gelenbe) from EPSRC funded at £524,000 (3 years, 1/1/2004 to 31/12/2006) which investigated the use of measurement based adaptation in order to offer network users a better level of Quality-of-Service.
- EU FP6 Project SAPAD, *Euros* 80,000 for two years (January 2005–December 2007).
- “Future Data Fusion Systems: Design and Demonstration” (PI E. Gelenbe) was funded by MoD within the DIF DTC at the level of £468,000 for 3 years starting 1/10/03. It investigated the use of intentionality in order to drive military decision making and order to better follow targets. This work was conducted with two UK companies: QinetiQ and General Dynamics UK.
- “Adaptive Networks” funded by MoD Award at the level of £55,000 for 3 years starting 1/10/03. This work was conducted with the UK company BT Exact.
- While at Imperial and until January 2005, I benefited from a \$ 75,000 per year grant from the U.S. Army Research Office’s Mathematics Division to study theoretical aspects of network quality of service.

3 Recent Keynotes and Seminars

- Computer Science Distinguished Lecture, Hong Kong Baptist University, 15th March, 2010: Product Form Solutions for Stochastic Networks: Discovery or Invention?
- Seminar Oxford University, 24th November 2009: Steps Towards Self-Aware Networks
- Keynote IEEE AINA Conference, Bradford, UK, 26th May 2009: Steps Towards Self-Aware Networks.
- Turkish Academy of Sciences, Istanbul Seminars, 23rd March 2009: Stochastic Models with Product Form Solution: Discovery or Invention?
- Plenary Keynote, IFIP World Computer Conference 2008 (one of two plenaries), Milan, 8th Sep. 2008: Auctions and Cognitive Networks

- Opening Plenary, ACM SIGMETRICS 2008 Conference, Annapolis, June 3rd 2008:
New Product Form Solutions for Stochastic Models: Discovery or Invention?
- Harvard University Initiative in Innovative Computing, 27th February 2008:
Spiked Neuronal Networks and Gene Regulatory Networks: a Common Stochastic Framework and Method of Solution [http : //iic.harvard.edu/seminars/022708.html](http://iic.harvard.edu/seminars/022708.html)
- MIT Laboratory for Information and Decision Sciences, 23rd Oct 2007:
The Cognitive Packet Network
- Colloquium Jacques Morgenstern, INRIA Sophia Antipolis, Oct. 11, 2007:
Réseaux de Neurones Impulsionnels et Réseaux Stochastiques
- Scuola Normale Superiore, Centro di Ricerca Matematica, Pisa, Sep 11-19, 2007:
Stochastic Networks and Internet Technology
- Laboratoire de Physique Théorique, Ecole Normale Supérieure, Paris, April 24, 2007:
Réseaux Stochastiques et Réseaux de Neurones (Stochastic networks and neural networks)",
- INRIA, Rocquencourt, April 5, 2007:
Fonctions Booléennes et Comportement Stationnaire de Réseaux Stochastiques
- Dalle Molle Institute for Artificial Intelligence, Lugano, February 19, 2007:
The Cognitive Packet Network Project at Imperial College

4 Selected Books

- P. Bouchet, M. Damestoy, E. Gelenbe, Ch. Parent, "Procédures de reprise dans les bases de données centralisées", *Monographie AFCET*, Editions Hommes et Techniques, Paris, 1978.
- E. Gelenbe, R. Marie, M. Métivier, J. Labetoulle, G. Pujolle and W. Stewart "Méthodes de modélisation de systèmes informatiques", *Monographie AFCET* Editions Hommes et Techniques, Paris, 1980.
- E. Gelenbe and I. Mitrani "Analysis and synthesis of computer systems", Imperial College Press, World Scientific (London and Singapore), 2nd Edition, 2010.
Japanese translation: Ohm-Sha Publishing Co., Tokyo 1988.
- Two chapters in "La Téléinformatique", Edited by C. Macchi and J.F. Guilbert, Dunod (Paris), 1979.
- E. Gelenbe and G. Pujolle "Introduction aux réseaux de files d'attente" Collection Scientifique et technique du CNET and Editions Eyrolles (Paris), 1982.
- W. Cellary, E. Gelenbe and J. Morzy "Concurrency control in distributed databases", North-Holland Pub. Co., Amsterdam, 1988.
- E. Gelenbe, "Multiprocessor performance", John Wiley & Sons, Chichester and New York, 1989.
- E. Gelenbe and G. Pujolle "Introduction to queueing networks", J. Wiley & Sons, Chichester and New York, 1986.
- E. Gelenbe and G. Pujolle "Introduction to queueing networks", J. Wiley & Sons, Chichester and New York, Expanded and Revised Second Edition 1998, 2nd Edition 2nd Printing 1999. Korean translation: Cheong Moon Gak Publishers, Seoul 2000.
- E. Gelenbe and Jean-Pierre Kahane (Editors) "Fundamental Concepts in Computer Science", World Scientific and Imperial College Press, Singapore, 2009.

5 Journal Papers until 2010

1. E. Gelenbe “Probabilistic automata with structural restrictions”, SWAT 1969 (IEEE Symp. on Switching and Automata Theory), also appeared as “On languages defined by linear probabilistic automata”, *Information and Control*, Vol. 16, 487-501, 1970.
2. E. Gelenbe “On the loop-free decomposition of stochastic finite-state systems”, *Information and Control*, Vol. 17, No. 5, 474-484, December 1970.
3. E. Gelenbe “A realizable model for stochastic sequential machines”, *IEEE Trans. Computers*, Vol. C-20, No. 2, 199-204, Feb. 1971.
4. E. Gelenbe, N. Rossi, “Uniform modular realisations and linear machines”, *IEEE Trans. Computers*, Vol. C-20, No. 12, 1616-1617, December 1971.
5. E. Gelenbe, “The 2/3 rule for dynamic storage allocation under equilibrium”, *Information Processing Letters*, Vol. 1, No. 2, pp. 59-60, 1971.
6. E. Gelenbe, P. Tiberio, “Multiprogrammazione e memoria virtuale”, *Alta Frequenza*, Vol. XLI, No. 7, pp. 487-503, July 1972.
7. E. Gelenbe “The distribution of a program in primary and fast buffer storage”, *Comm. ACM*, Vol. 16, No. 7, pp. 431-434, July 1973.
8. E. Gelenbe “An unified approach to the evaluation of a class of replacement algorithms”, *IEEE Trans. Computers*, Vol. C-22, No. 6, pp. 611-618, June 1973.
9. E. Gelenbe, J. Boekhorst, J. Kessels, “Minimizing wasted space in partitioned segmentation”, *Comm. ACM*, Vol. 16, No. 6, pp. 343-349, June 1973.
10. E. Gelenbe, P. Tiberio, J. Boekhorst “Page size in demand paging systems”, ACM-SIGMETRICS, First Symp. on System Performance Evaluation, also in *Acta Informatica*, Vol. 3, No. 1, pp. 1-23, January 1974.
11. E. Gelenbe, J. Lenfant, D. Potier, “Analyse d’un algorithme de gestion simultanée mémoire centrale-disque de pagination”, *Acta Informatica*, Vol. 3, pp. 321-345, 1974.
12. G. Fayolle, E. Gelenbe, J. Labetoulle, D. Bastin “The stability problem of broadcast packet switching networks”, *Acta Informatica*, Vol. 4, pp. 49-53, 1974.
13. E. Gelenbe, J. Lenfant, D. Potier “Response time of a disk to transfer of variable length”, *SIAM Journal on Computing*, Vol. 4, No. 4, pp. 461-473, December 1975.
14. E. Gelenbe “On approximate computer system models”, *Journal ACM*, Vol. 22, No. 2, pp. 261-269, April 1975.
15. M. Badel, E. Gelenbe, J. Leroudier, D. Potier “Adaptative optimization of a time-sharing system”, Invited paper *Proceedings of the IEEE* (Special issue on time-sharing systems), Vol. 63, No. 6, pp. 958-965, June 1975.
16. D. Potier, E. Gelenbe, J. Lenfant “Adaptative allocation of CPU quanta”, *Journal ACM*, Vol. 23, No. 1, pp. 97-102, January 1976.
17. E. Gelenbe, R. Muntz “Probabilistic models of computer systems - Part I”, *Acta Informatica*, Vol. 7, pp. 35-60, 1976.
18. E. Gelenbe, D. Derochette “Probabilistic behaviour of a computer system under intermittent failures”, *Comm. ACM*, Vol. 21, No. 6, pp. 493-499, June 1978.
19. E. Gelenbe, “A model of roll-back recovery with multiple checkpoints”, 2nd ACM Conference on Software Engineering, pp 251-255, October 1976, and appeared in Russian as “Model of information renewal by the method of multiple test-points”, *Avtomatika y Telemekhanika*, No. 4, pp. 142-151, 1979.

20. G. Fayolle, E. Gelenbe, J. Labetoulle "Stability and optimal control of the packet switching broadcast channel", *Journal ACM*, Vol. 24, No. 3, pp. 375-386, 1977.
21. G. Gelenbe, G. Pujolle "An approximation to the behaviour of a single queue in a network", *Acta Informatica*, Vol. 7, pp. 123-136, 1976.
22. Banh-Tri-An, E. Gelenbe, "Simulation et amélioration d'un canal de diffusion sous contrôle", *R.A.I.R.O. (Informatique)*, Vol. 11, No. 3, 301-321, 1977.
23. E. Gelenbe, A Kurinckx "Random injection control of multiprogramming in virtual memory", *IEEE Trans. on Software Eng.*, January 1978.
24. G. Fayolle, E. Gelenbe, G. Pujolle "An analytical evaluation of the performance of the "send-and-wait" protocol", *IEEE Trans. on Communications*, vol. COM-26, pp. 313-319 March 1978.
25. C. Adams, E. Gelenbe, J. Vicard "An experimentally validated model of the paging drum", *Acta Informatica*, Vol. 11 pp. 103-117, 1979.
26. E. Gelenbe "On the optimum check-point interval", *Journal ACM*, Vol. 26, No. 2, pp 259-270, April 1979.
27. P. Bouchet, E. Gelenbe, S. Tucci, "Le choix d'une architecture permettant la reprise sur erreur dans les systèmes de gestion de données" *R.A.I.R.O. Informatique*, No. 3, 1978.
28. E. Gelenbe, J. Labetoulle, G. Pujolle "Performance evaluation of the HDLC protocol", *Computer Networks*, vol. 2: 409-415, December 1978.
29. E. Gelenbe "Diffusion approximations: waiting times and batch arrivals *Acta Informatica*, Vol. 12, 285-303, (1979).
30. E. Gelenbe, K. Sevcik "Analysis of update synchronisation algorithms for Multiple copy data bases, *IEEE Trans on computers*, Vol. C-28, No. 10, pp. 737-747, Oct. 1979.
31. Boguslavskii, E. Gelenbe "A communication protocol and a problem of couples queues", *Podstawy Sterowania*, Tom 10, No. 3, 149-158, 1980.
32. E. Gelenbe, R. Iasnogorodski "A queue with server of walking type", *Annales de l'Institut Henry Poincaré, Série B (Probabilités et Statistiques)*, Vol. XVI, No. 1, 63-73, 1980.
33. E. Gelenbe, A. Kurinckx, I. Mitrani "The rate control policy for multiprogramming control", *Comm. ACM*, 1980.
34. E.G. Coffman, E. Gelenbe, B. Plateau "Optimisation of the number of copies in a distributed data base", *IEEE Trans. on Software Eng.*, Vol. SE-7, No. 1, 78-84, January 1981.
35. E. Gelenbe, A. Lichnewsky, A. Staphylopatis "Experience with the parallel solution of partial differential equations on a distributed computing system", *IEEE Trans. on Computers*, Vol. C-31, No. 12, pp. 1157-1164, December 1982.
36. E. Gelenbe, D. Gardy "On the size of projections I" *Information Processing Letters*, Vol. 14, No. 1, pp. 18-21, March 1982.
37. E.G. Coffman, H.O. Pollack, E. Gelenbe, R. Wood "Analysis of parallel read sequential write systems", *Performance Evaluation*, Vol. 1, pp. 62-69, 1981.
38. A. Chesnais, E. Gelenbe, I. Mitrani, "On the modelling of parallel access to shared data", *Comm. ACM*, Vol. 26, No. 3, pp. 196-202, March 1983.
39. E. Gelenbe, "Stationary deterministic flows", *Theoretical Computer Science*, Vol. 23, 107-128, 1983.
40. F. Baccelli, E. Gelenbe, B. Plateau, "An end to end approach to the resequencing problem", *Journal ACM*, Vol. 31, No. 3, pp. 474-485, July 1984.

41. E. Gelenbe, S. Tripathi, D. Finkel "Performance and reliability of a very large distributed system", Proc. ACM-SIGMETRICS Conference on system Performance Evaluation, Austin, Texas, August 1985. Also appeared in *Acta Informtica*, Vol. 23, 643-655, 1986.
42. E.G. Coffman, E. Gelenbe, E.N. Gilbert, "Analysis of a conveyor queue in a flexible manufacturing system", *Proceedings Performance 86* (IFIP and ACM Joint Conference on Computer Performance Modelling), Raleigh, NC, May 1986. Also appeared in *European Journal of Operations Research*, Vol, 35, 383-392, 1988.
43. E. Gelenbe, D. Finkel, "Stationary deterministic flow II: the single server queue" *Theoretical Computer Science*, Vol. 52, 269-280, 1987.
44. S. Tripathi, D. Finkel, E. Gelenbe "Load sharing in a distributed system with failures", *Acta Informatica*, Vol. 25 (1988), 677-689.
45. E. Gelenbe "Temps d'exécution asymptotique d'un programme parallèle", *Comptes-Rendus Acad. Sci. Paris*, t. 309, Série I (1989), 399-402.
46. E. Gelenbe "Réseaux stochastiques ouverts avec clients négatifs et positifs, et réseaux neuronaux", *Comptes-Rendus Acad. Sci. Paris*, t. 309, Série II (1989), 979-982.
47. E. Gelenbe "Random neural networks with positive and negative signals and product form solution", *Neural Computation*, Vol. 1, No. 4, pp 502-510, 1989.
48. J. Bourrelly, E. Gelenbe "Mémoires associatives: évaluation et architectures", *Comptes-Rendus Acad. Sci. Paris*, t. 309, Série II (1989), 523-526.
49. E. Gelenbe "Réseaux neuronaux aléatoires stables", *Comptes-Rendus Acad. Sci.*, t. 310, Série II, p. 177-180, 1990.
50. E. Gelenbe "Stability of the random neural networks", *Neural Computation*, Vol. 2, No. 2, pp 239-247, 1990.
51. E. Gelenbe, M. Hernandez "Optimum checkpoints with time dependent failures", *Acta Informatica*, Vol. 27, pp 519-531, 1990.
52. E. Gelenbe, C. Rosenberg "Queues with slowly varying arrival and service process," *Management Science*, Vol. 36, No. 8, August 1990.
53. E. Gelenbe, H. Guennouni "FLEXSIM: A Flexible manufacturing system simulator", *European Journal of Operations Research*, Vol. 53, pp 149-165 (1991).
54. E. Gelenbe "Distributed associative memory and the Computation of membership functions", *Information Sciences*, Vol. 57-58, pp 171-180 (1991).
55. E. Gelenbe "Product form queueing networks with negative and positive customers", *Journal of Applied Probability*, Vol. 28, 656-663 (1991).
56. E. Gelenbe, P. Glynn, K. Sigman "Queues with negative arrivals", *Journal of Applied Probability*, Vol. 28, pp 245-250, 1991.
57. A. Stafylopatis, E. Gelenbe "Synchronisation in parallel processing of finite sequences", *IEE Proceedings-E*, Vol. 138, No. 5, pp 329-334, September 1991.
58. E. Gelenbe, S. Tucci "Performances d'un système informatique dupliqué", *Comptes-Rendus Acad. Sci.*, t 312, Série II, pp. 27-30, 1991.
59. E. Gelenbe, M. Schassberger "Stability of product form G-Networks", *Probability in the Engineering and Informational Sciences*, 6, pp 271-276, 1992.
60. V. Atalay, E. Gelenbe, N. Yalabik "The random neural network model for texture generation", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 6, No. 1, pp 131-141, 1992.

61. E. Gelenbe "Une généralisation probabiliste du problème SAT", *Comptes-Rendus Acad. Sci.*, t 313, Série II, pp 339-342, 1992.
62. Volkan Atalay, Erol Gelenbe "Parallel algorithm for colour texture generation using the random neural network model", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 6, No. 2 & 3, pp 437-446, 1992.
63. E. Gelenbe "G-networks with instantaneous customer movement", *Journal of Applied Probability*, 30 (3), 742-748, 1993.
64. E. Gelenbe "Learning in the recurrent random network", *Neural Computation*, 5, pp 154-164, 1993.
65. Erol Gelenbe "G-Networks with signals and batch removal", *Probability in the Engineering and Informational Sciences*, 7, pp 335-342, 1993.
66. A. Stafylopatis, E. Gelenbe "Resequencing under subset associations," *International Journal of Modelling and Simulation*, Vol. 14, No. 1, pp 18-21, 1994.
67. E. Gelenbe, V. Koubi, F. Pekergin "Dynamical random neural approach to the traveling salesman problem," *ELEKTRIK*, Vol. 2, No. 2, pp 1-10, 1994.
68. E. Gelenbe, N. Hernandez "Virus tests to maximize availability of software systems," *Theoretical Computer Science*, Vol. 125, pp 131-147, 1994.
69. Erol Gelenbe "G-networks: An unifying model for queueing networks and neural networks," *Annals of Operations Research*, Vol. 48, No. 1-4, pp 433-461, 1994.
70. E. Gelenbe, S. Chabridon "Dependable execution of distributed programs," *Simulation Practice and Theory*, Vol. 3, No. 1, pp 1-16, 1995.
71. J.M. Fourneau, E. Gelenbe, R. Suros "G-networks with multiple classes of positive and negative customers," *Theoretical Computer Science* Vol. 155 (1996), pp.141-156.
72. E. Gelenbe, X. Mang, R. Önvural "Diffusion based Call Admission Control in ATM", *Performance Evaluation* Vol. 27 & 28, pp. 411-436, 1996, also in *Proceedings of the IFIP WG 7.3/ACM-SIGMETRICS Performance '96 Conference*.
73. E. Gelenbe, X. Mang and Y. Feng "Diffusion cell loss estimates for ATM with multiclass bursty traffic", *Computer Systems-Science and Engineering*, Special Issue: ATM Networks, Vol. 11, No. 6, pp. 325-334, November 1996.
74. V. Srinivasan, A. Ghanwani, E. Gelenbe "Block cell loss reduction in ATM systems", *Computer Communications*, Vol. 19, pp. 1077-1091, 1996.
75. E. Gelenbe, C. Cramer, M. Sungur, P. Gelenbe "Traffic and video quality in adaptive neural compression", *Multimedia Systems*, Vol. 4, pp. 357-369, 1996.
76. E. Gelenbe, T. Feng, K.R.R. Krishnan "Neural network methods for volumetric magnetic resonance imaging of the human brain," *Proceedings of the IEEE*, Vol. 84, No. 10, pp. 1488-1496, October 1996.
77. C. Cramer, E. Gelenbe, H. Bakircioglu "Low bit rate video compression with neural networks and temporal subsampling," *Proceedings of the IEEE*, Vol. 84, No. 10, pp. 1529-1543, October 1996.
78. J. Aguilar, E. Gelenbe "Task assignment and transaction clustering heuristics for distributed systems" *Information Sciences - Informatics and Computer Science*, Vol. 97, Nos 1-2, pp. 199-221, 1997.
79. C. Houstis, S. Kapidakis, E.P. Markatos, E. Gelenbe "Execution of compute-intensive parallel applications in parallel machines" *Information Sciences - Informatics and Computer Science*, Vol. 97, Nos 1-2, pp. 83-184, 1997.
80. S. Chabridon, E. Gelenbe "Scheduling of distributed tasks for survivability of the application" *Information Sciences - Informatics and Computer Science*, Vol. 97, Nos. 1-2, pp. 179-198, 1997.

81. E. Gelenbe, A. Ghanwani, V. Srinivasan “Improved neural heuristics for multicast routing”, *IEEE Journal of Selected Areas of Communications*, Vol. 15, No. 2, pp. 147-155, February 1997.
82. E. Gelenbe, X. Mang, Raif Önvural “Bandwidth allocation and call admission control in high-speed networks”, *IEEE Communications Magazine*, Vol. 35, No. 5, pp. 122-129, May 1997.
83. E. Gelenbe, S. Kotia, D. Krauss “Call establishment overload in large ATM networks”, *Performance Evaluation*, Vol. 31 (1997), Nos. 1 & 2, pp. 33-49.
84. E. Gelenbe “Genetic algorithms with analytical solution”, *Robotics and Autonomous Systems*, Vol. 22, pp. 59-64, 1997.
85. E. Gelenbe, N. Schmajuk, J. Staddon, J. Reif “Autonomous search by robots and animals: A survey”, *Robotics and Autonomous Systems*, Vol. 22, pp. 23-34, 1997.
86. E. Gelenbe, K. Harmanci, J. Krolik “Learning neural networks for detection and classification of synchronous recurrent transient signals”, *Signal Processing*, Vol. 64 (3), pp. 233-247, 1998.
87. E. Gelenbe, Y. Cao “Autonomous search for mines”, *European Journal of Operations Research*, Vol. 108 (2), pp. 319-333, July 1998.
88. H. Bakircioglu, E. Gelenbe, T. Koçak, “Image processing with the Random Neural Network model”, *ELEKTRIK*, Vol. 5 (1), pp. 65-77, 1998.
89. E. Gelenbe, A. Labeled “G-networks with multiple classes of signals and positive customers”, *European Journal of Operations Research*, Vol. 108 (2), pp. 293-305, July 1998.
90. C. Cramer, E. Gelenbe, P. Gelenbe “Image and video compression”, *IEEE Potentials*, February/March 1998.
91. E. Gelenbe, C. Cramer “Oscillatory corticothalamic response to somatosensory input”, *Biosystems*, Vol. 48 (1-3), pp. 67-75, 1998.
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