

IAPR Newsletter

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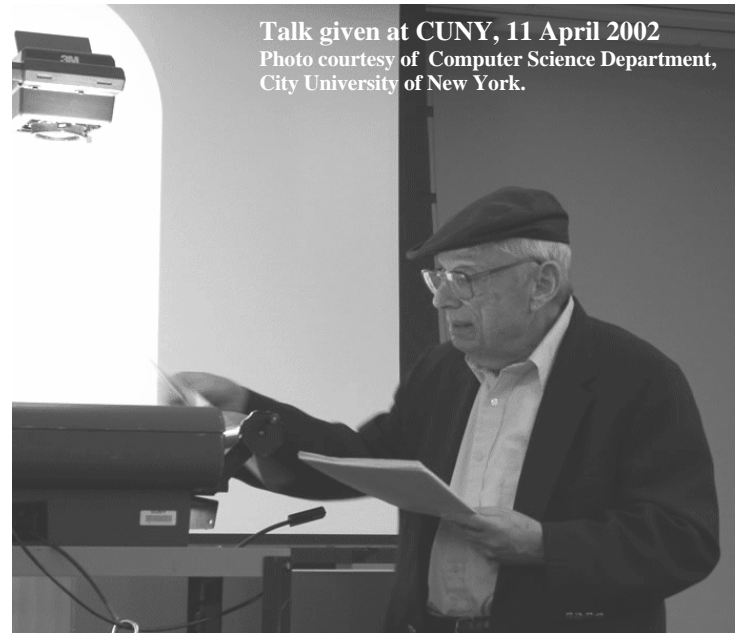
Professor Azriel Rosenfeld (1931-2004)

Professor Azriel Rosefeld, one of the world's leading scholars and scientists in the field of computer image processing and pattern recognition during the last 40 years, died Sunday, 22 February 2004, in Baltimore, Maryland, at the age of 73 after a long illness.

Professor Rosenfeld obtained his PhD degree in mathematics from Columbia University in 1957 and a Doctor of Hebrew Literature in 1955 from Yeshiva University. He started his career with the Ford Instrument Company in Long Island City, where he began a lifelong interest in image processing. In the mid-1960's he moved to the Washington, DC, area to become a research professor at the University of Maryland in College Park, Maryland. He helped found the computer science department there and later the Center for Automation Research, retiring from there in 2001.

From 1960 until his death, Professor Rosenfeld exerted an enormous

Talk given at CUNY, 11 April 2002
Photo courtesy of Computer Science Department,
City University of New York.



influence on the field of computer image processing and its related sciences. He was the driving force behind numerous courses, workshops, seminars and conferences that served to advance the state of the art in image processing and pattern recognition. One of his earliest efforts on promoting the art was a two-week "short" course entitled "Pictorial Data Processing and Pattern Recognition" he organized at the Belfer Graduate School of Science of Yeshiva University in New York City in 1963. His book, *Picture Processing by Computer*, Academic Press, published

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NEWS FROM IAPR SOCIETIES

New Brazilian Society

The Brazilian Computer Society (www.sbc.org.br), and, in particular, members of its special interest group in Pattern Recognition, were honoured to become an IAPR member society in August, 2003. The PR group of the Brazilian Computer Society has 35 members and plans to participate actively with IAPR, bringing, IAPR-sponsored conferences to Brazil and getting involved with the technical committees.

The Brazilian Computer Society is 25 years old, and it is the largest and most active non-profit scientific and professional society in Computing Science in Brazil. It is affiliated to IFIP (International Federation for Information Processing) and has more than 15 Chapters and interest groups organizing conferences and activities in major areas of Computing. SIBGRAPI (www.sbc.org.br/sibgrapi/), a major conference in Image Processing, Computer Graphics, Vision and Pattern Recognition, is in its XVIIth edition this year, and it is an international gathering using English as the official language.

There are more than 100 graduate programs in Brazil in areas of Computer Science, Electrical Engineering, and Mathematics, and in most of them there are active researchers in a PR related topic. We think that participation as a community working together with IAPR will steadily grow in the near future.

The special interest group in PR was formed in 2003 with 35 members, mostly lecturers and researchers from 15 different universities. Its first chair and representative is Prof. Díbio Leandro Borges (www.ppgia.pucpr.br/~dibio/) from the Pontifical Catholic University of Parana, in the city of Curitiba, who is also a member of the organizing committee for the 2007 ICDAR Conference (International Conference on Document Analysis and Recognition) which will be held in Curitiba, Brazil.

The Brazilian PR community would like to express its happiness in being one of the IAPR member societies and to invite all of the IAPR members to visit and participate in the scientific activities we organize.



Díbio Leandro Borges

Austrian Association for Pattern Recognition

The Austrian Association for Pattern Recognition (AAPR) is the Austrian chapter of the IAPR and currently consists



of approximately 100 members. Among them are researchers from all major pattern recognition groups in Austria. The AAPR is an independent society that also operates as a working group within the Austrian Computer Society (OCG). The purpose of the AAPR is the ongoing exchange of information and experience regarding the state and technology of pattern recognition and its applications between the members of the association and the international community. The activities of the AAPR are focused on the international and national scientific debate on pattern recognition.

A major activity of the AAPR is the annual workshop which has become a traditional meeting for the image processing, pattern recognition and computer vision community from numerous central European countries. Several of the AAPR conferences and workshops have been organized together with neighboring countries (DAGM - Germany, SDVR - Slovenia). Last year 's AAPR meeting was organized by Csaba Beleznai and Thomas Schlögl of the Advanced Computer Vision Competence Center and focused on vision algorithms and technologies applicable to real-world activities enabling automatic interpretation of visual input. Anil K. Jain gave the keynote speech and 35 papers were presented. A new AAPR governing board was elected consisting of Markus Vincze as Chairman, Horst Bischof as Deputy Chairman, Robert Sablatnig as Secretary and Lucas Paletta as Treasurer. Walter Kropatsch, 1st Vice-president of the IAPR, Werner Schneider and Othmar Scherzer serve on the Advisory Board.

The 28th annual AAPR Workshop will be held in Hagenberg (Upper Austria) on June 17-18, 2004, and is dedicated to "Imaging in Media and Education". For details see mtd.fh-hagenberg.at/conf/oagm04/.

In the near future the AAPR Website www.aapr.at will be restructured and serve as an electronic information center for the Austrian Pattern Recognition Society. For more information on the AAPR please contact Robert Sablatnig, sab@prip.tuwien.ac.at.

Robert Sablatnig, Secretary, AAPR

New Moroccan Pattern Recognition Section

The Moroccan Pattern Recognition Section (MPRS) is a special interest group of the Moroccan Association for Development of Electrical and Electronic Engineering, Computer Science and Automation (AMADEIA). Its creation was approved by the Office of the AMADEIA in April, 2003, with the main goal of joining the IAPR. Since its formation in 1978, the AMADEIA has been the unique, independent Moroccan Association devoted to the development of Electrical and Electronic Engineering, Automation, Computer Science, Image Analysis and Operational Research. The AMADEIA holds meetings to determine the aims of the Association; organizes conferences, workshops or study days; improves cultural or scientific manifestations; and supports studies to promote the Association's areas of interest, both in the country and in the region. The AMADEIA also edits a scientific journal entitled *Moroccan Journal of Control Computer Science and Signal Processing*. Two normal or special issues of this journal are published annually.



Committee and some members of MPRS of AMADEIA at a national workshop

MPRS of AMADEIA is managed by a committee of five members. This committee, coordinates with the Office of AMADEIA, establishes and maintains continuous relations among all members of MPRS of AMADEIA, and speaks on behalf of them in the international scientific community, more precisely with IAPR societies.

MPRS assembles 67 members of AMADEIA interested in activities within the field of interest of IAPR, such as: pattern recognition, speech recognition, computer vision, image coding and processing, document processing, natural language analysis, information systems, multimedia systems, remote sensing, robotics, special hardware architectures, and software packages.

MPRS is honored and highly pleased to join the IAPR. On behalf of all members of MPRS, we are very thankful to the IAPR Membership Committee, Executive Committee and Governing Board for their acceptance of the MPRS membership application. We would like to wish them successful accomplishment of the IAPR scientific mission. MPRS hopes to contribute well as a national member of IAPR.

Abderrahmane SBIHI, President, MPRS of AMADEIA

From the ExCo

Our pattern recognition community has just lost one of its pioneers and founding fathers: Professor Azriel Rosenfeld passed away in February, 2004. The loss is immense, and we are unable to say in just a few words – or even fully understand – how much his life-long dedication to the field and his service to the IAPR have meant to each one of us. There will certainly be several opportunities, in the coming months, to honor Azriel's memory and pay due tribute to his numerous contributions.

The next ICPR will be held this summer, and by the time you receive this newsletter, many of you will probably be planning to attend. The ExCo is pleased to announce that the IAPR will again award a number of ICPR travel stipends (500 USD each) to authors of accepted papers, oral or poster, who would not otherwise be able to attend. An application must be sent to the IAPR Secretary. The applicant should provide the following information: name, title, complete affiliation, paper ID, whether or not he/she is a member of an IAPR member society, and any other useful information to explain the request for a stipend. The ExCo points out that the applicant should be able to find elsewhere the complementary funds to cover the ICPR registration fee and traveling expenses. Precise information about how to send in the application, including the deadline, will be posted on the ICPR web site.

In these last months, the Conferences and Meetings (C&M) Committee, in close cooperation with the ExCo, has worked out a standard Memorandum of Understanding to be signed by the IAPR and ICPR conference organizers. Those of you working on a proposal for organizing ICPR'08 are therefore kindly requested to contact the C&M Committee as soon as possible to get a copy of this MoU and to make sure that your proposal addresses the various points mentioned by it. Please make sure that your proposal is sent in due time to the C&M Committee.

Another joint action of the C&M Committee and the ExCo is that of working out more simple and intelligible rules for the various levels of support the IAPR might provide to conferences and workshops, the associated levy to be paid to IAPR, and the incentives that the IAPR can provide for the success of these events. We plan to submit the revised rules for Governing Board approval at their meeting to be held this summer during ICPR.

Professor Mubarak Shah has been named the new editor-in-chief of *Machine Vision and Applications*, an IAPR journal. We congratulate Dr. Shah on this appointment and thank the outgoing editor-in-chief, Professor Mohan Trivedi, for his service. (*see related article on page 4*)



Finally, a correction to what we wrote in the last newsletter. As some readers noted, the admission to IAPR membership of the Moroccan Pattern Recognition Section of AMADEIA, our 40th member, did not mark the first member society from the African continent, but the first member society from North Africa. The IAPR has already had a South African member for a number of years. Our apologies for this error.

Professor Azriel Rosenfeld

(Continued from page 1)

in 1969, formalized image processing as an academic subject. In 1971, he and I founded the journal *Computer Graphics and Image Processing*, which recognized the synergy between image synthesis and image analysis, and quickly became a leading vehicle for the publication of articles dealing with the intersection of these two fields.

His was a strong voice arguing for creating a formal structure to deal with the rapidly advancing developments in pattern recognition and image processing. Together with the late K.S. Fu and others he organized a meeting at Airlie House in a suburb of Washington, DC, in 1972 at which it was agreed to form a "Standing Committee" to organize biennial conferences on pattern recognition. The first conference under the auspices of this committee was "The First International Joint Conference on Pattern Recognition"

held in Washington in October 1973, with Professor Rosenfeld playing a leading role. To minimize conflict with the biennial conferences on artificial intelligence, then held in odd-numbered years, it was decided to hold the Second Joint Conference on Pattern Recognition in 1974, in Lyngby, Denmark, with other conferences to follow every two years thereafter. By the time of the third such conference in Coronado, CA, in 1976, chaired by Professor Rosenfeld, the desire for a more formal organization had developed, and at the fourth conference in Kyoto, Japan, in 1978, the International Association for Pattern Recognition (IAPR) was officially born. Professor Rosenfeld then served as one of the four delegates from the USA to this international body for many years and as its president from 1980 through 1982.

From the late 1960s through the 1980s, it was a rare conference program committee dealing with pattern recognition or image

processing that did not have Professor Rosenfeld as a member and/or contributor, and just about every journal dealing with these topics had him on its editorial board. He was an exceptionally prolific author, publishing more than 500 articles and writing or editing more than 30 books. During his years at the University of Maryland, he supervised nearly 60 PhD students, many of whom subsequently moved to universities all over the world and became leaders in image processing in their own right. He was clearly one of the most influential leaders in fostering the development of image processing as a recognized academic discipline. It is difficult to imagine where that field would be today without his monumental contributions. In 1988, IAPR awarded him its highest honor, the K.S. Fu Prize, for his accomplishments. His death is a great loss for IAPR and for all who knew him and interacted with him.

Herbert Freeman

Machine Vision and Applications: An Official Journal of IAPR



Machine Vision and Applications Journal, an official journal of IAPR, publishes high quality research papers dealing with fundamental contributions in computer vision and its applications in a variety of domains. Research-oriented manuscripts should make a significant contribution to the state of art in computer vision. Application-oriented

manuscripts should demonstrate performance evaluations of the proposed algorithm/system in a particular domain with large number of experimental results on real imagery.

From time to time *MVA* publishes special issues on emerging topics. Recent special issues include: Human Modeling, Analysis and Synthesis, Innovative Applications of Computer Vision and Omnidirectional Vision and its Application. The next special issue will be on Computer

Vision Systems and will be published during the next few months. Another special issue on Applications of Computer Vision in Archaeology is also planned.

The editorial board of *MVA* is currently being reconstituted in order to introduce some new associate editors who will help deal with the rapidly growing number of submissions.

The journal is published six times a year and is accessible at <http://www.springeronline.com/sgw/cda/frontpage/0,10735,4-40100-70-1009251-0,00.html>. *MVA* is in the process of adopting Scholar One system for electronic submission and review of papers. It is expected this will significantly reduce the time between submission and first set of reviews, and expedite the publication of papers in *MVA*.

Mubarak Shah, *MVA* Editor-in-Chief

Calls for Papers

Complete list of conferences and workshops at www.iapr.org

CIARP 2004

9th Iberoamerican Congress on Pattern
Recognition
26-29 October 2004
Tonanzintla, Puebla, Mexico
Deadline: 17 May, 2004

IWCIA 2004

10th International Workshop on
Combinatorial Image Analysis
1-3 December 2004
Auckland, New Zealand
Deadline: 1 August 2004

MLDM 2005

International Conference on
Machine Learning and Data Mining in
Pattern Recognition
9-11 July 2005
Leipzig, Germany
Deadline: 10 January 2005

Conference & Workshop Reports

Workshop Report: DAGM 2003

25th International Pattern Recognition Symposium 10-12 September 2003, Magdeburg, Germany

The 25th International Pattern Recognition Symposium DAGM 2003 was sponsored by the German Association for Pattern Recognition, DAGM (Deutsche Arbeitsgemeinschaft für Mustererkennung e.V.), a non-profit organization. The event was organized by the Institute for Electronics, Signal Processing and Communications with assistance from the Institute for Simulation and Graphics. The gathering was preceded by tutorials on current trends in image processing and a workshop on language recognition and processing.

The symposium, held in English, was attended by more than 150 scientists from many European countries (Germany, Belgium, Denmark, Ireland, Sweden, Switzerland, Spain, Italy, Czech Republic, Ukraine)

as well as Australia, Korea and the United States.



At the beginning of the meeting, the “Olympus Prize” for innovative research in the field of image processing was presented, followed by a presentation of the results of this effort. In talks prepared for this event, internationally renowned researchers presented some of the latest information on the following topics: identification of persons by means of biometric

characteristics, new procedures in image recognition and evaluation of moving images in environmental research and life sciences

The focal point of the symposium was 75 research projects selected from a total of 140 that had been submitted. The projects were presented in talks or on poster displays at the symposium. In addition to fundamental, introductory topics, current developments in the analysis of scenes with moving objects, capture of objects in three-dimensional space, gesture recognition and applications in technology, traffic and medicine were dealt with.

The 26th conference of the DAGM will be held from August 30 to September 1, 2004, in Tübingen, Germany.

Gerald Krell

11th International Conference on Discrete Geometry for Computer Imagery 19-21 November 2003, Napoli, Italy

DGCI is the main conference of IAPR Technical Committee 18 on Discrete Geometry (www.cb.uu.se/~tc18/).

For DGCI 2003, Gabriella Sanniti di Baja was the general chair, Stina Svensson the Program Chair and Ingela Nyström the Publications Chair. The local committee included Salvatore Piandedosi, Silvia Rossi, Luca Serino, Ida-Maria Sintorn and Henrik Boström. The organising institutions were the Istituto Italiano per gli Studi Filosofici (which provided wonderful conference rooms), and the Institute of Cybernetics E. Caianiello - CNR (for facilities and secretariat work). The conference was sponsored by the IAPR.

Out of 68 submitted papers, 23 were selected for oral presentations and 26 for poster sessions. The conference brought together 76 participants, coming from 16 countries. As usual at DGCI conferences, there was a low registration fee for students.

The three conference days were rich in scientific discussions and full of social events. Unfortunately, we all missed our colleague Alberto Del Lungo (Dipartimento di Matematica, University of Siena, Italy), an active member of the DGCI scientific community, who passed away in June, 2003.

Oral and poster sessions covered some fascinating topics, such as discrete geometry, discrete topology, discrete models and transforms, discrete surfaces and volumes,



DGCI 2003 Participants at Piazza del Plebiscito

morphology and tomography and various applications to image analysis, image synthesis and visualisation.

The three invited speakers showed important aspects on their research and stimulated new ideas: Prof. Isabelle Bloch, ENST, Paris, France, gave a talk devoted to "Fuzzy spatial relationships from mathematical morphology for model-based pattern recognition and spatial reasoning". Prof. Longin Jan Latecki, Temple University, Philadelphia, USA, illustrated a precise and efficient process to work on "Shape similarity and visual part". The third invited talk by Prof. Ralph Kopperman, the City College of New York, New York, USA, about "Topological Digital Topology" was a great event for our community. All DGCI 2003 participants were happy to discuss the results of their research and many new ideas arose... to be followed up on at the next DGCI.

Several nice social events helped stimulate scientific discussions. The welcome cocktail party and the Italian

pizza party were simply perfect. The gala dinner was delightful, and we understood what an Italian dinner means: eight or even nine dishes, each one better than the other! Everybody enjoyed visiting Napoli during their spare time, or looking at the Vesuvio towards "Golfo di Napoli". The conference venue was very conveniently located in the city; also, the weather was very pleasant. It was a success and a great event.

The conference proceedings have been published by Springer in *Lecture Notes in Computer Science #2886*. Two special issues will come out in the near future, in *Image and Vision Computing Journal* and in *Discrete Applied Mathematics Journal*.

The next DGCI Conference will be held in Poitiers, France, on April 13-15, 2005, organised by SIC laboratory with Prof. Eric Andrès as General Chair.

Note that two other events will be close in location and date: 11-13 April 2005, Poitiers, 5th IAPR -TC-15 Workshop on Graph-Based Representations in Pattern Recognition; 18-20 April 2005, Paris, International Symposium on Mathematical Morphology. See www.cb.uu.se/~tc18/ and www.sic.sp2mi.univ-poitiers.fr/dgci/ for more details about the next DGCI conference and about TC18 (don't forget to register!).

Annick Montanvert

**8th Iberoamerican Congress on Pattern Recognition
26-29 November 2003, Hotel Nacional, Havana, Cuba**

CIARP 2003 was organized by the Institute of Cybernetics, Mathematics and Physics of Cuba and the Center for Computing Research of the National Polytechnic Institute of Mexico, and sponsored by the University of La Salle, Mexico, the University of



Oriente, Cuba, the Polytechnic Institute "José A Echeverría", Cuba, the Central University of Las Villas, Cuba, the National Center of Scientific Research, Cuba, the Cuban Association for Pattern Recognition, the Portuguese Association for Pattern Recognition, the Spanish Association for Pattern Recognition and Image Analysis, and the Mexican Society for Artificial Intelligence. This was an official IAPR event.

138 papers were submitted from 19 countries. The program featured 82 talks, 9 posters, 3 keynote addresses and 2 tutorials. 97 scientists from Austria, Brazil, Canada, Chile, Germany, France, Mexico, Poland, Portugal, United Kingdom, United States, Russia, Spain, Uruguay, and Cuba took part in the conference. 56 colleagues attended the tutorials dedicated to Document Image Analysis and Lattice Algebra, Dendritic Computing, and Pattern Recognition.

The Minister of Science, Technology and Environment, Dr Daniel Codorníu, gave the welcome speech, and Dr Rangachar Kasturi brought a salutation message from the IAPR. The new ExCo of the Cuban Association for Pattern Recognition was presented: Dr José Ruiz-Shulcloper, Dr Manuel Lazo-Cortés and Dr Roberto Rodríguez-Morales were elected

President, Secretary and Treasurer respectively.

There were three invited talks. Rangachar Kasturi (Department of Computer Science and Engineering, University of South Florida) presented an overview of research in computer vision and image processing at the Pennsylvania State University. Gerhard X. Ritter (University of Florida) addressed neurons, dendrites, and pattern classification. And, Alberto Sanfeliu (Institute of Robotics and Informatics Polytechnic University of Cataluña) talked about robot vision for autonomous learning and tracking objects and maps.

Attendees were treated to a conference dinner with musical

entertainment in a very nice restaurant at the Havana bay. The social program also included the National Congress party of the Cuban Association for Pattern Recognition, the Conjunto Folklórico de Oriente spectacle at the Mella theater, and a visit for the invited

speakers to Cuban Neuroscience Center, in which they received an overview of the development of biomedical researches in Cuba, a guided walk of Old Havana and a visit to the Hemingway House Museum.

Papers from the conference have been published in the volume *Progress in Pattern Recognition, Speech and Image Analysis, LNCS 2905*, edited by Alberto Sanfeliu and José Ruiz-Shulcloper.

The 9th Iberoamerican Congress on Pattern Recognition will be in Puebla, Mexico, in November, 2004, and the 10th Iberoamerican Congress on Pattern Recognition in Hotel Nacional, Havana, Cuba, in November, 2005.

José Ruiz-Shulcloper



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**The deadline for submission of material
for the next issue is
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**For a complete list of IAPR-sponsored
conferences and workshops, visit
www.iapr.org/iapr-conf.html**

ICPR2004

17th INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION

the IAPR and BMVA, and at the time of writing, can count Hewlett Packard Labs (Bristol) and Microsoft Research (Cambridge) as *local* part-sponsors.

For those of you who have never attended an ICPR conference, this particular event could be a doubly wholesome experience! First, ICPR conferences tend to be extremely dynamic, maintaining your interest throughout the event. Second, with regularly well over 800 attendees, there is never enough time to meet all your colleagues, yet it is the best forum for chatting with as many of those names you have seen on papers and always wanted to catch up with! Finally, ICPR2004 will provide a great chance to visit the historic city of Cambridge.

Originally a Roman military outpost, the city adopted its name when River Cam was bridged. Cambridge can boast of ancient monuments, a wealth of museums and galleries, as well as its famous book-shops and markets. The city is small enough for most of its major attractions to be visited on foot. Visitors can walk along the famous grass-covered banks of the River Cam or take a lazy summer punt along the rivers and enjoy the architectural glories of the riverside colleges.

The best known of all the Cambridge buildings is King's College Chapel, with its world-famous choir. It also hosts Ruben's *Adoration of the Magi*. Other university colleges are Clare College with the oldest surviving river bridge in Cambridge, Corpus Christi College founded in 1352 by two town guilds, St. John's College with the Bridge of Sighs, and many more.

Cambridge can also be proud of its many museums. One that soon becomes a favourite of most visitors is the Fitzwilliam Museum with extensive Egyptian, Greek, and Roman collections containing medieval works, paintings, drawings, sculptures, ceramics, glass, and armour. The Cambridge Museum of Technology is based in the Old Pumping Station with the original pumps and boilers and many other engines. There are a number of hands-on pumps, a printing room, a collection of early Cambridge wirelesses, instruments and other local artefacts. The oldest museum in Cambridge is the Sedgwick containing over 1 million fossils ranging from the earliest forms of life over 3000 million years old through huge ammonites, giant marine reptiles, and dinosaurs. There is even a 125,000 years old hippopotamus from the nearby Barrington gravel pit. There are also other University-owned museums.

Cambridge is located about 60 miles (100 km) from London and is easily accessible from the UK's major airports (Heathrow, Gatwick, Birmingham, Stanstead) by rail and coach. August is one of the best months to visit the UK as temperatures generally vary between 14 and 25C. More information about the city and its forthcoming events can be found at <http://www.camcity.co.uk/>.

The ICPR2004 Theme is "Pattern Recognition in the Digital World", and will be a multi-track international forum for discussions on recent advances in the fields of:

- Computer Vision and Robotics
- Pattern Recognition
- Neural Networks
- Document Analysis
- Image and Signal Processing
- Biomedical, multimedia and e-commerce applications

For further details visit www.eim.surrey.ac.uk/icpr04.

Majid Mirmehdi, ICPR2004 Publicity Chair

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