

## Call for Participants

# 2004 International Workshop on Nature Inspired Computation and Applications (IWNICA'2004)

October 25-29, 2004, Hefei, P. R. China



**NSFC**  
National Natural Science Foundation of China



**THE ROYAL  
SOCIETY**

Nature Inspired Computation, which is inspired from natural systems, has the unique character of self-adaptive, self-organizing and self-learning. Because of its ability to solve complex problems that are difficult for traditional computational methods, Nature Inspired Computation is now successfully used in many fields such as Combinational Optimization, Machine Learning, Data Mining and Engineering Design, etc.

The 2004 International Workshop on Nature Inspired Computation and Applications will be held on October 25-29, 2004 at the University of Science and Technology of China (USTC), Hefei, P. R. China. The aim of this Workshop is to further explore the theories and applications of Nature Inspired Computation and identify future research directions. The Workshop provides an excellent opportunity for participants to hear from many distinguished international experts in the field and exchange ideas with them. The official language of the Workshop is English.

## 1. Main Topics

The topics of the workshop include, but are not limited to:

- Basic Methods in Nature Inspired Computation
- Theoretic Foundations and Performance Analysis for Nature Inspired Computation
- Applications of Nature Inspired Computation
- High Performance Computation Inspired by Nature
- Novel Algorithms in Nature Inspired Computation

## 2. Invited Speakers

Distinguished experts will give lectures on Nature Inspired Computation and its applications. For detailed information, please refer to <http://nical.ustc.edu.cn/nica2004/>.

So far, the experts who have confirmed to give the lectures at IWNICA'2004 include:

Prof. Wolfgang Banzhaf	Professor from The Memorial University of Newfoundland, Canada. Current Editor-in-Chief of Genetic Programming and Evolvable Machines (Kluwer), and associate editor of Applied Soft Computing (Elsevier). Research interests include Evolvable Machines, Genetic Programming, Evolvable Machines, Artificial Life, Complex Systems, Self-organization, etc.
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Prof. Bill Buckles	Professor from The Tulane University, USA. Research interests include GA, Evolutionary Strategy, Fuzzy Set, etc.
Prof. Guoliang Chen	Professor from University of Science and Technology of China, an academican of the Chinese Academy of Sciences. Research interests include Parallel Computing, High Performance Computation and Computation Intelligence. He has won the second grade of National Natural Science Award of China, Science & Technology Progress Award of ministry level, province level and Chinese Academy of Science for fourteen times. He has published 7 books and more than 100 papers in related areas. He also translated 5 books, participated in editing 5 dictionaries or vocabularies about computer, published 8 computer textbooks as edit-in-chief or examiner-in-chief.
Prof. David Corne	Professor from The University of Exeter, UK. Research interests include Theory of Evolutionary Computation and Applications in Multi-objective Approaches, Bioinformatics, Creativity, Scheduling, Data Mining, Forecasting, Timetabling, Telecommunications, etc. Founding Co-Editor of the Journal of Scheduling (now on Editorial Board). associate editor of the IEEE Transactions on Evolutionary Computation, and editorial board member of Applied Soft Computing (Elsevier) , editorial board member of International Journal of Systems Science (Taylor and Francis).
Prof. Aike Guo	Prof. Aike Guo is an academican of the Chinese Academy of Sciences. Prof. Guo's current research interest is to understand the molecular, cellular, and integrative mechanisms underlying learning, memory and cognition-like behaviour, e.g., decision-making and selective attention in Drosophila.
Prof. Li-Cheng Jiao	Professor from Xidian University. Standing director of Chinese Association of Artificial Intelligence, director of Chinese Institute of Electronics, committeeman of Chinese Committee of Neural Networks, and member of Academic Degrees Committee of the State Council. Research interests include Evolutionary Computation, Artificial Immune Systems and Intelligent Information Processing. He has published several books and more than 100 papers in international and internal magazines of these areas.
Dr. Roy Johnston	Reader in Computational Chemistry at the University of Birmingham. Research interests include the application of Genetic Algorithms, Ant Colony Optimization, Artificial Neural Networks and Artificial Immune Systems to optimization problems in chemistry (e.g. geometry optimization of nanoparticle structures, protein folding, structure solution from powder diffraction data). Editor of "Applications of Evolutionary Computation in Chemistry" (Structure & Bonding, Volume 110, Springer-Verlag, Heidelberg, 2004).
Prof. Lishan Kang	Professor from The State Key Laboratory of Software Engineering, Wunan University. Research interests include Parallel Computation, Evolutionary Computation and Automatic Programming. Current editorial board member of "Neural, Parallel & Scientific Computations", "Parallel Algorithms and Applications". He has won severl prizes at national, ministerial or provincial level, published 7 books and more than 200 papers in these areas.
Prof. Peter Ross	Professor from The Napier University, UK. Main research interests are in evolutionary computing, in neural nets and in AI generally, especially

	timetabling and scheduling.
Prof. Marc Schoenauer	Senior researcher at INRIA, Associate Professor at Ecole Polytechnique, France. Current Editor-in-Chief of Evolutionary Computation (MIT Press) and associate editor of several international journals. Research interests include Theory of Evolutionary Computation and Applications.
Prof. Edward Tsang	Professor from The University of Essex, UK. Chair of IEEE NNS Task Force on Evolutionary Computation in Finance and Economics, editorial board member of IEEE Transactions on Evolutionary Computation. Research interests include Constrains Satisfaction Problems, Computational Economics, etc.
Prof. Xufa Wang	Professor from University of Science and Technology of China. Research interests include computational intelligence and its applications, especially Artificial Immune Systems, Genetic Algorithms and Artificial Neural Networks and network security, Image Processing, et al. Principal Investigators of projects supported by National 863, 973 (sub-projects), NSFC and Chinese Academy of Science. He has won several prizes at ministerial or provincial level, and published almost 100 papers in these areas.
Prof. Xin Yao	Professor from The University of Birmingham, Director of the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), Fellow of IEEE and the Chair of the IEEE Neural Network Society Technical Committee on Evolutionary Computation. Current Editor-in-Chief of IEEE Transactions on Evolutionary Computation, and associate editor of several international journals.
Bo Zhang / Ling Zhang	<p>Prof. Bo Zhang is an academician of the Chinese Academy of Sciences. His current research interests include artificial intelligence, artificial neural networks, genetic algorithms, fractal, wavelet theory, and the applications of applying the aforementioned theories into pattern recognition, knowledge engineering, robotics and intelligent control.</p> <p>Prof. Ling Zhang is from Anhui University, Institute of Artificial Intelligence. His research interests include artificial intelligence, artificial neural networks, genetic algorithms, machine learning, granular computing and their applications. He has published 4 books and more than 100 papers in these areas.</p>
Prof. Yixin Zhong	Professor from Beijing University of Posts and Telecommunications, IEEE fellow, Associate Editor of IEEE Transactions on Neural Networks, Chair of Chinese Committee of Neural Networks, Dean of Chinese Association of Artificial Intelligence, Associate Dean of Chinese Association of Information Economics. Main research interests include Theory of Telecommunication, Artificial Intelligence, Neural Networks, Decision Theory, Information Economics, etc. He has published 16 books and more than 400 papers in these areas.
Prof. Zhi-Hua Zhou	Professor from Department of Computer Science and Technology, Nanjing University. Associate Editor of Knowledge and Information Systems (Springer), Editorial Board Member of Artificial Intelligence in Medicine (Elsevier) and International Journal of Data Warehousing and Mining (Idea

	Group). Vice Chair of CCF Artificial Intelligence & Pattern Recognition Society. Winner of National Outstanding Youth Foundation and National Excellent Doctoral Dissertation Award of China. Research interests include Machine Learning, Data Mining, Pattern Recognition, Information Retrieval, Neural Computation and Evolutionary Computation, etc.
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### 3. Registration and Important Date

Anyone who is interested in nature inspired computation and applications is welcome.

Registration: Please browse workshop homepage: <http://nical.ustc.edu.cn/nica2004/> for detailed information and download the registration form.

Deadline for Early Registration: **September 30<sup>th</sup>, 2004.**

On-site registration is available.

### 4. Contacts

Workshop Homepage: <http://nical.ustc.edu.cn/nica2004/>

For further information, please contact:

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