Erol Gelenbe
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Curriculum Vitae and Publications

Contents

1 Biography

1.1 Personal Information, Degrees, Position

- Turkish Citizen by birth, French Citizen by naturalisation, US Permanent Resident.
- Degrees:
    - BSc.Eng. (High Honours), Middle East Technical University, Ankara,
    - MSc and PhD thesis on "Stochastic automata with structural restrictions", Polytechnic University (Brooklyn Poly), New York.
    - Doctorat d'État ès Sciences Mathématiques thesis on "Modèlisation de systèmes informatiques", Université Pierre et Marie Curie (Paris VI).
- Languages (fluent): English, Turkish, French, Italian.
- Professor in the Dennis Gabor Chair at Imperial College, London (since March 2003). Head of the Intelligent Systems and Networks Section 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.
- Consultant General Dynamics UK Ltd (since November 2003).
- Consultant Oxford University Press (since December 2007).

1.2 Honours and Awards

1.2.1 Membership of 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) $http://www.academie-technologies.fr$

1.2.2 Honorary Doctorates (Honoris Causa)

- *"Doctorat en Sciences Honoris Causa"*, University of Liège, 2006.
- *Honorary PhD* from Bogaziçi University, Istanbul, 2004.
- *Dott. Ingegnere Honoris Causa in Ars Computandi*, University of Rome II, 1996.

1.2.3 Scientific Prizes

- *ACM SIGMETRICS Achievement Award* (2008), one of the ACM's (Association for Computing Machinery) major field awards. I was 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.

1.2.4 Decorations

- *Knight Commander in the Order of the Star of Italy (2007)* (Grande Ufficiale dell'Ordine della Stella della Solidarietà)
- *Commander of Merit of the Republic of Italy (2005)* (Commendatore al Merito della Repubblica)
- 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).*

1.2.5 Professional Society Fellowships and other awards

- Fellow of ACM (2001) "In recognition of outstanding technical and professional achievements in information technology."
- Fellow IEE (2003)
- Fellow IEEE (1986) "For leadership in the development of computer system performance evaluation."

- Other professional society awards and recognitions: 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).

1.3   Books and Monographs

- 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, W. Stewart "Méthodes de modélisation de systèmes informatiques", *Monographie AFCET* Editions Hommes et Techniques, Paris, 1980.

- E. Gelenbe, I. Mitrani "Analysis and synthesis of computer systems", Academic Press (London and New York), 1980.
  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, G. Pujolle "Introduction aux réseaux de files d'attente" Collection Scientifique et technique du CNET and Editions Eyrolles (Paris), 1982.

- W. Cellary, E. Gelenbe, 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, G. Pujolle"Introduction to queueing networks", J. Wiley & Sons, Chichester and New York, 1986.

- E. Gelenbe, 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.

1.4   Recent Boards

- Member of the Science and Technology Board of *The Defence Technology Centre on Data and Information Fusion* October 2003- present

- Member of the Executive Board of *The Defence Technology Centre on Data and Information Fusion* October 2003- present

- Member of the Executive Committee of the *UK Computer Research Council UKCRC* June 2008- present

- Member of the Scientific Advisory Committee of the *Cyprus Foundation & Cyprus Institute* December 2007- present

- Chair of the Technical Advisory Board of the *US Army Simulation and Training Command* 2000-2003.

1.5   Editorial Boards

Partial list:

- Editor-in-Chief *The Computer Journal* (British Computer Society), since December 2007

- Editorial Board Member *The Computer Journal* 2005-2007

- *Proc. Royal Society A* 2005- present.

- Series Editor for Advances in Computer Science and Engineering, Imperial College Press, since 2006.

- *Acta Informatica* since 1980.

- *Performance Evaluation* since 1978.

- *IEEE Trans. on Software Engineering* 1980-92.

- *Proceedings of the IEEE* 1994-98.

1.6   Professional Achievements

- Played a leading role in the establishment of the sub-discipline of Computer System and Network Performance Evaluation which is common to Applied Probability, Electrical Engineering, Computer Science and Engineering. This effort was internationally successful, both in academia and industry, and has wide presence in universities, research and industrial centres in France, the USA, Italy, the Netherlands, Greece, the UK, Germany, Austria, Canada, Sweden, Japan and many other countries.

- Founded the "Performance modelling" groups at INRIA and in the French University system and industry, initiated two post-graduate and PhD programs (at the Universities of Paris Orsay and Paris V/VI), and graduated numerous PhDs who hold leadership positions in Canada, France, Turkey, Greece, the USA, Venezuela, Canada, Egypt, UK, etc.

- Proposed in 1983 to President Mitterand the creation of a national program in France to teach information technology to teen-agers in vocational programmes across France, with the help of voluntary educators who are recent university graduates and young engineers. This program was launched in 1983 as the "Programme des Volontaires pour la Formation à lInformatique and I lead it for two years. After that the programme continued until the late 80s and trained over 15,000 unemployed youths in the first three years and helped them find jobs.

- Introduced and established a first course in computer science into all of French undergraduate university education, while serving as Science and Technology Adviser to the French University Minister (1984-86).

- Co-authored four books which have been published in English with J. Wiley, Academic Press and Elsevier, some of which have also been published in French, Japanese and Korean editions.

- Impacted the development of Teletraffic and Network Performance research at CNET and France Telecom R&D, in the French "grandes écoles" (ENST, Institut National des Télécommunications, ENSIMAG, Ecole Polytechnique) through mentoring of researchers who are now leaders in these institutions, serving on the board of several French journals (*Annales des Télécommunications, Revue d'Informatique de l'AFCET, Recherche Opérationnelle*), and journals in Europe such as *The Computer Journal, Acta Informatica, Performance Evaluation*.

- Renamed the Department of Electrical and Computer Engineering at Duke University (1993-98) to explicitly include Computer Engineering. Founded the School of Electrical Engineering and Computer Science at the University of Central Florida, USA, by merging Electrical and Computer Engineering with Computer Science, and directing the School from 1998 to 2003, strongly expanded the School's PhD and undergraduate programmes, and introduced a fourth undergraduate programme school in Information Technology (in addition to the EE, CS end CE undergraduate programs.

1.7   Previous Positions

- University Chair Professor, Director of the School of EECS and Associate Dean of Engineering at the University of Central Florida (August 1998 to August 2003).
- Nello L. Teer Professor (endowed chair) of Engineering and Computer Science, and Chair of ECE Dept., Duke University, (May 1993 - August 1998).
New Jersey State Endowed Chair of Computer Science, NJIT, Fall 1991 to April 1993. - Science and Technology Adviser to the French Cabinet Minister for Universities (1984-86), on secondment from Univ. of Paris Orsay.
- Associate Professor then Professor of Computer Science (Professeur de 1ère classe), University of Paris Orsay (France) 1979, moved to Universite Paris V (René Descartes) 1986, promoted to Professeur de classe exceptionnelle 1991, and to 2è échelon (highest academic rank in France) in 2002. On leave of absence from the University of Paris (1991-2005).
- Maître de conférences à mi-temps (Half-Time Lecturer) in Applied Mathematics, Ecole Polytechnique, 1979-87
- Professor of Computer Science, University of Liège (1974-80)
- Research Engineer (1972-73), then Research Group Leader (part-time) at INRIA (1973-1982)
- Maître de conérences associé (Visiting Lecturer), Université Paris Nord (1973-74).
- Assistant Professor of Computer, Information and Control Engineering, University of Michigan, Ann Arbor (1970-1974), on leave during 1972-74.

2   Activities since joining Imperial College 2003–2008

2.1   Journal Papers 2008-2002

- E. Gelenbe "Network of interacting synthetic molecules in equilibrium, accepted for publication in *Proc. Royal Society A (Mathematical and Physical Sciences)*.

- E. Gelenbe and S. Timotheou "Random neural networks with synchronized interactions, accepted for publication in *The Computer Journal*.

- E. Gelenbe " Analysis of single and networked auctions, accepted for publication in *ACM Trans. On Internet Technology*, 2008.
- M. Georgiopoulos , R. F. DeMara, A. J. Gonzalez, A. S. Wu, M. Mollaghasemi, E. Gelenbe, M. Kysilka, J. Secretan, C. A. Sharma, A. J. Alnsour "Combined research and curriculum development in machine learning", accepted for publication *IEEE Trans. on Education.*
- E. Gelenbe, G. Sakellari and M. d'Arienzo "Admission of QoS aware users in a smart network", *ACM Trans. on Autonomous and Adaptive Systems* 3(1), 2008.
- Qi Zhua, Erol Gelenbe, Ying Qiaoc "Adaptive prefetching algorithm in disk controllers", *Performance Evaluation* 65 (2008): 382395.
- E. Gelenbe "Dealing with software viruses: a biological paradigm", *Information Security Technical Reports* 12: 242-250, Elsevier Science, 2007.
- E. Gelenbe "Steady-state solution of probabilistic gene regulatory networks", *Physical Review E*, 76(1), 031903 (2007), also in *Virtual Journal of Biological Physics Research*, September 15, 2007.
- E. Gelenbe "A diffusion model for packet travel time in a random multi-hop medium", *ACM Trans. on Sensor Networks*, 3 (2), Article 10, June 2007.
- R. Ghanea-Hercock, E. Gelenbe, N. R. Jennings, O. Smith, D. N. Allsopp, A. Healing, H. Duman, S. Sparks, N. C. Karunatillake and P. Vytelingum "Hyperion: next-generation battlespace information services", *The Computer Journal*, 50(6):632-645; doi:10.1093/comjnl/bxm063, 2007.
- E. Gelenbe and G. Loukas "A self-aware approach to denial of service defence", *Computer Networks*, 51(5): 1299-1314, April 2007.
- S. Dobson, S. Denazis, A. Fernández, D. Gaïti, E. Gelenbe, F. Massacci, Paddy Nixon, Fabrice Saffre, N. Schmidt, Mikhail Smirnow and F. Zambonelli "Autonomic Communications", *ACM Trans. on Autonomous and Adaptive Systems*, 1 (2), pp. 223-259, 2006.
- E. Gelenbe "Users and services in intelligent networks", *Proceedings IEE (ITS)*, 153 (3), pp. 213-220, November 2006.
- E. Gelenbe, Jérémie Lainé and P. Liu "Genetic algorithms for route discovery", *IEEE Trans. Systems, Man and Cybernetics B*, 36 (6) pp. 1247-1254, December 2006.
- E. Gelenbe, K. Hussain, and V. Kaptan "Simulating autonomous agents in augmented reality", *Journal of Systems and Software*, Vol. 74, pp. 255-268, 2005.
- H. Abdelbaki, E. Gelenbe and T. Kocak "Neural Algorithms and Energy Measures for EMI Based Mine Detection", *J. Differential Equations and Dynamical Systems*, 13 (1 & 2) pp.63-86 (2005).
- J.-M. Fourneau, E. Gelenbe "Flow equivalence and stochastic equivalence in G-Networks", *Computational Management Science*, 1 (2), pp. 179-192, 2004.
- E. Gelenbe, R. Lent, A. Nunez "Self-aware networks and quality of service", *Proceedings of the IEEE*, 92 (9), pp. 1479–1490, 2004.
- E. Gelenbe, R. Lent "Power aware ad hoc Cognitive Packet Networks", *Ad Hoc Networks Journal*, Vol. 2 (3), pp. 205–216, 2004.
- E. Gelenbe, Z.-H. Mao, Yan-Da Li " Function approximation by random neural networks with a bounded number of layers", *J. Differential Equations and Dynamical Systems*, Vol. 12 (1&2), pp. 143–170, 2004.
- E. Gelenbe and T. Koçak "Wafer surface reconstruction from top-down scanning electron microscope images", *Microlectronic Engineering*, Vol. 75, pp. 216–233, 2004.
- E. Gelenbe, R. Lent "Power-aware ad hoc cognitive packet networks", *Ad Hoc Networks*, Vol. 2, pp. 205-216, 2004.
- E. Gelenbe "Sensible decisions based on QoS", *Computational Management Science*, 1 (1), 1–14, 2003.
- E. Gelenbe, J.M. Fourneau "G-Networks with resets", *Performance Evaluation*, Vol. 49, pp. 179-192, 2002, also in *Proc. IFIP WG 7.3/ACM-SIGMETRICS Performance '02 Conference*, Rome, Italy.
- E. Gelenbe, K. Hussain "Learning in the multiple class random neural network", *IEEE Trans. on Neural Networks* 13 (6), 1257–1267, 2002.

2.2 Grants at Imperial College since 2003

- "Quality of Information in Sensor Networks" (PI E. Gelenbe). US-UK International Technology Alliance, in collaboration with IBM at £1,409,000 for 10 years 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).
- "Decentralised Data and Information Processing", (PI: E. Gelenbe) EPSRC, funded at £1,095,031 (5 years starting 1/1/06) that will develop probability models of systems of software agents.
- "Dynamic Infrastructure Protection – SATURN", (PI: E. Gelenbe). BT and MoD funded £80,000 project (12 months, 1/5/2005 to 30/4/2006) that investigates techniques that can help networks mitigate denial of service attacks.
- "Self-Aware Networks and Quality of Service" (PI: E. Gelenbe). EPSRC funded £524,000 project (3 years, 1/1/2004 to 31/12/2006) which investigates the use of measurement based adaptation in order to offer network users a better level of Quality-of-Service. The project is also supported by the European Union via an additional 80,000 grant.
- "Future Data Fusion Systems: Design and Demonstration" (PI E. Gelenbe) is funded by MoD within the DIF DTC at the level of £468,000 for 3 years starting 1/10/03. It investigates the use of intentionality in order to drive military decision making and order to better follow targets. There is an accompanying project on "Adaptive Networks" funded by MoD Award at the level of £55,000 for 3 years starting 1/10/03. This work is conducted with three UK companies: BT Exact, QinetiQ and General Dynamics UK.
- 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.

2.3   PhD Graduates 2003-07

George Loukas (BS National Technical University, Athens), Peixiang Liu (MSc Beijing University, MS UCF), Varol Kaptan (BS, MS METU, Ankara, MS UCF), Yu Wang (BSc, MSc Edinburgh), Michael Gellman (BS, MS, UCF), Pu Su (BS Tsinghua University, MS UCF).

2.4   Current PhD Students and Post-Docs

Research Fellows and Post-Doctoral Fellows:
- Antonio Di Ferdinando (PhD Newcastle-upon-Tyne)
- Daniele Gianni (PhD Università di Roma Tor-Vergata
- Ricardo Lent (PhD University of Central Florida)
- Georgios Loukas (PhD Imperial College)
- Gülay Öke (PhD Bogaziçi University)

PhD Students:
- Stelios Timotheou (MSc Imperial, BS National Technical University, Athens)
- Georgia Sakellari (BS National Technical University, Athens)
- Avgostinos Filippoupolitis (MSc Imperial, BS National Technical University, Athens)
- Laurence Hey (BSc Imperial),
- Kumaara Velan (BSc Malaysia).

2.5   Selected Conference Papers 2003–2008

1. G. Sakellari and E. Gelenbe "A multiple criteria, measurement-based admission control mechanism for self-aware networks", *Third International Conference on Communications and Networking in China (CHINACOM'08)*, August 2008.
2. G. Sakellari, L. Hey, and E. Gelenbe "Adaptability and failure resilience of the cognitive packet network", *Demo Session of the INFOCOM2008*, April 2008.
3. E. Gelenbe "Modeling gene regulatory networks", *FUZZ-IEEE'07, IEEE International Conference on Fuzzy Systems*, July 23-26, 2007.
4. E. Gelenbe "Travel time and energy in wireless networks with duplicate packets", SpaSWiN 2007, Workshop on Spatial Stochastic Models in Wireless Networks, Limassol, Cyprus, April 16, 2007.
5. G. Sakellari, M. d'Arienzo and E. Gelenbe "Controlling access to preserve QoS in a Self-Aware Network" SASO 2007, First IEEE International Conference on Self-Adaptive and Self-Organizing Systems, Boston, Mass., July 9-11, 2007.

6. E. Gelenbe and P. Liu "Recursive routing with the Cognitive Packet Network", TridentCom 2007, 3rd International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities, Orlando, FL, May 21-23, 2007.

7. E. Gelenbe "Towards Autonomic Networks", Proc. IEEE/IPJ (Information Processing Society of Japan) International Symposium on Applications of the Internet, Jan. 23-27, 2006, Phoenix, ISBN 0-7695-2508-3, pp. 2-7, IEEE Computer Society and IEEE.

8. E. Gelenbe, P. Liu, and J. Laine "Genetic algorithms for autonomic route discovery", Proc. IEEE Workshop on Distributed Intelligent Systems: Collective Intelligence and its Applications, pp. 371-376, Prague, June 15-16 2006.

9. E. Gelenbe "Travel delay in a large wireless ad hoc network" 2nd Workshop on Spatial Stochastic Models of Wireless Networks, Boston, 7th April 2006.

10. E. Gelenbe "User Cooperation and Search in Intelligent Networks", Volume 3854 / 2006 in *Autonomic Communication: Second International IFIP Workshop, WAC 2005*, Athens, Greece, October 2-5, 2005, Ioannis Stavrakakis, Michael Smirnov Eds., Springer Lecture Notes in Computer Science Vol. 3854, ISBN: 3-540-32992-7, pp. 41-56 (2006).

11. M. D' Arienzo, E. Gelenbe and G. Sakellari "Admission control in self aware networks" Accepted for 49th annual IEEE Global Telecommunications Conference, GLOBECOM 2006, San Francisco, November 2006.

1. E.Gelenbe and P.Liu "QoS and routing in the cognitive packet network", *Proceedings of the 6th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks*, pp. 517-521, 2005.

2. E. Gelenbe, G. Loukas and M. Gellman "An autonomic approach to denial of service defence", *Proceedings of the 6th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks*, pp. 537-541, 2005.

3. E. Gelenbe, M. Gellman, and G. Loukas. An autonomic approach to denial of service defence. *Proceedings of the IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks*, pp. 537-541, June 2005.

4. E. Gelenbe "Keeping viruses under control", Keynote Paper, *ISCIS'05 International Symposium on Computer and Information Sciences* (Istanbul, October 2005), Springer Lecture Notes in Computer Science Vol. LNCS 3733, pp. 304-311, 2005.

5. E. Gelenbe "Users and services in intelligent networks", Keynote Paper, *AINTEC'05, First Asian Internet Technology Conference*, Technologies for Advanced Heterogeneous Networks First Asian Internet Engineering Conference, AINTEC 2005, Bangkok, Thailand, December 13-15, 2005, Proceedings Series: Lecture Notes in Computer Science, Vol. 3837 Cho, Kenjiro; Jacquet, Philippe (Eds.) ISBN: 3-540-30884-9, pp. 30-45, Dec. 2005.

1. E. Gelenbe, M. Gellman, R. Lent, P. Liu, Pu Su "Autonomous smart routing for network QoS", Proc. First International Conference on Autonomic Computing (IEEE Computer Society), ISBN 0-7695-2114-2, pp. 232-239, May 17-18, 2004, New York.

2. E. Gelenbe, Yu Wang "A trade-off between agility and resilience", Proc. TAINN'04, pp. 209-218, Dokuz Eylul University, Izmir (Foca), Turkey, June 10-11, 2004.

3. M. Georgiopoulos, J. Castro, E. Gelenbe, R. DeMara, A. Gonzalez, M. Kysilka, M. Mollaghasemi, A. Wu, "CRCD Experiences at the University of Central Florida: An NSF Project", ASEE 2004 Annual Conference and Exposition, June 20-23, 2004, Salt Lake City, Utah.

4. E. Gelenbe, K. Hussain, V. Kaptan "Simulating the navigation and control of autonomous agents", *Proceedings of the 7th International Conference on Information Fusion*, pp. 183-189, 28 June to 1 July, 2004, Stockholm (Sweden).

5. E. Gelenbe, Varol Kaptan, Yu Wang "Biological metaphors for agent behaviour", *Computer and Information Sciences – ISCIS 2004*, LNCS 3280, pp. 667–675, 2004.

6. E. Gelenbe, M. Gellman, R. Lent, P. Liu, and Pu Su. "Autonomous smart routing for network QoS", *Proceedings of the First IEEE International Conference on Autonomic Computing*, pp. 232-239, New York, NY, May 2004.

7. E. Gelenbe, M. Gellman, and G. Loukas "Defending networks against denial of service attacks", In E.M. Carapezza, editor, *Proceedings of the SPIE Conference on Optics/Photonics in Security and Defence (SPIE), Unmanned/Unattended Sensors and Sensor Networks*, Vol. 5611, pp. 233-243, London, UK, October 2004.

8. E. Gelenbe "An approach to Quality of Service", *Computer and Information Sciences – ISCIS 2004*, LNCS 3280, pp. 1–10, 2004.

1. E. Gelenbe, K. Hussain, V. Kaptan "Realistic simulation of cooperating robots," Proc. CTS 2003 (International Symposium on Collaborative Technologies and Systems), WMC 03 Society for Computer Simulation, pp. 151–156, January 19-23, 2003, Orlando, FL.

2. E. Gelenbe "Composite QoS Metrics and Sensible Routing", Workshop on High Speed Networks, IEEE Infocom, San Francisco, March 30, 2003.

3. E. Gelenbe "Applications of Spiked Recurrent Stochastic Networks", Keynote Paper, 13th International Conference on Artificial Neural Networks & 10th International Conference on Neural Information Processing, June 26-29, 2003.

4. E. Gelenbe "Spiked Random Neural Networks, Product Forms, Learning and Approximation," Principal Keynote Lecture, *Conference on Analytical and Stochastic Modelling Techniques and Applications*, European Simulation Multiconference, Nottingham, UK, 9-11 June 2003.

5. E. Gelenbe, M. Gellman, P. Su "Self-awareness and adaptivity for Quality-of-Service", *Proc. 8th IEEE International Symposium on Computers and Communications*, ISBN 0-7695-1961-X, pp. 3-19, Antalya, July 2003.

6. E. Gelenbe, A. Nunez, R. Lent "Smart WWW Traffic Balancing", IEEE Workshop on Internet Performance and IP Operations Management, Kansas City, Mo., Oct. 1-3, 2003.

7. E. Gelenbe "Self-Aware Networks and Quality of Service", Keynote Lecture, International Network Optimization Conference, Evry/Paris, Oct. 27-29, 2003.

8. E. Gelenbe "Review of Experiments in Self-Aware Networks", Invited Paper, 18th International Symposium on Computer and Information Sciences (ISCIS2003), Antalya, Turkey, Nov. 3-5, in *Springer Lecture Notes in Computer Science LLNCS 2869*, pp. 1–8, , Springer Verlag, 2003.

9. E. Gelenbe, A. Nunez "Adaptive Web Service for QoS Improvement", IADIS International WWW/Internet 2003 Conference, Algarve, Portugal, Nov. 5-8, 2003.

1. E. Gelenbe, S. Seshadri and V. Srinivasan, Single Node and End-to-End Buffer Control in Real Time, in *Performance Modelling and Evaluation of ATM Networks*, ed. D. Kouvatsos, Chapman and Hall Publishers, London, 1995. (Refereed)

2. V. Srinivasan, E. Gelenbe and S. Seshadri, Performance of Optimal Loss Control Policies for ATM Networks, Invited paper for the *Princeton Conference on Information Systems and Science*, Mar 16-17, 1994. In *Proc. CISS 1994*, p. 12-17.

3. E. Gelenbe, S. Seshadri and V. Srinivasan, Parallel Simulation of End-to-End Buffer Control Policies for Real-Time Packet Video, in *Proc. of the Second Workshop on Performance Modelling and Evaluation of ATM Networks*, Bradford, UK, July 1994. (Refereed)

2.6 Conference Committees 2003-2009

- Technical Programme Committee Member, Network Control and Performance Evaluation track, 23rd IEEE International Conference on Advanced Information Networking and Applications (AINA 2009), University of Bradford, UK, May 2009.

- Founder and General Chair, British Computer Society, Visions of Computer Science Conference, September 22-24, 2008.

- Technical Programme Committee Member, DSOM 2008, 19th IFIP/IEEE International Workshop on Distributed Systems: Operations and Management Managing Large Scale Service Deployment, September 22-26, Samos Island, Greece.

- Technical Programme Committee Member of BIONETICS 2008, 3rd International Conference on Bio-Inspired Models of Network, Information, and Computing Systems, Hyogo, Japan, November 25-28, 2008.

- Technical Programme Committee Member Inter-Perf 2008 Workshop on Interdisciplinary Systems Approach in Performance Evaluation and Design of Computer & Communication Systems, colocated with Valuetools (http://www.valuetools.org Athens Oct. 2008.

- Honorary Chair, 23rd ISCIS (International Symposium on Computer and Information Sciences, Istanbul Technical University, October 2008.

- General Chair, 15th IEEE Computer Society MASCOTS '07 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Istanbul, Turkey, Oct. 24-26, 2007.

- Technical Programme Committee Member, 5th Intenational Symp. Neural Networks, Beijing, China, September 24-28, 2008.

- Member of the Programme Committee, International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC-2008).

- Co-Chair of the Workshop on "Stochastic Networks and Internet Technology, Scuola Normale Superiore, Centro di Ricerca Matematica Ennio de Giorgi, Pisa, Italy, Sep. 16-22, 2007.

- Co-Chair of Bionetworks Workshop, IEEE MASS 2007 Conference, Pisa, Italy, Oct. 8, 2007.

- Honorary General Chair ISCIS Conferences 2003-2007.

- General Chair, IEEE Computer Society MASCOTS '03 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Orlando, FL, Oct. 12-15, 2003.

- Programme Committee Member, IEEE Computer Society MASCOTS '04 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Amsetrdam, Nov. 2004.

- Programme Committee Member, IEEE IWQoS '05 (IEEE International Workshop on Quality of Service) Conference, Passau, Germany, June 21-23, 2005.
- Programme Committee Member, IEEE Computer Society MASCOTS '05 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Atlanta, GA, Sep. 26-30, 2005.
- Programme Committee Member, AAMAS05, International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), Utrecht, July 27-29, 2005.
- Programme Committee Member, IFIP WG 7.3 Symposium on Computer Performance Modeling, Measurement and Evaluation, Juan-les-Pins, France, October 3-7, 2005.
- Programme Committee Member, IEEE International Conference on Pervasive Services (ICPS), Santorini, Greece, 11–14 July, 2005.
- Programme Committee Member ICANN International Conference on Artificial Neural Networks, 9-13 September 2007, Portugal.
- Programme Committee Member NGI 2007 (3rd Euro-NGI Conference on Next Generation Internet Networks - Design and Engineering for Heterogeneity).
- Programme Committee Member of TRIDENTCOM 2007, Third International IEEE/Create-Net Conference on Test beds and Research Infrastructures for the Development of Networks and Communities, February 5-8, 2006, Orlando, Florida USA.
- General Chair, IEEE Computer Society MASCOTS'07, Istanbul, Turkey.

2.7 Keynotes and Seminars 2008–2003

- Plenary Keynote (one of just two plenaries at this major bi-annual conference) "Networked Auctions and Economics on the Internet", IFIP World Computer Conference, Milan, September 7-10, 2008.
- Tutorial "Fundamental problems in autonomic communications", Budapest Tutorial and Workshop on Autonomic Communications and Component-ware, July 7-9, 2008.
- Opening Plenary Keynote "New Product Form Solutions for Stochastic Models: Discovery or Invention?", ACM SIGMETRICS Achievement Award Speech, ACM SIGMETRICS 2008 Conference, Annapolis, June 3-6, 2008.
- Seminar "Spiked neuronal networks and gene regulatory networks: a common stochastic framework and method of solution", The Initiative in Innovative Computing (IIC), Harvard University, Feb. 27, 2008, $http://iic.harvard.edu/seminars/02$
- Seminar, "The Cognitive Packet Network, MIT Laboratory for Information and Decision Sciences, Oct. 23, 2007.
- Seminar, "Réseaux de neurones impulsionnels et réseaux stochastiques", Colloquium Jacques Morgenstern, INRIA Sophia Antipolis, Oct. 11, 2007.
- Advanced School Organisation and Lectures, "Stochastic Networks and Internet Technology", Scuola Normale Superiore, Centro di Ricerca Matematica, Pisa, Sep 11-19, 2007.
- Seminar, "Réseaux stochastiques et réseaux de neurones (Stochastic networks and neural networks)", Laboratoire de Physique Théorique, Ecole Normale Supérieure, Paris, April 24, 2007.
- Seminar, "Fonctions booléennes et comportement stationnaire de réseaux stochastiques (Boolean functions and stationary behaviour of stochastic networks)", INRIA, Rocquencourt, April 5, 2007.
- Invited Talk, "Neuronal communications and neuronal networks", BIOWIRES2007 Workshop Sponsored by IBM and the US/UK ITA, Cambridge University, April 2-4, 2007.
- Seminar "The Cognitive Packet Network Project at Imperial College", Dalle Molle Institute for Artificial Intelligence, Lugano, February 19, 2007.
- Seminar "Analysis of Gene Regulatory Networks", (1) Cambridge Microsoft Laboratory, January 14, 2007, and (2) Mathematical Institute Complex Systems Seminar, Imperial College, February 13, 2007.
- Seminar "The Cognitive Packet Network Project at Imperial College", IBM Research Laboratory, Hawthorne, USA, January 5, 2007.
- E. Gelenbe, "Analysis of automated auctions", Opening Keynote, ISCIS 2006, 21th International Symposium, Istanbul, Turkey, November 1-3, 2006, Proceedings. Lecture Notes in Computer Science 4263 Springer 2006, ISBN 3-540-47242-8.
- Keynote "The role of basic research in information technology", AICA (Italian Computer Society) National Conference, Cesena (Bologna), 21-22 September 2006.
- Seminar "Random neural networks: theory and some applications", Conference on Biologically Inspired Neural Networks, Dedicated to Prof. Camillo Golgi on the centenary of his Nobel Prize in 1906, Università di Roma La Sapienza, 24-26 June 2006.
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- Opening Keynote, "Measurements, Modelling, and Simulation of a Cognitive Packet Network", 15th IASTED Int. Conf. on APPLIED SIMULATION AND MODELLING, ASM 2006, Rhodes, Greece, June 26-28, 2006.

- Seminar "Random neural networks and the control of packet networks", Pazmany University Budapest, June 16, 2006.

- Keynote "Cyberwarfare: the challenges for security of data and assurance of information in 2015", Whither Warfare Conference, Defence College Shrivenham, June 12-13, 2006.

- Seminar "Stochastic networks and biological models", Genopôle, Programme Epignomique, Evry (France), March 31, 2006.

- Seminar "Sensible decisions in very large networks", Department of Computer Science, University of Newcastle upon Tyne, March 19, 2006.

- Seminar "Cognitive Packet Networks", Laboratoire de Recherche en Informatique, Université Paris-Sud, January 4, 2006.

- Keynote, "Towards Autonomic Networks", Proc. IEEE/IPJ (Information Processing Society of Japan) International Symposium on Applications of the Internet, Jan. 23-27, 2006, Phoenix, ISBN 0-7695-2508-3, pp. 2–7, IEEE Computer Society and IEEE.

- Keynote, "Research and Development Test-Beds for Future Networks", International Conference on Network Test-Beds – Tridentcom 2005, Trento, Italy, February 22–25, 2005.

- Keynote, "Towards user autonomy and network intelligence", International Conference on Next Generation Internet (NGI EU FP6), April 18–20, Rome, Italy.

- Keynote, "User Cooperation and Autonomy in Autonomic Networks", Networking 2005, May 2–6, 2005, Waterloo, Canada ($http : //www.cs.uwaterloo.ca/conferences/networking2005/coming/program.html\#keynote1$).

- Seminar, "Self aware networks and Quality of Service", Seminar at the Technical University of Budapest, March 31, 2005.

- Keynote, "Users and Services in Intelligent Networks", Technologies for Advanced Heterogeneous Networks First Asian Internet Engineering Conference, AINTEC 2005, Bangkok, Thailand, December 13-15, 2005, Proceedings Series: Lecture Notes in Computer Science, Vol. 3837, Cho, Kenjiro; Jacquet, Philippe (Eds.) 2005, IX, ISBN: 3-540-30884-9, pp. 30-45.

- "Fast adaptation with random neural networks", Invited Paper, 17th Annual FLAIRS Conference, Miami, Florida, May 17-19, 2004.

- "Distributed neural network control of packet networks", Keynote Paper, 13th TAINN (Turkish Artificial Intelligence and Neural Networks) Conference, Antalya, Turkey, June 10-12, 2004.

- "On stability problems for G-networks", Invited Plenary, 24th International Seminar on Stability Problems for Stochastic Models, Jurmala, Latvia, September 10-17, 2004.

- "An approach to Quality of Service", Keynote Paper, 19th International Symposium on Computer and Information Sciences, in Springer LNCS 3280, October 26–29, 2004.

- "Réseaux stochastiques généralisés: existence et unicité de solutions stationnaires, et applications au traitement des images et au contrôle de systèmes de communication", Seminar, Laboratoire Jacques Louis Lions, University Paris VI, January 6 2004.

- "G-Networks: Controlled performance and learning, with applications to augmented reality and networks", Seminar, University of Hanover, Institut of Informatics, February 2 2004.

- "Biologically inspired stochastic models with applications in neurobiology and computer Science", Seminar, School of Informatics Colloquium, University of Edinburgh, April 21, 2004.

- "G-networks and product forms", Seminar in the Engineering Department, Cambridge University, November 9 2004.

- "Spiking Neurons, Competing Agent Populations, and Network QoS Through Distributed Control" Seminar at the Computer Laboratory, Cambridge University, November 10 2004.

- "Adaptive Networks and QoS", Seminar in the Telecommunications Institute, University of Lund (Sweden), November 30, 2004.

- Keynote Lecture, "Spiked Random Neural Networks, Product Forms, Learning and Approximation," *Conference on Analytical and Stochastic Modelling Techniques and Applications*, European Simulation Multiconference, Nottingham, UK, 9-11 June 2003.

- Keynote Paper, "Applications of Spiked Recurrent Stochastic Networks", ICANN'03, 13th International Conference on Artificial Neural Networks & 10th International Conference on Neural Information Processing, June 26–29, 2003.

- Invited Paper, "Review of Experiments in Self-Aware Networks", 18th International Symposium on Computer and Information Sciences (ISCIS 2003), Nov. 3 – 5, Antalya, Turkey, in *Springer Lecture Notes in Computer Science LNCS 2869*, pp. 1 – 8, 2003.

- "Self-Aware Networks and Quality of Service", Seminar, Department of Computer Science, North Carolina State University, February 5, 2003.

- "Self-Aware Networks and Quality of Service", Microsoft Research Laboratories, Cambridge, UK, January 22, 2003.

- "Self-Aware Networks and Quality of Service", Seminar, Dept. of Computer Science, Illinois Institute of Technology, Chicago Ill., July 24, 2003.

- "Self-Aware Networks and Quality of Service", Seminar, Dept. of Computer Science, University of Manchester (UK), October 20, 2003.

- "Self-Aware Networks and Quality of Service", Invited Paper, International Symposium on Computer Communications, *IEEE Communications Society*, June 30–July 3, 2003.

- "Self-Aware Networks and Quality of Service", Keynote Lecture, International Network Optimization Conference, Evry/Paris, Oct. 27-29, 2003.

- "Some real-time algorithms for demining", University of Pisa, Dept. of Computer Science, November 25, 2003.

3 Activities 1998–2002

3.1 Research Grants 1994-2003 in the US

3.1.1 Grants at UCF 1998–2003

Total Awards of $4,143,089 as PI or Co-PI at the University of Central Florida:

- E. Gelenbe (PI) U.S. Army Stricom – Learning Stochastic Automata for Computer Generated Forces, $40,000 – January 1, 1999 – June 30, 2000.

- E. Gelenbe (PI) U.S. Army Stricom N61339-00-K0002 "Interacting assemblies of learning agents", $127,436.

- (PI) U.S. Army Stricom N61339-00-K0002/Ta "Performance of simulated agents with genetic algorithms and reinforcement learning", $195,384.

- R. Guha, M. Bassiouni, E. Gelenbe (Co-PI) NSF EIA0086251 – Introducing Fundamental Concepts and Evaluation Methods for Distributed Systems and Applications, $530,000 – January 1, 2001 – December 31, 2003.

- E. Gelenbe (PI) U.S. Army Stricom via NAWC N61339-02-C0050 – Behavioral Simulation in Computer Generated Forces, $219,000 – January 1, 2000 – September 30, 2002.

- Cooperative Agreement U.S. Army Stricom – The Matrix Lab, $3,790,000 – December 8, 2000 – September 30, 2003.

- E. Gelenbe (PI) NAWCTSD – Target Overlay and aimpoint determination, $209,400 – March 1, 2000 – September 30, 2001.

- E. Gelenbe (PI) U.S, Army Stricom N16339-01-D-002/Ta – Wearable Computer Network,

- E. Gelenbe (PI) U.S. Army Stricom N61339-01-D-002/Ta – Technical Advisory Board, $40,000 – October 1, 2001 – September 31, 2002.

- G. Li, M. Bassiouni, P. Delfyett, E. Gelenbe (Co-PI), Li Kam Wa, J. Moharam NSF/IGERT DGE0114418 Optical Communications and Networking, $2,100,000, November 1, 2001 – Oct. 30, 2006.

- E. Gelenbe (PI) NAWC N61339-02-C0080 – Cooperating Teams of Robotic Intelligent Entities (COTERIE), $216,481 – May 1, 2002 – May 30, 2004.

- E. Gelenbe (PI) U.S. Army Stricom via NAWC N61339-02-C0117 – Simulating Dynamically Reconfigurable Ad-Hoc Networks to Maximize Dependability and QoS, $80,000 – May 1, 2002 – December 31, 2004.

- Wei Li, M. Georgiopoulos, E. Gelenbe (Co-PI), Z. Qu, P. Wahid NSF ECS0216381 – Wireless Communication Emulator for Wireless Communications Lab, $100,475 – August 5, 2002 – September 30, 2003.

- M. Georgiopoulos, E. Gelenbe (Co-PI) NSF EIA0203446 – Combined Research and Curriculum Development in Machine Learning, $407,000 - May 1, 2002 - September 30, 2005.

- E. Gelenbe (PI) - Mathematical Models of Quality of Service, Army Research Office DAAD190310135, $265,000 – June 1, 2003 - Jan. 31, 2005.

- R. Guha (PI), M. Bassiouni (Co-PI), E. Gelenbe (Co-PI 30%) - High performance cluster computing, Army Research Office DURIP W911NF0410100, $270,000 – May 13, 2004 - May 12, 2005.

- E. Gelenbe (PI), K. Hua, N. Lobo, M. Shah (PI) Harris Corporation – AIMS: Advanced Image Management Systems, $250,000 – July 1, 1998 – June 30, 1999.

- E. Gelenbe, A. Mukherjee (PI) Lucent Technologies – Semiconductor Photoresist Shape Reconstruction from Scanning Electron Microscopy, $272,523 – May 1, 1999 - June 30, 2004.

- E. Gelenbe (PI) DPT Corp. & I-4 Corridor, – Performance of RAID Controllers $104,000 - May 1, 1999 - April 30, 2000.

- E. Gelenbe (PI) DPT Corp. & I-4 Corridor – Performance of RAID Controllers (Continuation), $98,000 - January 15, 2000 - December 30, 2000.

- E. Gelenbe (PI) SEO Corp. & I-4 Corridor – Vehicle classification from top-down infrared laser telemetry, $36,000 - March 15, 1999 - June 30, 2000.

- E. Gelenbe (PI) SEO Corp. & I-4 Corridor – Software based methods to automatically evaluate trainees, $30,000 - January 1, 2000 - December 31, 2000.

- E. Gelenbe (PI) Giganet Corp. – Design and evaluation of Cognitive Packet Networks, $40,000 - September, 2000 - December 31, 2000.

- E. Gelenbe (PI) Adaptec Corp. – Adaptive RAID Controller Design - $225,500, December 2000 - December 31, 2003.

3.1.2 Grants at Duke University 1994–1998

Federal Research Grants at Duke University:

- (Co-PI) NSF Instrumentation grant – Equipment for parallel processing, $ 65,000. July 1995–June 1997.

- (Co-PI) NSF Planning Grant, $50,000, Jan. 1, 1994 – June 30, 1994.

- (PI) DOE PhD Fellowship via the Free Electron Laser Laboratory $36K. September 1994–August 1996.

- (PI) NATO – Adaptive Videoconferencing, $6.3K (Travel Grant), 12 months. January 1996–December 1996.

- (PI) NSF – Workshop on Biologically Inspired Autonomous Systems, $8.2K, 12 months – March 1996.

- (PI) ONR – New Biologically Inspired Models for Large Scale Recurrent Networks, $298K, 36 months, November 1996 – November 1999.

- (PI) ESPRIT EEC Grant – Load balancing in distributed systems, $289,820 (ECU 236,000), June 15, 1994–June 14, 1997.

- (Joint-PI) ARO – Modeling and ATR for Ground Penetrating Radar, $375,000, 36 months, starting January 1996.

- (Co-PI) ARO – MURI on Demining, Portion of Grant for Gelenbe's Work $233,360, 36 months, October 1996 – September 1999.

- (PI) ARO – Autonomous Search for Mines, $104,000, 36 months, January 1998 – January 2001.

Industrial and Private Foundation Grants at Duke University:

- (PI) IBM Equipment Grant – Laboratory for network and distributed simulation, $47K, September 1993–August 1994.

- (PI) IBM – Advances in ATM, $12K, 6 months, January 1994–June 1994.

- (PI) IBM – Adaptive control of communication networks, $ 14K, 12 months, September 1994 – August 1995.

- (PI) IBM – Neural methods for computer-communication networks, $ 50K, 12 months. December 1994–December 1995.

- (Co-PI) Sandoz Foundation – Geometric recurrent random neural networks for segmentation of brain MRI scans, $ 60K, 12 months. January 1995–December 1995.

- (PI) Lord Foundation – Geometric recurrent random pulsed networks for segmentation of brain MRI scans, $8K, 12 months. January 1996–December 1996.

- (PI) IBM – Stability of large ATM networks, $ 50K, 12 months. July 1995–June 1996.

- (PI) IBM – Call Admission Control in ATM Networks (Ph.D. Fellowship), $14K, 12 months, September 1995–August 1996.

- (PI) IBM – Adaptive control of ABR traffic in ATM, $50K, 12 months. December 1995–December 1996.

- (PI) IBM – Performance of RSVP Protocols for Communication Networks, $30K, 12 months, December 1996 to December 1997.

- (PI) Lord Foundation – Enhancing the Competitiveness of the ECE Department at Duke University, $109,500, July 1, 1997 – June 30, 1998.

- (PI) Lord Foundation – Intelligence in Motion, $15,490, July 1, 1997 – June 30, 1998.

3.2 Patents

- U.S. Patent 5,995,651: E. Gelenbe, Y. Feng "Image content classification methods, systems and computer programs using texture patterns", Nov. 30, 1999.
- U.S. Patent 6,222,824: G. Marin, X. Mang, E. Gelenbe, R. Onvural "Statistical call admission control", April 24, 2001.
- U.S. Patent 6,804,201: E. Gelenbe "Cognitive Packet Network", October 11, 2004.

3.3 Journal Articles 1998–2002

- 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.
- E. Gelenbe, Y. Cao "Autonomous search for mines", *European Journal of Operations Research*, Vol. 108 (2), pp. 319-333, July 1998.
- H. Bakircioglu, E. Gelenbe, T. Koçak, "Image processing with the Random Neural Network model", *ELEKTRIK*, Vol. 5 (1), pp. 65-77, 1998.
- E. Gelenbe, A. Labed "G-networks with multiple classes of signals and positive customers", *European Journal of Operations Research*, Vol. 108 (2), pp. 293-305, July 1998.
- C. Cramer, E. Gelenbe, P. Gelenbe "Image and video compression", *IEEE Potentials*, February/March 1998.
- E. Gelenbe, C. Cramer "Oscillatory corticothalamic response to somatosensory input", *Biosystems*, Vol. 48 (1-3), pp. 67-75, 1998.
- E. Gelenbe, Z.-H. Mao, Y.-D. Li "Function approximation with spiked random networks", *IEEE Trans. on Neural Networks*, Vol. 10, No. 1, pp. 3–9, 1999.
- Y. Feng and E. Gelenbe "Adaptive object tracking and video compression," *Network and Information Systems Journal*, Vol. 1, No. 4-5, pp. 371–400, 1999.
- E. Gelenbe and A. Ghanwani "Approximate analysis of coupled queueing in ATM networks", *IEEE Communications Letters*, Vol. 3, No. 2, pp. 31–33, 1999.
- E. Gelenbe, J.M. Fourneau "Random neural networks with multiple classes of signals," *Neural Computation*, Vol. 11 (4):953–963, 1999.
- E. Gelenbe, P. Kammerman, T. Lam "Performance considerations in totally mobile wireless", *Performance Evaluation*, Vol. 36-37, pp. 387-399, October 1999.
- E. Gelenbe and T. Koçak "Area-based results for mine detection", *IEEE Trans. on Geoscience and Remote Sensing*, Vol. 38, No.1, pp. 1–14, January 2000.
- C. Cramer, E. Gelenbe "Video quality and traffic QoS in learning-based subsampled and receiver-interpolated video sequences", *IEEE Journal on Selected Areas in Communications*, Vol. 18, No. 2, pp. 150–167, February 2000.
- E. Gelenbe, H. Shachnai "On G-networks and resource allocation in multimedia systems", *European Journal of Operational Research*, Vol. 126, No. 2, pp. 308–318, October 2000.
- E. Gelenbe, "The first decade of G-networks", *European Journal of Operational Research*, Vol. 126, pp. 231–232, October 2000.
- E. Gelenbe, V. Srinivasan, S. Seshadri, and N. Gautam, Optimal Policies for ATM Cell Scheduling and Rejection, *Telecommunication Systems*, 18 (4), pp. 331-358, Dec. 2001, DOI 10.1023/A:1016782028027.
- E. Gelenbe, E. Şeref, Z. Xu, "Simulation with learning agents", *Proceedings of the IEEE*, Vol. 89 (2), pp. 148–157, Feb. 2001.
- E. Gelenbe, R. Lent, Z. Xu, "Design and performance of cognitive packet networks", *Performance Evaluation*, Vol. 46, pp. 155-176, 2001.
- E. Gelenbe, Q. Zhu, "Adaptive control of prefetching", *Performance Evaluation*, Vol. 46, pp. 177-192, 2001.
- E. Gelenbe, R. Lent, Z. Xu, "Measurement and performance of a cognitive packet network", *Computer Networks*, Vol. 37, pp. 691-791, 2001.
- E. Gelenbe, J.M. Fourneau "G-Networks with resets",*Performance Evaluation*, Vol. 49, pp. 179-192, 2002, also in *Proc. IFIP WG 7.3/ACM-SIGMETRICSPerformance '02 Conf.*, Rome, Italy, October 2002.
- E. Gelenbe, K. Hussain "Learning in the multiple class random neural network", *IEEE Trans. on Neural Networks* 13 (6), 1257–1267, 2002.

3.4 Conference Papers 1998–2002

1. E. Gelenbe "Cognitive Packet Networks", Keynote Address, CNDS02 (Conference on Communication Networks Modeling and Simulation), Winter Simulation Conference, Society for Computer Simulation, San Antonio, Texas, Jan 27–30, 2002.

2. E. Gelenbe, V. Kaptan, E. Gelenbe "Simulating Autonomous Agents with Augmented Reality", SPIE Conference 4716, Session 5, Orlando, FL, April 1–5, 2002.

3. E. Gelenbe "Gelenbe Networks", Invited Opening Tutorial, TOOLS '92 Conference, Imperial College, London (UK), April 15, 2002.

4. E. Gelenbe, R. Lent, A. Nunez, Z. Xu "Experiments with QoS Driven Learning Packet Networks", SCS 2002 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS 2002, June 14-17, San Diego, CA.

5. E. Gelenbe "Gelenbe Networks – Queueing Networks with Control Functions", Plenary Talk, July 2, 2002, Madrid Conference on Queueing Theory, Complutense University Madrid, July 1-6, 2002.

6. E. Gelenbe and R. Lent "Mobile Ad-Hoc Cognitive Packet Networks", IEEE ASWN, Paris, July 2-4, 2002.

7. E. Gelenbe, R. Lent, Z. Xu "Networking with Cognitive Packets", ICANN 2002 (International Conference on Artificial Neural Networks), Full paper with oral presentation, August 27-30, 2002, Madrid, Spain.

8. E. Gelenbe "G-Networks: Multiple Classes of Positive Customers, Signals, and Product Form Results", *in* M.C. Calzarossa and S. Tucci eds., *Performance Evaluation of Complex Systems, Techniques and Tools*, Springer Lecture Notes in Computer Science No. 2459, Berlin, September 2002.

1. E. Gelenbe, R. Lent, Z. Xu "Towards networks with cognitive packets", Opening Invited Paper, Proceedings of the International Conference on Performance and QoS of Next Generation Networking, Nagoya, Japan, November 2000, in K. Goto, T. Hasegawa, H. Takagi and Y. Takahashi (eds.), *Performance and QoS of Next Generation Networking*, Springer Verlag, London, 2001.

2. E. Gelenbe and R. Wang "Evaluating neural network reconstruction of wafer profile from electron microscopy", Electronic Imaging 2001, IST & SPIE, San Jose, January 20-26, 2001.

3. E. Gelenbe, R. Lent, Z. Xu "Self-routing packet networks", TERENA Networking Conference 2001, Antalya, Turkey, 16 May, 2001

4. E. Gelenbe, R. Lent, Z. Xu "Self-routing packet networks", AFRICOM 2001, IFIP International Conference on Communication Systems - Cape Town, 28-30 May 2001.

5. E. Gelenbe "Simulation with goal oriented learning agents", EUROSIM 2001 - Delft University of Technology - Delft, Netherlands, 26-30 June 2001.

6. E. Gelenbe, J.M. Fourneau "G-networks with resets", Workshop on Mathematical Modeling and Analysis of Computer Systems, ACM SIGMETRICS and IFIP WG 7.3, Harvard University, June 20, 2001.

7. E. Gelenbe, R. Lent, Z. Xu "Dependable Design of Cognitive Packet Networks", Invited Keynote Paper, Conference on Design of Reliable Communication Networks in Budapest (Hungary), October 8, 2001.

8. E. Gelenbe, Khaled Hussain, Varol Kaptan "Simulating Autonomous Agents with Augmented Reality", Opening Keynote Lecture, *Proc. Games-On*, Second International Conference on Intelligent Games and Simulation, Society for Computer Simulation (SCS), London, November 30 to December 1, 2001.

1. E. Gelenbe, E. Şeref, Z. Xu "Discrete event simulation using goal oriented learning agents", *AI, Simulation & Planning in High Autonomy Systems*, SCS, March 6–8 2000, Tucson, Arizona.

2. E. Gelenbe "Towards networks with cognitive packets", Invited Talk, *Invitational Conference on the Global Course of the Information Revolution: Technical Trends*, RAND Corp. and Carnegie-Mellon University, May 10-12 2000, Pittsburgh, PA.

3. E. Gelenbe, C. Cramer "Response of cortico-thalamic oscillations to somatosensory input", Invited Key-Note Paper, *TAINN: Turkish Artificial Intelligence and Neural Networks Symposium*, June 20-23 2000, Izmir, Turkey.

4. E. Gelenbe "G-Networks: Modeling and simulation of networks with control", Invited Key-Note Paper, *SPECTS 2K: 2000 Symposium on Performance Evaluation of Computer and Telecommunication Systems, and SCSC 2K: 2000 Summer Computer Simulation Conference,* , July 16-20 2000, Vancouver, Canada.

5. S. El-Khamy, E. Gelenbe, H. Abdelbaki "Neural network based spread spectrum PN code acquisition system", *IEEE International Joint Conference on Neural Networks*, IEEE Press, July 24-26 2000, Como, Italy.

6. E. Gelenbe, R. Wang "Neural network methods for top-down surface reconstruction from scanning electron microscopy images", *IEEE International Joint Conference on Neural Networks*, IEEE Press, July 24-26 2000, Como, Italy.

7. E. Gelenbe, R. Lent, Z. Xhu "Networks with Cognitive Packets", Invited Paper 1, MASCOTS 2000, IEEE Eighth International Symposium on Modeling Analysis and Simulation of Computer and Telecommunication Systems, August 29-September 1, 2000, San Francisco, CA.

8. B. Foss, E. Gelenbe, K. Hussain, N. Lobo, H. Bahr "Simulation driven virtual objects in real scenes", Proc. ITSEC 2000, Orlando, FL, November 2000.

1. Erol Gelenbe "Stability of large ATM networks", Opening Key-Note Paper, *Proc. BAS 99*, pp. 1–24, Istanbul, May 1999.

2. Erol Gelenbe "Simulation in the search for landmines", Invited Plenary Paper, *Proc. European Simulation Multi-conference*, Warsaw, May 1999.

3. A.H. Abdelbaki, E. Gelenbe "Random neural network decoder for error correcting codes", *International Joint Conference on Neural Networks*, IEEE Press, 1999.

4. A.H. Abdelbaki, E. Gelenbe, T. Koçak "Matched neural filters for EMI based mine detection", *International Joint Conference on Neural Networks*, IEEE Press, 1999.

5. E. Gelenbe "Interacting assemblies of goal-based learning agents," Invited presentation, in P. Fishwick, A. Uhrmacher, B. Zeigler eds., Agent Oriented Approaches in Distributed Modeling and Simulation: Challenges and Methodologies, Dagstuhl Seminar Report No. 245, Dagstuhl (Germany), July 4-7, 1999.

6. E. Gelenbe, P. Kammerman, T. Lam "Performance considerations in totally mobile wireless", *Performance '99: WG 7.3 International Conference on Modeling and Performance Evaluation of Computer Systems and Networks*, October 1999, Istanbul, Turkey.

7. E. Gelenbe, Jun Wang "QoS management with delays and cell drops", *Performance '99: WG 7.3 International Conference on Modeling and Performance Evaluation of Computer Systems and Networks*, October 1999, Istanbul, Turkey.

8. E. Gelenbe, E. Şeref, Z. Xu "Towards networks with intelligent packets", Opening Key-Note Paper, *Proc. IV–th International Symposium on Computer and Information Sciences*, pp. 1-11, October 18-20 1999, Izmir, Turkey.

9. E. Gelenbe, Esin Seref, Zhiguang Xu " Towards networks with intelligent packets", *IEEE-ICTAI Conference on Tools for Artificial Intelligence*, Chicago, November 9-11, 1999.

10. E. Gelenbe "Modeling CGF with learning stochastic finite-state machines", *Proc. 8-th Conference on Computer Generated Forces*, pp. 113-116, Orlando, May 11-13, 1999.

1. Erol Gelenbe, Patrick Kammerman, Teresa Lam "Mobile base station navigation and call hand-off in totally mobile wireless", Invited Paper, Computer Networking Track, *Proc. 37th IEEE Conference on Decision and Control*, Tampa, December 1998.

2. Juan-Manuel Barrionuevo, Erol Gelenbe, Evrim Icoz "Delay-based call admission control in ATM", Invited Paper, Computer Networking Track, *Proc. 37th IEEE Conference on Decision and Control*, Tampa, December 1998.

3.5 Conference Committees (partial list) 1994-2002

- Honorary Chair of the International Symposia Series on Computer and Information Systems (ISCIS), that I founded in 1986 and that takes place annually in Turkey in October of each year, with Proceedings published by CRC Press, Springer Verlag and other publishers. Every year since 1986.

- General Chair and Programme Committee Member, IEEE Computer Society MASCOTS '94 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Durham, NC, Jan. 31 to Feb. 4, 1994.

- General Chair and Programme Committee Member, IEEE Computer Society MASCOTS '95 (Modeling, Analysis and Simulation of Computer and Telecommunication Systems) Conference, Durham, NC, Jan. 18-20, 1995.

- General Chair, ACM SIGMETRICS/IFIP WG 7.3 Symposium on Computer Performance Modeling, Measurement and Evaluation, Istanbul, Turkey, October, 1999.

- Co-Programme Chair, Workshop on Mathematical Modeling and Analysis of Computer Systems (MAMA), ACM SIGMETRICS and IFIP WG 7.3, Harvard University, June 20, 2001.

- Programme Committee Member, ACM SIGMETRICS/IFIP WG 7.3 Symposium on Computer Performance Modeling, Measurement and Evaluation, Rome, Italy, October, 2002.

3.6 Keynotes and Seminars 1998-2002

- Invited Plenary, "Gelenbe Networks – Queueing Networks with Control Functions", July 2, 2002, Madrid Conference on Queueing Theory, Complutense University Madrid, July 1-6, 2002.

- Invited plenary, "Simulation with Augmented Reality", Perspectives on the Future of Modeling and Simulation, Summer Computer Simulation Conference, July 17, 2002.

- Opening Keynote, "Cognitive Packet Networks: QoS and Performance", IEEE Computer Society MASCOTS02 Sysmposium, ISBN 0-7695-1840-0, 3 – 12, Fort Worth, TX, Oct. 14, 2002.

- Keynote, "Cognitive Packet Networks", CNDS02 (Conference on Communication Networks Modeling and Simulation), Winter Simulation Conference, Society for Computer Simulation, San Antonio, Texas, Jan 27–30, 2002.

- Invited Opening Turorial Lecture, "Gelenbe Networks", TOOLS '02 Conference, Imperial College, London (UK), April 15, 2002.

- "Design and Measurement of Cognitive Packet Networks", Seminar at Bogaziçi University, Computer Engineering Department, Istanbul, Turkey, March 13, 2002.

- "Self-routing packet networks", Seminar, Department of Computer Science, University of Maryland, College Park, August 15, 2002.

- "Design and Performance of Cognitive Packet Networks", The Dean's Seminar Series, College of Engineering, University of Florida, Gainesville, January 16, 2002.

- "Cognitive Packet Networks", Seminar at the Department of Computer Science, University of Houston, Texas, April 25, 2002.

- "Adaptive Network Architecture using Random Neural Network Routing", Seminar at the Department of Computing, Imperial College, University of London, England, May 15, 2002.

- "Cognitive Packet Networks", Seminar at the Institut Montefiore, University of Liège, Belgium, June 17, 2002.

- "G-réseaux – nouvelles formes-produit de réseaux stochastiques: existence, unicité et application à l'analyse de grands systèmes", Seminar at INRIA, Rocquencourt, France, June 18, 2002.

- "G-réseaux – nouvelles formes-produit de réseaux stochastiques: existence, unicité et application à l'analyse de grands systèmes", Seminar at Ecole Normale Supérieure, Paris, France, June 19, 2002.

- "Cognitive Packet Networks", Seminar at the DAI-Laboratorium, Technical University of Berlin, Germany, June 25, 2002.

- "Cognitive Packet Networks", Seminar, IBM T.J. Watson Research Center, Yorktown Heights, NY, November 15, 2002.

- Keynote, "Self-routing packet networks", AFRICOM 2001, IFIP International Conference on Communication Systems - Cape Town, 28-30 May 2001.

- Keynote, "Simulation with Augmented Reality", EUROSIM, Delft University of Technology, Netherlands, 26-30 June 2001.

- Keynote, "Dependable Design of Cognitive Packet Networks", Conference on Design of Reliable Communication Networks in Budapest (Hungary), October 8, 2001.

- Keynote, "Simulating Autonomous Agents with Augmented Reality", Opening Keynote Lecture, *Proc. Games-On*, Second International Conference on Intelligent Games and Simulation, Society for Computer Simulation (SCS), London, November 30-December 1, 2001.

- Self-routing packet networks, School of Computational Science and Information Technology, Florida State University (Tallahassee), 5 February 2001.

- "Gelenbe Networks, a class of queueing networks with product form", Department of Electrical Engineering, Princeton University, October 10, 2001.

- CPN: Conception d'un reseau actif avec acheminement de paquets a base de Qualite de Service", Laboratoire LIP6, University of Paris VI, 12 March 2001.

- CPN: Acheminement de paquets base de qualité de service, Institut National des Télécommunications (France), 14 March 2001.

- Oscillatory corticothalamic response to somatosensory input, Technical University of Prague, 16 March 2001.

- "Design and Performance of Cognitive Packet Networks", Georgia Center for Advanced Telecommunications Technologies, Georgia Tech, March 23, 2001.

- Adaptive routing in QoS oriented Adhoc Networks, Koç University, Istanbul, 11 May 2001.

- Self-routing packet networks, TERENA Networking Conference 2001, Antalya, Turkey, 16 May, 2001

- "Cognitive Packet Networks", Seminar at MIT LIDS, June 21, 2001.

- "Cognitive Packet Networks", Seminar at the Eurecom Institute in Sophia-Antipolis, France, July 24, 2001.

- "Simulation with Augmented Reality", United Technologies Seminar Series, Boston University, September 28, 2001.

- "Performances et Qualité de Service dans les Réseaux à Paquets Cognitifs", Ecole Normale Supérieure, Paris, December 20, 2001.

- "Cheminement du Trafic dans les Réseaux à Paquets Cognitifs", INRIA, Rocquencourt, December 21, 2001.

- Opening Keynote, E. Gelenbe, R. Lent, Z. Xu "Towards networks with cognitive packets", International Conference on Performance and QoS of Next Generation Networking, Nagoya, Japan, 21 November 2000, in K. Goto, T. Hasegawa, H. Takagi and Y. Takahashi (eds.), Performance and QoS of Next Generation Networking, Springer Verlag, London, 2001.

- Invited Paper, "Towards networks with cognitive packets", Invitational Conference on the Global Course du Information Revolution: Technical Trends, RAND Corp. and Carnegie-Mellon University, 10-12 May 2000, Pittsburgh.

- Keynote Paper, E. Gelenbe, R. Lent, Z. Xu "Towards networks with cognitive packets", Proc. IEEE MASCOTS Conference, ISBN 0-7695-0728-X, pp. 3-12, San Francisco, CA, August 29-Sep.1 , 2000.

- Reti de calcolatori con pacchetti cognitivi, Department of "Informatica e Sistemistica", University of Pavia, July 2000.

- Reti generalizzate in forma prodotto, University of Pavia, July 2000.

- Towards networks with cognitive packets, University of California and ICSI, Berkeley, January 2000.

- Réseaux avec paquets cognitifs, University of Versailles Saint-Quentin, Laboratoire PRISM, May 2000.

- G-Networks: Modeling and simulation of networks with control, Opening Key-Note Paper, SPECTS 2K: 2000 Symposium on Performance Evaluation of Computer and Telecommunication Systems, and SCSC 2K: 2000 Summer Computer Simulation Conference, 16-20 July 2000, Vancouver, Canada.

- Goal based adaptive routing, Seminar at the Lorenz Mathematische-Physiche-Astronomische Centrum, Reijksuniversiteit Leiden, July 2000, Pays Bas.

- E. Gelenbe, C. Cramer Response of cortico-thalamic oscillations to somatosensory input, Opening Key-Note Paper, TAINN: Turkish Artificial Intelligence and Neural Networks Symposium, 20-23 June 2000, Izmir, Turkey.

- Invited Paper, "Autonomous search for information in an unknown environment", Workshop on Cooperative Information Agents, Uppsala, Sweden, 31 July - 2 August 1999.

- Opening Keynote, "Stability of large ATM networks", Proc. BAS 99, pp. 1-24, May 1999, Istanbul.

- Interacting assemblies of goal-based learning agents, Dagstuhl Seminar No. 245, in P. Fishwick, A. Uhrmacher, B. Zeigler eds., Agent Oriented Approaches in Distributed Modeling and Simulation: Challenges and Methodologies, 4-7 July 1999, Dagstuhl, Germany.

- Reti di calcolatori con pacchetti cognitivi, University of Modena, December 1999.

- Reti di calcolatori con pacchetti cognitivi, University of Roma Tor Vergata, Departement of "Informatica, Sistemi e Produzione", December 1999.

- E. Gelenbe, E. Seref, Z. Xu, Towards networks with intelligent packets, Proc. IV-th International Symposium on Computer and Information Sciences, pp. 1-11, 18-20 October 1999, Izmir, Turkey.

4 Former PhD Students

4.1 PhDs Graduated in France & Current Positions

- Sophie Chabridon is with Institut National des Télécommunications, France.

- Alexandre Aussem is Professor of Computer Science, University of Lyon I (France).

- Jose Aguilar is an Associate Professor of Computer Science at the University of Merida (Venezuela).

- Christine Hubert is Assistant Professor of of Computer Science, Univ of Angers.

- Myriam Mokhtari is Associate Professor of Computer Science, University of Rheims (France).

- Ali Labed is with Nortel Networks in Ottawa (Canada).

- Volkan Atalay is Associate Professor of Computer Engineering, Middle East Technical University (Turkey).

- Claude Poulain is with the company SAGEM in France.

- Alain Jean-Marie is a Professor at the University of Montpellier (France).

- Zhen Liu is a Manager at IBM Watson Research Center, Yorktown Heights, NY.

- Gilbert Harrus is with HP Labs in Grenoble, France.

- Vassilada Koubi is with industry in Greece.

- Tulin Atmaca is a Professor at Institut National des Télecommunications in Evry, France.
- Jean-Michel Fourneau is Professor of Computer Science, PRISM Laboratory, University of Versailles (France).
- Catherine Rosenberg is University Chair Professor and Department Head at the University of Waterloo.
- Gérard Hébuterne is Director of the Networks Department at Institut National des Tél'ecommunications in Evry, France.
- Guy Bernard is Director of the Computer Science Department at Institut National des Télécommunications.
- François Baccelli is Professor of Computer Science at Ecole Normale Supérieure in Paris (France).
- Salvatore Tucci is Professor at the University of Rome II, and Director of the Prime-Minister's Office of Informatics, Italian Government, Rome (Italy).
- Guy Pujolle is Professor of Computer Science, PRISM Laboratory, University of Paris VI (France).
- Jacques Labetoulle is with the Telecoms Administration in France (Sophia Antipolis). (France).
- Andreas Staphylopatis is Professor of Electrical Engineering and Computer Science at the National Technical University in Athens (Greece).
- Georges Hébrail is Professor at Ecole Nationale des Télecommunications, after being Head of an R&D Department at Electricitéde France.
- Jacques Lenfant rose to being President of the University of Rennes I (France).
- Dominique Potier heads Computer Science technical activities with the Thalès Group in Paris (France).
- Alain Kurinckx heads technical activities of the Networks Department of Thalès Group in Paris (France).
- Brigitte Plateau is Professor of Computer Science at the University of Grenoble.
- André Duda is Professor of Computer Science at the University of Grenoble.
- Jean-Marc Vincent is an Assistant Professor at the University of Grenoble.
- Philippe Nain and Guy Fayolle are Managers of Research Groups at INRIA, France.
- Rina Suros is Chair of the Computer Science Department at the Central University of Caracas (Venezuela).
- Geneviève Jomier is a Professor at University of Paris-Dauphine (France).
- Banh Tri An is a Professor at the University of Liège.
- François Bancilhon heads a Database company.
- Marisela Hernandez is an Associate Professor at the University of Amiens (France).
- Nicholas Spyratos is a Professor at University Paris-Sud (France).
- Nihal Pekergin is an Associate Professor at University Paris-Sorbonne (France).
- Ferhan Pekergin is an Associate Professor at University Paris XIII (France).
- Jean Vicard is an Associate Professor at University Paris XIII (France).
- Pierre Bouchet is a Professor at University Paris XIII (France).

4.2 PhDs Graduated in the USA

- Pu Su is with Microsoft.
- Varol Kaptan is with Industry in London.
- Yutao Feng is with nCube Systems.
- Ricardo Lent is Research Fellow at Imperial College.
- Qi Zhu is Assistant Professor at the University of Houston.
- Khaled Hussain is Visiting Assistant Professor at the University of Central Florida.
- Taşkin Koçak is Senior Lecturer at the University of Bristol.
- Zhiguang Xu is an Assistant Professor at Valdosta State University (Georgia).
- Hossam Abdelbaki is an Assistant Professor at the University of Alexandria (Egypt).
- Anoop Ghanwani is with HP Labs, after working at Cosine Networks and IBM's Network Products Division.
- Vijay Srinivasan is with Willownetworks, after working at Lantern Networks and IBM.
- Chris Cramer is Assistant Research Professor at Duke University.
- Xiaowen Mang is at AT&T Research Labs.
- Rakesh Kuswhaha is Vice-President of mFormation (a start-up), after having been with AT&T Labs.

4.3 PhDs Graduated at Imperial College

- Mike Gellman is with KBC Financial Products UK Ltd, 111 Old Broad Street, London EC2N 1FP, michael.gellman@kbcfp.com
- George Loukas is with Imperial College.
- Yu Wang is with industry in London.
- Peixiang Liu is with Southeastern University (USA).

5 Edited Books and Conference Proceedings

1. E. Gelenbe, C. Kaiser, "Operating systems theory and practice", Springer Lecture Notes in Computer Sciences (Berlin and Heidelberg), 1974.

2. E. Gelenbe, R. Mahl, "Computer architectures and networks: modelling and performance evaluation", North-Holland Pub. Co. (Amsterdam), 1975.

3. E. Gelenbe, H. Beilner, "Measuring, modelling and evaluating computer systems", North-Holland Pub. Co. (Amsterdam), 1977.

4. M. Arato, A. Butrimenko, E. Gelenbe, "Computer system performance", North-Holland Pub. Co. (Amsterdam), 1978.

5. E. Gelenbe, "Distributed systems", IEEE Press, New York, 1981.

6. G. Gardarin, E. Gelenbe "New applications of date bases", Academic Press (London and New York), 1984.

7. E. Gelenbe, "Performance '84", North-Holland Pub. Co. (Amsterdam), 1984.

8. E. Gelenbe, "High Performance Computer Systems", North-Holland Pub. Co. (Amsterdam), 1987.

9. J. L. Delhaye, E. Gelenbe "High Performance Computing", North-Holland Pub., Co. (Amsterdam), 1989.

10. E. Gelenbe (ed. and co-author), "Neural Networks: Advances and Applications I", North-Holland Pub. Co. (Amsterdam), 1991.

11. E. Gelenbe (ed. and co-author), "Neural Networks: Advances and Applications II", North-Holland Pub. Co. (Amsterdam), 1992.

12. E. Gelenbe, K.K. Bagchi, G.W. Zobrist (eds.) "Network Systems Design", Gordon and Breach, Amsterdam, 1999.

13. E. Gelenbe (ed. and co-author), "Advances in System Performance Evaluation", CRC Press, Boca Raton, 2000.

14. I. Çiçekli, N. Çiçekli, E. Gelenbe (eds.), "Proc. 17th International Symposium on Computer and Information Sciences", CRC Press, Boca Raton, 28-30 Oct. 2002.

6 Comprehensive List of Journal Papers 1970–2008

1. E. Gelenbe "On the loop-free decomposition of stochastic finite-state systems", *Information and Control*, Vol. 17, No. 5, 474-484, December 1970.

2. 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. 18, February 1971.

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 moduler 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.

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14. E. Gelenbe "On approximate computer system models", *Journal ACM*, Vol. 22, No. 2, pp. 261-269, April 1975.

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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.

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22. Banh-Tri-An, E. Gelenbe, "Simulation et amélioraton 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.

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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.

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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.

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45. E. Gelenbe "Temps d'execution asymptotique d'un programme parallèle", *Comptes-Rendus Acad. Sci. Paris*, t. 309, Série I (1989), 399-402.

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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.

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50. E. Gelenbe "Stability of the random neural networks", *Neural Computation*, Vol. 2, No. 2, pp 239-247, 1990.

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