

Artificial Immune Systems: A Bibliography

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**COMPUTER SCIENCE DEPARTMENT
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Important Note: The field of Artificial Immune Systems (AIS) is becoming more popular and AIS-based works spanning from theoretical modeling and simulation to wide variety of applications. In particular, some of the references are of synthetic approaches to understand and simulate the biological immune system, and others that develop computational methodologies inspired by the immune system to solve real-world problems. The AIS research group at the University of Memphis headed by Prof. Dipankar Dasgupta publishing the updated AIS bibliography since 1997. While this bibliography has been compiled with the utmost care and we tried to make it a complete review of the references in the field, there may be errors in the references we cited and we may have left out some important citations. In either case, we will appreciate any help you give us to update the future versions. All comments, suggestions and additions are welcome to improve this bibliography. Please send your contributions to Prof. Dipankar Dasgupta (dasgupta@memphis.edu). The compilers are also grateful to the researchers who helped us in our literature collection by either sending copies of citations or copies of documents. The authors take no responsibility, however, for any errors, missing information, the contents and quality of the references, nor for the usefulness and/or the consequences of applying the models or methodologies.

Books/Edited Volumes:

1. *Recent Developments in Biologically Inspired Computing*, L. N de Castro and F. J. Von Zuben, (Eds.) Idea Group Incorporation. 2004. ISBN: 1-59140-312-X.
2. *Immunity-Based-Systems: A Design Perspective*, Yoshiteru Ishida, Verlag/Jahr: Springer, 192 p. Berlin 2004. ISBN: 3-540-00896-9.
3. *Artificial immune Systems* (Special Issue on of the Journal on Genetic Programming and Evolvable Machines), J. Timmis and P. Bentley (Guest Eds.) Volume 4, No. 4, December 2003.
4. *Perspectives on Adaptation in Natural and Artificial Systems*. L. Booker, S. Forrest, M. Mitchell, and R. Riolo (Eds.), Oxford University Press.
5. *Immunocomputing: Principles and Applications*, A.O. Tarakanov, V.A. Skormin and S.P. Sokolova, Springer-Verlag, 2003. ISBN: 0-387-95533-X.
6. *Artificial Immune Systems* (Special issue of the journal IEEE Transaction on Evolutionary Computation). D. Dasgupta (Guest ed.), Vol. 6, No. 3, June 2002.
7. *Artificial Immune Systems: A New Computational Intelligence Approach*, L. N. de Castro and J. Timmis, Springer-Verlag, Heidelberg, Germany, August 2002. ISBN: 1 – 85233 – 594 – 7.
8. *Sztuczne systemy immunologiczne. Teoria i zastosowania* (Book in Polish). (Artificial Immune Systems. Theory and Applications). S.T.Wierzchon. Akademicka Oficyna Wydawnicza EXIT, Warszawa 2001. ISBN 83-87674-30-3.
9. *Design Principles for Immune System and Other Distributed Autonomous Systems*, Segel and Cohen (Eds). Oxford University Press, 2000.
10. *Artificial Immune Systems and Their Applications*, D. Dasgupta (Ed.) Springer – Verlag. 1999.

Book Sections:

1. *Enhancing Computer Security with Smart Technology [Book Review]* by Dasgupta, D. Ferebee, D. in May 2008
2. *Immunological Computation, Theory and Application* by Dipankar Dasgupta and Fernando Nino
3. *Introductory Tutorials in Optimisation, Search and Decision Support Methodology*, E. Burke and G. Kendall (Eds.), Kluwer, 2005.
4. *Towards a danger theory inspired artificial immune system for web mining*. Andrew Secker, Alex

- Freitas, and Jon Timmis. In A Scime, editor, *Web Mining: applications and techniques*, pages 145-168. Idea Group, January 2005.
5. *Intelligent Information Systems*. Series: Advances in Soft Computing. Zadeh, Kacprzyk (Eds.) Springer, Verlag, 2000.
 6. *New Ideas in Optimization*, D. Corne, M. Dorigo and F. Glover (Eds.), McGraw-Hill, 1999.

PhD Dissertations:

1. Dr. Zhou Ji. Dissertation title: *Negative Selection Algorithms: from the Thymus to V-detector*. Department of Computer Science. The University of Memphis, Summer 2006.
2. Albert W.Y. Ko. Dissertation Title: *The Design of an Immunity-based Search and Rescue System for Humanitarian Logistics*. The University of Hong Kong, 2006.
3. Andrew Secker. Dissertation Title: *Artificial Immune Systems for Web Content Mining: Focusing on the Discovery of Interesting Information*, University of Kent, 2006.
4. Thomas Stibor. Dissertation Title: *On the Appropriateness of Negative Selection for Anomaly Detection and Network Intrusion Detection*. Darmstadt University of Technology, 2006.
5. F. Esponda, Dissertation Title: *Negative Representations of Information*, Ph.D. thesis, University of New Mexico, 2005.
6. Modupe Ayara. Dissertation Title: *An Immune Inspired Approach For Adaptable Error Detection in Embedded Systems*, University of Kent, Canterbury, UK, 2005.
7. Andrew B. Watkins. Dissertation Title: *Exploiting Immunological Metaphors in the Development of Serial, Parallel, and Distributed Learning Algorithms*. University of Kent, Canterbury, UK, March 2005.
8. Luis J. Gonzalez. Dissertation Title: *A Self-Adaptive Evolutionary Negative Selection Approach for Anomaly Detection*. Nova Southeastern University, Fort Lauderdale-Davie, Florida, US, January 2005.
9. Nareli Cruz Cortes. Dissertation title: *Artificial immune system to solve problems of optimization*. The Evolutionary Computation Group at CINVESTAVIPN (EVOCINV) 2004.
10. Giuseppe Nicosia. Dissertation Title: *Immune Algorithms for Optimization and Protein Structure Prediction*. Department of Mathematics and Computer Science, University of Catania, 2004.
11. Dr. Tom Knight. Dissertation Title: *MARIA: A Multilayered Unsupervised Machine Learning Algorithm Based on the Vertebrate Immune System*, University of Kent, Canterbury, UK, September 2004.

12. F. Gonzalez. Dissertation Title: *A Study of Artificial Immune Systems Applied to Anomaly Detection*. Division of Computer Science, University of Memphis, Memphis, TN 38152, May 2003.
13. Anil B. Somayaji. Dissertation Title: *Operating System Stability and Security through Process Homeostasis*. Ph.D. thesis, University of New Mexico, July 2002.
14. Hossam Meshref. Dissertation Title: *Modeling Autonomous Agents' Behavior Using Neuro-Immune Networks*. Department of Electrical and Computer Engineering, Virginia Tech. 2002.
15. Jung Won Kim. Dissertation Title: *Integrating Artificial Immune Algorithms for Intrusion Detection*, Department of Computer Science, University College London, July 30, 2002.
16. E. Hart. Dissertation Title: *Immunology as a Metaphor for Computational Information Processing: Fact of Fiction*, University of Edinburgh, Scotland, UK, 2002.
17. L. N. de Castro. Dissertation Title: *Immune Engineering: Development of Computational Tools Inspired by the Artificial Immune Systems*. (In Portuguese). DCA – FEEC/UNICAMP, Campinas/SP, Brazil, May 2001.
18. Junichi Suzuki. Dissertation Title: *Biologically-inspired Autonomous Adaptability in Communication End system: An Approach Using an Artificial Immune Network..* Keio University, 2001.
19. Lei Wang. Dissertation Title: *Immune evolutionary computation and its application*. Xidian University, 2001.
20. J. Timmis. Dissertation Title: *Artificial immune systems: A novel data analysis technique inspired by the immune network theory*. Department of Computer Science, University of Wales, Aberystwyth. Ceredigion. Wales, UK, August 2000.
21. S. A. Hofmeyr. Dissertation Title: *An Immunological Model of Distributed Detection and its Application to Computer Security*. University of New Mexico, 1999.
22. M. Oprea. Dissertation Title: *Antibody Repertoires and Pathogen Recognition: The role of germline diversity and somatic hypermutation*. University of New Mexico. Albuquerque, NM. 1999.
23. D. J. Smith. Dissertation Title: *The Cross-Reactive Immune Response: Analysis, Modeling, and Application to Vaccine Design*. University of New Mexico, NM. 1997
24. J. Carneiro. Dissertation Title: *Towards a comprehensive view of the immune system*. University of Porto. Portugal, 1997.
25. R. Hightower. Dissertation Title: *Computational aspect of antibody gene families*. University of New Mexico, Albuquerque, NM. 1996.
26. V. Detours. Dissertation Title: *Modeles formels de la selection des cellules B et T.*, University <http://ais.cs.memphis.edu/files/papers/AIS-bibliography-Dec08.pdf>

Paris 6, France, 1996

Masters Thesis:

1. Oladipo Lawal. Masters Thesis: *Investigation of Novel Mutation Mechanisms for Immune-Inspired Optimisation Algorithms*. School of Computing, Napier University, 2007.
2. Nrupal Choudary Prattipati. Masters Thesis: *Improvement and Evaluation of an immune-based email classification system*. School of Computing, Napier University, 2007.
3. Terri Oda. Masters Thesis: *A Spam-Detecting Artificial Immune System*. Ottawa-Charleton Institute for Computer Science, School of Computer Science, Carleton University, 2005.
4. Sankalp Balachandran. Masters Thesis: *Multi-shaped Detector generation using Real-valued representation for Anomaly Detection*. University of Memphis, Memphis, TN, US, December 2005.
5. Joseph M. Shapiro. Masters Thesis: *An Evolutionary Algorithm to Generate Ellipsoid Detectors for Negative Selection*. Air Force Institute of Technology. Wright-Patterson Air Force Base, Ohio, USA. March, 2005.
6. X. Wang. Masters Thesis: *Artificial Immune Optimization and Its Application in Industrial Electronics*. Institute of Intelligent Power Electronics, Department of Electrical and Communications Engineering, Helsinki University of Technology, 2005.
7. Amanda Marie Whitbrook. Masters Thesis: *An idiotypic immune network for mobile robot control*. School of Computer Science and Information Technology, University of Nottingham, 2005.
8. Bashar Barrishi. Masters Thesis: *Modeling the artificial immune system to the human immune system with the use of agents*. Oklahoma State University, 2004.
9. Johnny Kelsey. Masters Thesis: *An Immune Inspired Algorithm for Function Optimization*. MSc. 2004.
10. Jeong Sik Jang. Masters Thesis: *An Empirical Investigation into an Artificial Immune System for Email Classification AISEC*. 2004.
11. Lingjun Meng. Masters Thesis: *Artificial Immune System for Knowledge Discovery*. Leiden Institute of Advanced Computer Science (LIACS), Leiden University, 2004.
12. Jos_Daniel Dias Pacheco. Masters Thesis: *Computational Power of Killers and Helpers in the Immune System*. Universidade de Lisboa (Lisbon University), 2004.
13. Nyrki Rantonen. Masters Thesis: *An Artificial Immune System for Document Classification*. 2004.

14. Alex Kilgour. Masters Thesis: *Developing a Practicle Artificial Immune System for Email Classification*.2004
15. Mark A. Esslinger. Masters Thesis: *An Artificial Immune System Strategy for Robust Chemical Spectra Classification via Distributed Heterogeneous Sensors*. Air Force Institute of Technology, Air University, 2003.
16. Alexander Jakobus Graaff. Masters Thesis: *The artificial immune system with evolved lymphocytes*. Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, 2003.
17. Julie Greensmith. Masters Thesis: *New Frontiers For An Artificial Immune System*. University of Leeds, 2003.
18. Christopher C. Lord. Masters Thesis: *An Emergent Model of Immune Cognition* 2003. Carnegie Mellon University.
19. Kathy Jean Matthews. Masters Thesis: *Immunotronics: Self-repairing finite state machines* 2003. University of West England.
20. Tom Morrison. Masters Thesis: *Similarity Measure Building for Website Recommendation within an Artificial Immune System*. School of Computer Science, University of Nottingham, 2003.
21. Larissa A. O'Brien, Masters Thesis: *Using Sequence Analysis to Perform Application-Based Anomaly Detection Within an Artificial Immune System Framework*. Air Force Institute of Technology, Air University, 2003.
22. Camilla Edmonds. Masters Thesis: *Artificial Immune Networks for Function Optimisation* MSc. 2003
23. John L. Bebo. Masters Thesis: *Using Relational Schemata in a Computer Immune System to Detect Multiple-Packet Network Intrusions*. Air Force Institute of Technology, Air University, 2002.
24. Martin Thorsen Ranang. Masters Thesis: *An Artificial Immune System Approach to Preserving Security in Computer Networks*. Norwegian University of Science and Technology (NTNU), Trondheim, Norway, June 2002.
25. Lars Olsson. Masters Thesis: *Anomaly Detection Using Self/Nonself Discrimination*. Evolutionary and Adaptive Systems, The University of Sussex, 2002.
26. N. S. Majumdar. Masters Thesis: *Anomaly Detection in Single and Multidimensional datasets using Artificial Immune Systems*. Division of Computer Science, Department of Mathematical Sciences. University of Memphis. Memphis, TN. May 2002.
27. Kathia Regina Lemos Juca. Masters Thesis: *An Approach for Intrusion Detection with Immune System*. Santa Catarina Federal University, 2001.
28. P. D. Williams Warthog. Masters Thesis: *Towards an artificial Immune System for detecting 'low*

- and slow' information system attacks*, AFIT/GCE/ENG/01M-15, Air Force Institute of Technology, WPAFB, OH. March 2001.
29. Andrew B. Watkins. Masters Thesis: *AIRS: A resource limited artificial immune classifier*. Mississippi State University, 2001
 30. Paul K. Harmer. Masters Thesis: *A Distributed Agent Architecture for a Computer Virus Immune System*. Air Force Institute of Technology, Air University, 2000.
 31. Daniel Stow. Masters Thesis: *Towards an immunological approach to network management: learning, memory and cross-reactivity in an artificial immune system*. Evolutionary and Adaptive Systems, The University of Sussex, 2000.
 32. Kelley J. Cardinale and Hugh M. O'Donnell. Masters Thesis: *A Constructive Induction Approach to Computer Immunology*. Air Force Institute of Technology, Air University, 1999.

Links to AIS related web sites (last access date December 30, 2008):

People

- ❑ Uwe Aickelin: <http://www.cs.nott.ac.uk/~uxa/>
- ❑ Jason Brownlee: <http://www.ict.swin.edu.au/personal/jbrownlee/>
- ❑ D. Dasgupta: <http://www.msci.memphis.edu/~dasgupta>
- ❑ P. D'haeseleer: http://www-cmls.llnl.gov/?url=about_cmls-scientific_staff-dhaeseleer_p
- ❑ S. Forrest: <http://www.cs.unm.edu/~forrest>
- ❑ Fabio A. González: <http://dis.unal.edu.co/~fgonza/>
- ❑ P. Hajela: <http://www.rpi.edu/~hajela>
- ❑ E. Hart: <http://www.dcs.napier.ac.uk/~emmah/>
- ❑ S. A. Hofmeyr: <http://www.cs.unm.edu/~steveah>
- ❑ G.Nicosia: <http://www.dmi.unict.it/~nicosia/intro.html>
- ❑ N. I. Nikolaev: <http://homepages.gold.ac.uk/nikolaev/>
- ❑ F. Nino: <http://dis.unal.edu.co/~lfnino>
- ❑ L. Nunes de Castro: <http://www.dca.fee.unicamp.br/~lnunes>
- ❑ Mihaela Oprea, <http://www.santafe.edu/~mihaela>
- ❑ S. Perelson: <http://www.t10.lanl.gov/asp/>
- ❑ L. Segel: <http://www.wisdom.weizmann.ac.il/~NoMoreUsers/lee/>
- ❑ D. J. Smith: <http://www.santafe.edu/~dsmith>
- ❑ S. Thayer: http://www.ri.cmu.edu/people/thayer_scott.html

- J. Timmis: <http://www-users.cs.york.ac.uk/jtimmis/>
- F. J. Von Zuben: <http://www.dca.fee.unicamp.br/~vonzuben>
- Y. Watanabe: <http://www.nsc.nagoya-cu.ac.jp/profile/watanabey-e.html>

Organizations

- CytoCom Network: <http://www.csc.liv.ac.uk/~cytocom/index.html>
- IBM Antivirus Research: <http://www.research.ibm.com/antivirus/>
- ISYS Project: <http://www.aber.ac.uk/~dcswww/ISYS>
- Primary Response: <http://www.sanasecurity.com/>

AIS-related Events

- **2009 Events**
- [8th International Conference on Artificial Immune Systems \(ICARIS'2009\) on 9th – 12th August'09, York, UK.](#)
- [The 13th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems \(KES2008\) on Santiago, Chile, September'2009](#)
- [The 5th International Conference on Natural Computation \(ICNC'09\) and the 6th International Conference on Fuzzy Systems and Knowledge Discovery \(FSKD'09\) on 14th – 16th August, 2009 in Tianjin, China](#)
- [The 21st Innovative Applications of Artificial Intelligence Conference on 11th – 15th July 2009 in Pasadena, CA](#)
- [The Twenty-Fourth AAI Conference on Artificial Intelligence \(AAAI\) on 11th – 15th July 2010 in Atlanta, Georgia, USA. \(Because the IJCAI conference is being held in North America in 2009, no AAAI conference will be held that year.\)](#)
- [The International Conference on Genetic & Evolutionary Methods \(GEM 2009\) on 13th – 16th July'09 in Las Vegas, Nevada](#)
- [IEEE Congress on Evolutionary Computation \(IEEE CEC 2009\) on 18th – 21st May' 2009 in Trondheim, Norway](#)
- [Joint venture of the 17th International Conference Intelligent Information Systems \(IIS\) and the 24th International Conference on Artificial Intelligence \(AI\) on 15th – 18th June 2009 in Kraków, Poland.](#)
- [The IASTED International Conference on Artificial Intelligence and Applications ~ AIA ~ 2009 on 16th – 18th February'09 in Innsbruck, Austria.](#)
- [The International Conference of Agents & Artificial Intelligence'09 \(ICAART'09\) on 19th – 21st January'09 in Porto, Portugal.](#)

- **2008 Events**

- [The Seventh International Conference on Simulated Evolution And Learning \(SEAL'08\)](#) 7 - 10 December 2008 Melbourne, Australia.
- [The 12th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems \(KES2008\)](#), 3-6 September 2008, Zagreb, Croatia.
- [The 4th International Conference on Natural Computation \(ICNC'08\)](#) and the [5th international Conference on Fuzzy Systems and Knowledge Discovery \(FSKD'08\)](#), 25th-27th August, 2008, jointly held in Jinan, China.
- [7th International Conference on Artificial Immune Systems \(ICARIS 2008\)](#), 10th-13th August, Phuket, Thailand.
- [The Twenty-Third AAI Conference on Artificial Intelligence](#), July 13th-17th, 2008 Chicago, Illinois.
- [A recombination of 17th International Conference on Genetic Algorithms \(ICGA\) and the 13th Annual Genetic Programming Conference \(GP\)](#), 12th-16th July, 2008, Atlanta, Georgia, USA.
- [International Conference on Artificial Intelligence and Pattern Recognition](#), 7th-10th of July 2008 in Orlando, FL, USA.
- [IEEE Congress on Computational Intelligence \(WCCI\)](#), June 1-6, 2008 in Hong Kong.
- [16th International Conference Intelligent Information Systems \(IIS\)](#), Zakopane, Poland, June 16-18, 2008.
- [The IASTED International Conference on Artificial Intelligence and Applications \(AIA\)](#), Innsbruck, Austria, February 11 – 13, 2008.

- **2007 Events**

- [3rd Indian International Conference on Artificial Intelligence \(IICAI\)](#) 17-19 December, 2007 in Pune, India.

- ❑ [19th IEEE International Conference on Tools with Artificial Intelligence \(ICTAI\)29-31_October, 2007 in Patras, Greece](#)
- ❑ [2nd International Symposium on Intelligence Computation and Applications \(ISICA\) 21-23 September, 2007 in Wuhan, China](#)
- ❑ [IEEE Congress on Evolutionary Computation \(CEC\), 25-28 September, 2007 in Singapore.](#)
- ❑ [6th International Conference on Artificial Immune Systems \(ICARIS\),_26-29 August, 2007_ in Santos/SP, Brazil.](#)
- ❑ [The 3rd International Conference on Natural Computation \(ICNC\) and the 4th international Conference on Fuzzy Systems and Knowledge Discovery \(FSKD\), 24th-27th August, 2007, jointly held in Haikou, China.](#)
- ❑ [World Conference of STRESS, HANS SELYE 1907-2007, 23-26 August, Budapest in Hungary.](#)
- ❑ [The Twenty-Second AAAI Conference on Artificial Intelligence, July 22–26, 2007 in Vancouver, British Columbia, Canada.](#)
- ❑ [7th Symposium on Abstraction, Reformulation, and Approximation \(SARA\), 18-21 July, 2007 in Vancouver, Canada.](#)
- ❑ [International Conference on Artificial Intelligence and Pattern Recognition, 9-12 of July 2007 in Orlando, FL, USA.](#)
- ❑ [The Third IASTED International Conference on Computational Intelligence, 2-4 July 2007 in Banff, Alberta, Canada.](#)
- ❑ [A recombination of 16th International Conference on Genetic Algorithms \(ICGA\) and the 12th Annual Genetic Programming Conference \(GP\) \(GECCO'06\), 7-11 July, 2007, London, England.](#)
- ❑ [The First IEEE Symposium on Foundations of Computational Intelligence \(FOCI\) 1-5 April, 2007 Hawaii, USA](#)
- ❑ [The IASTED International Conference on Artificial Intelligence and Applications \(AIA\), February 12 – 14, 2007 in Innsbruck, Austria 2007.](#)
- ❑ [Twentieth International Joint Conference on Artificial Intelligence, 6-12 January, 2007 in Hyderabad, India.](#)

▪ **Previous Events**

- ❑ [Tenth International Conference on Knowledge-Based & Intelligent Information & Engineering Systems \(KES2006\), 9-11 October 2006, Bournemouth International Conference_Centre.](#)
- ❑ [Advisory board Member, The 2nd International Conference on Natural Computation \(ICNC\) and the 3rd International Conference on Fuzzy Systems and Knowledge Discovery \(FSKD'06\) , 24-28 September 2006 will be jointly held in Xi'an, China. ICNC'06-FSKD'06_](#)
- ❑ [Fifth International Conference on Artificial Immune Systems\(ICARIS\),4th-6th September 2006, Instituto Gulbenkian de Ciência, Oeiras, Portugal.](#)
- ❑ [Fifth Mexican International Conference on Artificial Intelligence, September 2006. Mexico.](#)
- ❑ [The 14th Annual International conference on Intelligent Systems for Molecular Biology \(ISMB 2006\), 6-10 August 2006, Fortaleza, Brazil.](#)
- ❑ [The IASTED International Conference on COMPUTATIONAL INTELLIGENCE \(CI\) 17-19_July, 2006. Calgary, Alberta, Canada](#)
- ❑ [A Special Session on Recent Developments in Artificial Immune Systems \(IEEE World_Congress on Computational Intelligence\), 16–21 July 2006,Sheraton Vancouver Wall Centre Hotel, Vancouver, Canada.](#)
- ❑ [Artificial Immune Systems at Genetic and Evolutionary Computation Conference \(GECCO'06\), 8-12 July, 2006, Seattle, W.A, USA.](#)
- ❑ [Workshop on Artificial Immune Systems and Immune System Modelling \(AISB'06: Adaptation in](#)

- Artificial and Biological Systems), 4th April 2006, University of Bristol, Bristol, England.
- [International Conference on Natural Intelligence - ICNI 2006](#), 24-26 February, 2006 Czech Republic, Prague.
 - [Second Indian International Conference on Artificial Intelligence \(IICAI\)](#), 20th -22nd December, 2005, Pune, INDIA.
 - [Fourth Mexican International Conference on Artificial Intelligence](#), 14th -18th November, 2005. Monterrey, Nuevo Leon. Mexico.
 - [A Special Session on "Immunity-Based Systems" under Information Sciences Sessions at SAE World Aerospace Congress](#), 4th - 6th October, 2005. Grapevine, Texas, USA.
 - [Ninth International Conference on Knowledge-Based Intelligent Information & Engineering Systems \(KES\)](#), 14 - 16 September, 2005, Melbourne, Australia.
 - [International Conference on Evolvable Systems \(ICES\)](#), 12th - 14th September, 2005, Sitges, Barcelona, Spain.
 - [Recent Development in Artificial Immune Systems at IEEE Congress on Evolutionary Computation \(CEC\)](#), 2nd - 5th September, 2005, Edinburgh, UK.
 - [Sixth International Workshop on Information Processing in Cells and Tissues \(IPCAT\)](#), August 30 - September 1, 2005, St William's College, York, United Kingdom.
 - [International Conference on Natural Computation \(ICNC\)](#), 27th-29th August, 2005, Changsha, China.
 - [International Conference on Intelligent Computing \(ICIC\)](#), 23rd - 26th August, 2005, Hefei, China.
 - [4th International Conference on Artificial Immune Systems \(ICARIS\)](#), 14th - 17th August, 2005, Banff, Alberta, Canada.
 - [International Joint Conference on Neural Networks](#), 31st July - 4th August, 2005, Montréal, Québec, Canada.
 - [Second Multidisciplinary International Conference on Scheduling: Theory and Applications \(MISTA\)](#), 18th -21st July 2005, New York, USA.
 - [The IASTED International Conference on COMPUTATIONAL INTELLIGENCE](#) 4th -6th July, 2005, Calgary, Alberta, Canada.
 - [Artificial Immune Systems at Genetic and Evolutionary Computation Conference \(GECCO\)](#), 25th - 29th June, 2005, Washington, D.C., USA.
 - [New Trends in Intelligent Information Processing and Web Mining \(IIPWM\) INTELLIGENT INFORMATION SYSTEMS 2005 - IIS'05](#) Gdansk, Poland, June 13-16, 2005.
 - [International Workshop on Natural and Artificial Immune Systems \(NAIS\)](#), 9th - 10th June, 2005, Vietri sul Mare, Salerno, Italy.
 - [The Fourth IEEE International Workshop on Soft Computing as Transdisciplinary Science and Technology](#), 25-27 May 2005, Muroran, Japan.
 - [3rd International Conference on Artificial Immune Systems](#), 13-16 September, 2004, Catania, Italy.
 - [International Workshop on "Computational Intelligence Applied to Tutoring Systems"](#), August 30 to September 03, 2004, Maceió, Brazil.
 - Special Track on [Artificial Immune Systems](#) at [Genetic and Evolutionary Computation Conference \(GECCO\)](#), June 26-30, 2004. Seattle, Washington USA.
 - Special Session on [Artificial Immune Systems](#) at the [Congress on Evolutionary Computation \(CEC\)](#), June 20-23, 2004, Portland, Oregon, USA.
 - Tutorial on Immunological Computation at [Mexican International Conference on Artificial Intelligence \(MICAI\)](#), April 26-30, 2004, Mexico City, Mexico.
 - AISB 2004 Symposium on The Immune System and Cognition (ImmCog-2004), 30th-31st March, 2004, Leeds, UK.
 - Special Session on [Artificial Immune Systems](#) at the [Congress on Evolutionary Computation \(CEC\)](#), December 8-12, 2003, Canberra, Australia.
 - Special Session on Immunity-Based Systems at [Seventh International Conference on Knowledge-Based Intelligent Information & Engineering Systems \(KES\)](#), September 3-5, 2003, University of

- Oxford, UK. http://www.kesinternational.org/kes2003/http://web.comlab.ox.ac.uk/oucl/conferences/kes2003/Invited_Sessions.html
- ❑ [Second International Conference on Artificial Immune Systems \(ICARIS\)](#), September 1-3, 2003, Napier University, Edinburgh, UK.
 - ❑ Tutorial on Artificial Immune Systems at [First Multidisciplinary International Conference on Scheduling: Theory and Applications \(MISTA\)](#), 12 August 2003, The University of Nottingham, UK.
 - ❑ Tutorial on Immunological Computation at [International Joint Conference on Artificial Intelligence \(IJCAI\)](#), 10 August 2003, Acapulco, Mexico.
 - ❑ Special Track on [Artificial Immune Systems](#) at [Genetic and Evolutionary Computation Conference \(GECCO\)](#), July 12-16, 2003, Chicago, USA.
 - ❑ 9th International Conference on Neural Information Processing, 4th Asia-Pacific Conference on Simulated Evolution and Learning, 2002 International Conference on Fuzzy Systems and Knowledge Discovery, November 18-22, 2002, Singapore. <http://www.ntu.edu.sg/home/nef/>
 - ❑ Fifth International Conference on Cellular Automata for Research and Industry, October 9- 11, 2002, Switzerland. This conference invites papers on immune systems as well. <http://cui.unige.ch/acri2002/>
 - ❑ IEEE 2002 Systems, Man and Cybernetics conference, October 6-9 Tunisia. <http://smc02.ec-lille.fr/home.html>
 - ❑ KES'2002 Special Session on Immunity-Based Systems held as part of 6th International Conference on Knowledge-Based Intelligent Information Engineering Systems, 16-18 September 2002, Podere d'Ombriano, Crema, Italy. <http://www.dc.fi.udc.es/lidia/kes2002.html>
 - ❑ 1st International Conference on Artificial Immune Systems (ICARIS-2002) University of Kent, September 9-11, 2002, Canterbury. <http://www.aber.ac.uk/icaris-2002/icaris-2002.htm>
 - ❑ Special track on Artificial Immune Systems held at the 2002 Congress on Evolutionary Computation as part of the 2002 IEEE World Congress on Computational Intelligence, May 12-17, 2002, Honolulu, HI. <http://www.wcci2002.org/>
 - ❑ Congress On Evolutionary Computation, (CEC 2001): <http://cec2001.kaist.ac.kr/>
 - ❑ Genetic and Evolutionary Computation Conference (GECCO' 2001): <http://gal4.ge.uiuc.edu:8080/GECCO-2001/>
 - ❑ IEEE International Conference on Systems, Man, and Cybernetics '97, Special Track on Artificial Immune systems: <http://www.msci.memphis.edu/~dasgupta/accepted-papers.html>
 - ❑ IEEE International Conference on Systems, Man, and Cybernetics '98, Special Track on Artificial Immune systems: <http://www.msci.memphis.edu/~dasgupta/smc98-AIS-list.html>
 - ❑ International Workshop on Information Processing in Cells and Tissues (IPCAT' 2001): <http://ipcat.etro.vub.ac.be/IPCAT2001/welcome.html>

Journal Articles, Conference papers and Technical Reports:

A

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