



***Bulletin of the
International Graphonomics Society***

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Editorial

This is the 23rd Bulletin of the International Graphonomics Society, BIGS 12 (1).

The President of our Society, Réjean Plamondon, has recently been appointed by the Canadian Ministry of Education as General Director of the École Polytechnique de Montréal. Despite the new responsibilities associated with this function, Réjean Plamondon intends to continue both his research and his work for the various national and international societies of which he is a Board member.

This BIGS issue reports on the progress that has been made with the preparations of the three major publications following the 8th IGS Conference, IGS '97, held at the University of Genova, Italy, August 24-28, 1997.

The IGS office is pleased to announce that the special tutorial on *Writing Systems* which was given by Professor André Roch Lecours (Montréal, Canada) during the opening session of IGS '97, is now available on Internet. It can be found as a separate entry on the IGS homepage on World Wide Web at: www.psych.kun.nl/igs.

In this BIGS issue, we inform the IGS members about the 9th International Conference of our Society which will be held in Singapore, 28-30 June 1999. Details on the special theme of the conference and the (new) abstract submission procedure are given in addition to background information on Singapore.

This BIGS issue reports on recent publications relevant to IGS members among which three journals and the first part of a PhD thesis reporting an assessment of the reliability of reconstructing pen-pressure data from written documents for identification purposes. Also, a summary is given of the results of a search for information available on the Internet relevant to our members. As usual, you will find an update of the conference agenda, a list of recent and forthcoming workshops and conferences relevant to the IGS.

IGS members are reminded to transfer their membership dues for 1998.

The present BIGS issue is completed with the financial overview of IGS 1997.

Ruud Meulenbroek
Réjean Plamondon
Editors



IGS News Items

Message from the President

Dear Colleagues,

How many of you have found a new member? How many remember our challenge? With the Summer coming in the Northern Hemisphere, many of you will attend meetings and conferences. These events are the best opportunity to publicise IGS activities. The simplest thing to do is to bring a few IGS leaflets with you and distribute them to potential members or to bring a whole bunch of leaflets and leave them on a strategically positioned table where people can take a copy during coffee breaks. Those of you who want to do more, please contact the IGS secretariat. A full box of IGS publication (books, special issues of journals, publicity flyers, posters) can be made available for display at the conference you are attending. You can also bring some BIGS issues for that purpose. These give a good idea of our activities and communications. Particularly in this BIGS issue you will find information about our most recent conference held in Genova, Italy, 1997, and about our next conference which will be held in Singapore, 1999. Furthermore, this BIGS issue demonstrates the multi-disciplinary character of our Society in which members from a wide variety of disciplines are represented. Information on many fields of interest is presented. I draw your special attention to the electronic version of the tutorial which was recently given by Prof. André Roch Lecours during the opening session of IGS '97. The tutorial can now be found on the homepage of IGS on Internet. I hope that you, as a valued member of our Society, will also make your contribution to increasing the visibility of the IGS.

Réjean Plamondon
IGS President



The Eighth IGS Conference 1997

Publications following IGS '97

As indicated in the former BIGS issue (BIGS 11, 1, p.31), three scientific journals have agreed to publish a special issue devoted to a selection of papers presented at IGS '97. These journals are: *Acta Psychologica* (Editors: Gerard van Galen and Pietro Morasso), *Intelligent Automation and Soft Computing* (Editors: Francesco Masulli, Réjean Plamondon and Anna-Maria Colla) and the *Journal of Forensic Document Examination* (Editors: Lynn Wilson-Marks and Marvin Simner). A total of approximately 25 papers following IGS '97 will be published in the three journals. The papers that will be published in *Acta Psychologica* (appr. 12) will appear in a special double issue of the journal. The Editors of the volumes have informed the IGS office that the review procedures are making progress according to plan. Recently, the invited authors have received the comments of the Editors and the reviewers, and they have been informed about the deadline for resubmitting the revised versions of their manuscripts. The Editors expect the three volumes will be published in the Fall of 1998.

Tutorial by André Roch Lecours at IGS '97

During the opening session of the Eighth Biennial Conference of the International Graphonomics Society in Genova, Italy (August 24-28, 1997), Professor André Roch Lecours held a special tutorial on *Writing Systems*. The tutorial consisted of an in-depth analysis of past and present writing systems in terms of the cognitive functions that are involved when language processes take place within the constraints of these systems. The IGS office is pleased to announce that Professor Lecours' tutorial could be made available on the Internet as part of the IGS homepage on World Wide Web. The tutorial is organised into six parts: (1) From logographic to lexical writing systems, (2) Alphabetic writing systems, (3) Dogmas in and out, (4) Neural substratum and diseases, (5) Cognition, consciousness and language, and (6) Roots, and more abstract entities. The expose includes over 50 graphic images which, given an appropriate screen resolution, are of an impressive high quality. The tutorial can be found at: www.psych.kun.nl/igs.

The IGS office is grateful to Prof. André Roch Lecours for providing his tutorial to the IGS and the office would also like to pay special thanks to Mrs. Marianne Corre of the University of Montreal who assisted in preparing the electronic version of the tutorial. Further information about the analysis of *Writing Systems* by André Roch Lecours can be found in his book "Langage écrit: Histoire, théorie et maladie" [Written language: History, theory, and disorder]. Molinghem (F): L'Ortho-Edition. *Series "Collection Montréal-Toulouse Neurolinguistique et Neuropsychologie"* (262 pages. ISBN 2-906896-45-4). A review of this book, entitled *The neuropsychology of writing: Cultural-historical views* by Arnold Thomassen, Past President of the IGS, was published in BIGS 11, 1 (pp. 6-12) and is now also available on the IGS homepage on WWW.



The Ninth IGS Conference 1999

Place

The ninth IGS conference will be held over three days 28-30 June 1999 (these are provisional dates but unlikely to change by more than a day or so) in Singapore and will be hosted by the Nanyang Technological University. Full details of the conference will be communicated in the next BIGS issue (to appear in Fall 1998). The first Call for Papers will be issued during May 1998. All IGS members should receive a copy of the first call for papers by the end of May. If you do not then contact Graham Leedham (contact details below). The conference will be held either at Nanyang Technological University or at a hotel conference venue in downtown Singapore.

Theme

Papers relevant to all aspects of the IGS are welcomed. The special theme of the conference will be *Written Oriental Language*.

Organiser

IGS99 will be organised by: Graham Leedham, Nanyang Technological University, School of Applied Science, Division of Computing Systems, Nanyang Avenue, Singapore 639798. Tel: +65.799.6250. Fax: +65.792.6559. Email: asgloedham@ntu.edu.sg. Please feel free to contact me with any questions you may have.

Costs

The registration cost of IGS99 will be kept as low as possible and will certainly not exceed US\$300 per person. Hotel costs in Singapore are very competitive and the standards are high. And many of the major airlines offer stopover packages which are unbeatable. We will offer all IGS99 attendees the best assistance we can in finding their preferred accommodation and will also help in any other way we can. Transport costs in Singapore by taxi, bus or MRT (rail) are fast efficient and inexpensive. Eating out can vary from very little (S\$4 per head in a Hawker Centre) to S\$100 per head in the top restaurants.

Background information on Singapore and Nanyang Technological University

Singapore is a busy small state located at the southern tip of Western Malaysia and a little north of the large Indonesian Island of Sumatra. It is almost on the equator and has a tropical climate with temperatures always in the range 25C (night time) to 35C (day time) with relatively high humidity. Despite the recent talk of the Asian Crisis, Singapore has fared well and been relatively unaffected by the regional problems. English is spoken everywhere. Getting to Singapore is very easy. Changi Airport is probably the cleanest and most efficient airport in the world (this is true, try it for yourself) and has direct connections with many cities in the world. Just check out the flight schedules of most major airlines between Singapore and European or North America cities and you will see just how easy it is to get here. And once you are here your hotel is not more than 30 minutes away. More details on Singapore at: www.travel.com.sg/sog and www.newasia-singapore.com.



(Nanyang Technological University: NTU)

Nanyang Technological University (NTU) has a 200-hectare campus in Jurong which is located in the south-western part of the island some 25km from the city centre. The university dates back to the 1950's when it was Nantah, the Chinese University of Singapore but the main parts of the campus was built in 1986 prior to it becoming Nanyang Technological University in 1991. It consists of a two central spines each with four 'fingers' branching from them. The campus has more than 50 buildings on its extensive site. More details about the university can be found on web site www.ntu.edu.sg.

Submission procedure

It is already time to plan your work for the Singapore Conference. Presenters at the 9th IGS conference in Singapore are required to submit a four pages (A4) single-spaced paper of their presentation. The Call for Papers will appear soon and full 4-page papers will be required. This means that the research must be almost completed by the time of submission – 15 January 1999.

Important Dates for your diary

15 January 1999: Full 4-page papers submitted for review

15 March 1999: Decision and reviewers comments sent to authors

16 April 1999: Final revised camera-ready copy received in Singapore

If you have any questions or comments on IGS99 then please feel free to contact me at the address above.

Hope to see you in Singapore!

Graham Leedham



Update of e-mail addresses IGS Board members

The IGS office informs you that all members of the IGS Board can be contacted by E-mail. The Board Members' E-mail addresses are given in the table below.

Board Member

E-mail address

Réjean Plamondon – President	Réjean.plamondon@mail.polymtl.ca
Ruud Meulenbroek – Secretary	Meulenbroek@nici.kun.nl
Peter Baier	Pebaier@aol.com
Claudie Faure	Cfaure@sig.enst.fr
Graham Leedham	Asgleedham@ntu.edu.sg
Norbert Mai	Nmai@nefo.med.uni-muenchen.de
Francesco Masulli	Masulli@ge.infm.it
Marvin Simner	Msimner@julian.uwo.ca
Ar Thomassen – Past President	Thomassen@nici.kun.nl

Handwriting Journals

On February 1st, 1998, the first issue of the *International Journal on Document Analysis and Recognition (IJ DAR)* has been published by Springer Verlag (Berlin, Germany). The new journal aims to publish scientific papers on the handling, retrieval and storage of documents and the information they contain. The journal demonstrates that technologies dealing with the recognition of the constituent elements of documents – characters, symbols, text, lines, graphics, images, handwriting, signatures etc. – has become a separate research domain. The domain ultimately deals with automatic analysis of the overall physical and logical structures of documents in order to represent a high-level understanding of their semantic contents. Given the renewed interest in optical character recognition and handwriting recognition, the Editors of IJ DAR expect that interest in document analysis and recognition will increase considerably in the near future. Automatic, intelligent processing of documents and their contents is at the intersection of many fields of research, especially of computer vision, image analysis, pattern recognition and artificial intelligence. The research area is also based on studies on reading, handwriting, and linguistics. IJ DAR welcomes submissions in all areas related to document analysis and recognition. Possible topics include: document image processing, document models, handwriting models and analysis, character and word recognition, on-line recognition, pen-based computing, multilingual processing, physical and logical page analysis, graphics recognition, map and line drawing understanding, storage and retrieval of documents, text analysis and processing, natural language issues, information extraction and filtering, performance evaluation, document authentication and validation, implementations, applications and systems. IJ DAR also welcomes



submissions of papers on non-traditional topics such as: processing text in other contexts, multimedia and hypermedia analysis, time varying documents and distributed document collections (digital libraries).

Several IGS members take part in the Editorial Board of the *International Journal on Document Analysis and Recognition*. They are: M. Fairhurst (Canterbury, U.K.), S. Impedovo (Bari, Italy), Seong-Whan Lee (Seoul, Korea), G. Lorette (Rennes, France), R. Plamondon (Montréal, Canada) and CY. Suen (Montréal, Canada). The first paper published in the first issue of IJDAR is a study by M. Côté, E. Lecolinet, M. Cheriet and C. Suen on automatic handwriting recognition based on a reading model and perceptual concepts. Further information about IJDAR can be obtained by contacting the Editorial Office at: IJDAR, c/o Centre for Automation Research, University of Maryland, College Park, MD 20742, U.S.A., tel: +1.301.405.6444; fax: +1.301.314.9115; E-mail: ijdar@cfar.umd.edu. The annual subscription rate is USD 177,- (single-issue price: USD 48,90). Order forms, containing your complete mailing address, credit card specifications (type, number and expiry date), and the title of the journal, can be sent to: Springer-Verlag, Customer Service Journals, P.O. Box 311340, D-10643, Berlin, Germany; Fax: +49.30.82787-448; E-mail: subscriptions@springer.de.

Pen Computing

Group Publisher: Howard Borgen. For information and subscription, please contact: Pen Computing Inc., 88, Sunnyside Blvd., Suite 203, Plainview, NY 11803 U.S.A.. Basic subscription rate is USD 18,- for six issues, single copy: USD 4.95.

Portable Design

Editor-in-chief: Alex Mendelohn (603) 891-9319. PennWell Publishing Company. For information and subscription, please contact: Portable Design, P.O. Box 3566, Tulsa, OK 74101-3566 U.S.A. Subscription rate for 1 year (12 issues): USD 72,-.

Publications

Extracting pen pressure from questioned documents

Maus, E. P., 1997. Schriftdruckmessung: Grundlagen, Methoden, Instrumente. (Off-line measurement of writing pressure: Foundations, methods and instruments). In P. Baier (Ed.), *Mannheimer Hefte Für Schriftvergleichung* (Mannheimer Journal of Document Examination), 23 (2-3), 58-81.

This paper is a summary of the first part of the PhD thesis by Eugene Paul Maus, University of Mannheim. The study focusses on the reliability of extracting axial pen-pressure variations from written documents. Following the specification of the document examination purposes of the project, the author defines the concepts relevant to the approach. He recognises that the term



'axial pen force' (units: Newton) should preferably be used in this context rather than 'pen pressure' (units: gram). However, he decides to use the latter, more commonly used, concept. The author points out that indentation curves obtained from written traces qualitatively differ in several ways from the forces exerted by the writer along the longitudinal axis of the writing stylus when he/she produced the document. Nevertheless, retrieving indentation curves is regarded as an important, useful tool for document examination purposes. In his experimental work, the author used three types of ballpoint pens (with ballpoint diameters of 0.6, 1.1, and 1.4 mm) and four types of writing surfaces (glossy paper, normal writing paper, forms commonly used at post offices, and offset paper). The production of artificial writing traces on a hard writing surface (glass) and a soft writing surface (a synthetic desk top map) were compared. Ink traces were generated artificially using a highly reliable force generator. Other variables taken into consideration were: writing speed, trace length, and the sample date (during a period of one month, the measurements were repeated ten times). Indentation curves were obtained by means of a surface measurement technique (Maus, 1974) having a spatial resolution of 1 μm . The results show that with time, indentation depths change non-linearly. For indentation depths of up to 20 μm , the relationship between exerted axial pen force and reproduced depths is linear. For depths larger than 20 μm , a first-order polynomial or, sometimes, a logarithmic relationship was found to exist between indentation depth and the (experimentally controlled) writing pressure. The axial pen force exerted by a writer can be more reliably reproduced if indentation depths are larger than 20 μm . The consequences of specific writing-surface characteristics such as fibre density, could accurately be described by means of higher-order polynomials. These relationships were highly replicable. As expected, small ballpoint diameters corresponded with deeper indentation levels, and paper used for offset purposes contained the deepest indentations. The author concludes that surface-measurement techniques applied to written documents in order to estimate the axial pen force exerted when the document was produced, continue to be useful to specify production-related information. He qualitatively compares the surface-measurement technique with greyscale analysis techniques as applied to laser-scanned documents and concludes that the mechanical filtering inherent in any contact-based surface measurement, increases, paradoxically, the quality of the retrieved signals because surface contact eliminates various unwanted sources of measurement noise.

Handwriting Volumes: Acquisition, Typography, Computers

Below, a list of recent (hand)writing volumes published by Intellect Publishers is presented. Some of the listed publications have been specified and/or reviewed in earlier BIGS issues. The IGS office provides the current list as a special service to the new members of our Society. The volumes listed in this section can be ordered by contacting: Intellect, EFAE, Earl Richards Road North, Exeter, EX2 6AS, U.K.. More information can be found on the Internet at: www.intellect-net.com/



Sassoon, R., 1993. The Art and Science of Handwriting

This book reflects the various facets of the lifetime of work in letterforms of the author. The collection of papers and articles, linked by a commentary on a decade in handwriting studies, shows how the educational and medical aspects of Sassoon's work could not have taken place without a lengthy grounding in lettering. A book for teachers and those who train teachers, as well as therapists and psychologists. Topics, among others, are: letter forms, variability of letters, children's signatures, writer's cramp, education and curriculum planning, therapy. Price: £19.95. Hardback, 230x174mm, 192 pages. ISBN 1-871516-33-1.

Sassoon, R., 1995. The Acquisition of a Second Writing System

This book is concerned with writing systems in a multi-cultural context. The field of English as a second language is well researched and documented, but the equally important subject of how to acquire the Latin alphabet as a second writing system, or how to alter from any particular writing system to another, has seldom been considered. This book provides an analytical approach to this subject. Topics, among others, are: writing systems, rules of writing systems, writing materials, writing posture, assessment, handwriting models, teaching techniques, typography, computers and handwriting. Price: £14.95. Paperback, 230x174mm, 160 pages. ISBN 1-871516-43-9.

Sassoon, R. (Ed.), 1993. Computers and Typography

This book bridges the gap between those in the field of computers and those concerned with typography. It sets out to raise awareness of the importance of letterforms and layout. The separate chapters, written by international specialists in their field, stress that the lessons learned in five centuries of printing are still relevant today, and should not be ignored. This is a valuable resource for all concerned with design and teaching, and everyone whose work involves text. *Contents:* Part 1 - Spacing and layout: Introduction to text message by G.S. Briem; The layout of computer-based text by J. Hartley; Presentation rules and rules of composition in the formatting of complex text by R. Southall; Part 2 - Typographic choices in Latin and other alphabets: Digital Hebrew in a monolingual world by A. Davidow; Spoiled for choice by E. Blacker & M. Blacker; Part 3 - Technical issues in type design: Some aspects of the effect of technology on type design by M. Daines; Character description techniques in type manufacture by R. Southall; Part 4 - Lessons to be learned from the history of typography: Education in the making and shaping of written words by F. Baudin; A typographer by any other name by A. Marshall; Part 5 - Research and the perception of type: Through the eyes of a child's perception and type design by R. Sassoon; The visual analysis of pages of text by R. Watt. Price: £14.95. Paperback, 230x174mm, 208 pages. ISBN 1-871516-43-9.



Sassoon, R. and Gaur, A., 1997. Signs, Symbols and Icons

Raises the awareness of how hand-written and machine-generated iconographies might work together to our benefit. The two parts of this book are formed by iconography being analysed as a crucial form of communication through history and looking at the many ways in which signs and symbols are being integrated into the current age of digital information. The first part gives an historic overview from the earliest known iconic communication through the eye of an historian illustrating how the icon is universal and ever present. The second part looks to the future and the effects of the computer on iconic communication as the computer enables some tasks to be undertaken that were impossible before while it may limit others through a need to simplify and categorise, tasks that were more expressive by hand. Contents: The history of non-verbal scripts: The origin and meaning of symbols and iconography; Iconography and writing; Iconography in calligraphy, religion and art; Iconography in the computer age: Extending the concept of iconography; Iconography and special needs; Symbol systems for visually impaired; An iconography for deaf signers; Music notation; Movement notation; Multilingual and multimedia iconographies. Price: £14.95. Paperback, 208 pages. ISBN 1-871516-73-0.

Tonfoni, G., and Richardson, J.E., 1994. *Writing as a Visual Art*

The ability to learn to read and write is still acknowledged universally as one of the human mysteries. The author encourages us to equate writing with concepts of shape, texture and other visual concepts - stimulations that are recognised as an important way for meaning and value to be imparted to others. Price: £19.95. Hardback, 230x174mm, 256 pages. ISBN 1-871516382.

Honeywill, P., (in press). *Visual Language for the World Wide Web*

This book explains that the computer interface is a metaphor for the real world and that desktop objects need to express familiar real-world functions. It explains that language systems, such as Maya, are communicated through a visual writing system that could give precise and complex meaning within even a one-glyph block. The author recognises that computer iconography needs to identify verbs, objects and subjects as a vehicle for visual communication. This volume: deconstructs the Maya system in a contemporary context for both visual syntax and grammar. Then it ascertains what parts of visual writing could add clarification to computer icons. Subsequently it considers the graphic construction, the aesthetic quality of symbols, and the aesthetic nuances of its letterform and colour, and how the computer interface can best interpolate these qualities to enhance meaning. Then, the author evaluates international graphic systems that use representational imagery as units of meaning and discusses comprehension and the learning tolerance of computer users. This data and comparative analysis is used to determine how much of the past can inform the user interface. The author encourages the reader to participate in the implementation of a WWW site that will synthesise



all the research and gathered empirical data. Contents: Synergy between Maya hieroglyphs and computer icons; The computer interface as a metaphor for the real world; Multiple meaning within an icon; Aesthetic qualities and computer iconic interpolation; User tolerance of representational and abstract computer icons; An interchangeable iconic baseline with visual syntax and grammar; A distinct but functionally overlapping graphical user interface. Expected publication data: Spring 1999. Price: £14.95. Paperback, 192 pages. ISBN 1-871516-96-X.

Further News

Results from Search for information on the Internet

Information which is relevant to IGS members and can be accessed on World Wide Web Internet services is summarised in BIGS regularly. The aim is to provide IGS members who have access to WWW with addresses of interesting sites. IGS members who have no facilities to access WWW are updated through this summary. The present overview contains site addresses that resulted from a (broad) search for new information by using the keyword *handwriting*.

borneo.gmd.de/EIA/papers/fohres_papers.html

This site contains the bibliography of seven handwriting-recognition papers by A. Malaviya with links to the abstracts of those papers.

www.asqde.org/97abstr.htm

This page contains links to abstracts of 34 papers presented at the fifty-fifth annual conference of the American Society of Questioned Document Examiners (ASQDE). The conference was held in Scottsdale, August, 1997. The abstracts are indexed by title/author and concern issues like statistical approaches to classifying hand-printed letters, computer-assisted dynamic handwriting comparison, effects of sunlight and fluorescent tube light on paper and inks, evolution of handwriting from grades three to six, and statistical analysis of dollar line formatting in fraudulent checks.

www.indiana.edu/~eric_rec/ieo/bibs/handwrit.html

This site contains links to information about handwriting and handwriting instruction. It also provides a bibliography of literature on handwriting instruction. Further information on this subject can be obtained by contacting Users Services Division, ERIC Clearinghouse on Reading, English, and Communication, Indiana University, 2805 E. 10th St., Suite 150, Bloomington, IN 47408-2698. (Tel: 1-812-855-5847, E-mail: ericcs@indiana.edu). Issues



covered are, among others, the development of handwriting skills (box.argonet.co.uk/users/quilljar/hand.html), children's handwriting evaluations system (www.sofdesign.com/dyslexia/ches.html), spelling, reading, and handwriting (easyweb.easynet.co.uk/~smidgley/spelletec.html). The site also contains a list of commercially available handwriting curricula.

set.gmd.de/EIA/read.html

This site provides information on the project *Read* aimed at increasing the efficiency of the current "Recognition and Document Analysis" technology. The main goal of *Read* is to combine and refine document analysis techniques, ranging from low level picture processing, over document structure analysis, to linguistic extraction into a general framework. *Read* is funded by the German Federal Ministry of Education, Science, Research and Technology (BMBF). Among the partners in *Read* are the University of Koblenz-Lanuda, the University of Magdeburg, the Technical University Braunschweig, Siemens, and Daimler-Benz AG.

IGS Membership

New IGS Members

Ms. Katrin **Franke**. Dept. Pattern Recognition Fraunhofer Inst. For Production Systems & Design Techn.: Pascalstr. 8-9, 10587 Berlin, Germany Tel: +49.3039 006.194, Fax: +49.3039.175.17, E-mail: franke@ipk.fhg.de (Fields: ai cos fs).

Mr. Lee **Do Hoon**. M.Sc. Dept. of Computer Engineering, Miryang National University, 1025-1 Naeidong Miryang Miryang Kyungnam 627-130, Korea. Tel: +82.527. 50.5444, Fax: +82.527.355.3186, E-mail: dhlee@arang.miryang.ac.kr (Fields: cos ld sp hd).

Mr. John S. **Gorajczyk**, M.Sc. Criminal Justice Lewis University, RT 53 Romfo vill III 60435 5432 E: Karen Drive, Phoenix AZ 85254, USA. Tel: +1 602.494.4557, Fax: +1.602.495.0169. (Fields: fs).

Mrs. Hideyo **Kobayashi**, M.A. Naganoken Kiso High School, 2050 Soga Shiojiri-shi, Nagano-ken 399-04, Japan. Tel./Fax: +81.264.24.2127. (Fields: ed ld).

Mrs. Orly **Yazdy-Ugav**, Zinman College, Wingate Institute, Netanya, Israel. Tel.: +972.66344.476, Fax: +972.66344.845. (Fields: ed ep ld np).



IGS Membership Dues

The IGS office kindly reminds IGS members who have not already done so, to effectuate their membership dues for the current year by following the instructions on the colourful payment slip that was enclosed in the former BIGS (BIGS 11, 2) mailing.

Recent Conferences

Conferences which have already been announced in a previous BIGS issue are summarised by means of a brief, marked (*) entry

CFP International Symposium on Chinese Processing

29 August – 2 September, 1997. The International Symposium on Cognitive Processes of the Chinese Language was organised by the joint research centres of the Chinese Academy of Sciences and the university of Hong Kong. Chinese is one of the oldest and perhaps the most widely used language in the world. The unique properties of the Chinese writing system in its phonology, morphology, and semantics are critical to the understanding of the universal as well as specific aspects of language processing. Research into Chinese has fundamental significance for developing general theories of language processing through the exploration of the cognitive mechanisms underlying Chinese reading, writing and speech. The last two decades have witnessed growing interest in scientific studies of Chinese from the prospective of psychology, linguistics, neuroscience, computer science and speech and hearing science. Greater interdisciplinary endeavours are needed from these disciplines to foster future research with special reference to its unique properties and scientific implications, as well as its application and technological development for language learning and communication. The University of Hong Kong has played an instrumental role in the research as well as the promotion of academic activities in this emerging field. Last year, a Chinese Language-Cognitive Science Research Centre has been established at the University of Hong Kong as a joint venture with the Chinese Academy of Sciences (CAS) in order to enhance and co-ordinate scientific study of the Chinese language. This Symposium was organised as an inaugural function of the Chinese Language-Cognitive Science Joint Research Centres, Beijing & Hong Kong. The aim of the conference was to bring together researchers from various fields: including character/word recognition, speech perception, sentence/discourse comprehension, handwriting, graphonomics, language acquisition, reading ability/disability, bilingual processing, neuropsychological processes, Chinese learning and instruction. Contact: Henry S.R. Kao (Ph. D.), Department of Psychology, University of Hong Kong, Pokfulam Road, Hong Kong. Tel: (852) 2859.2383; (852).2859.2375; Fax: (852).2858.3518, E-mail: hrnyksr@hkucc.hku.hk.



Forthcoming Conferences

Conferences which have already been announced in a previous BIGS issue are summarised by means of a brief, marked (*) entry.

Eight Annual Meeting on Neural Control of Movement

14-19 April, 1998. Place: Key West, FL. Contact: Dr. B. W. Peterson, Department of Physiology, North-western University Medical School, 303 East. Chicago Avenue, Ward Building 5-095, Chicago, IL 60611-3008, Tel.: +1.312.503-6216, Fax: +1.312.503-5101, E-mail: *b-peterson2@nwu.edu*.

Computational Issues in Biological Motor Control

19-22 April, 1998. Place: Key West, FL. , Satellite Conference to Neural Control of Movement. Contact: Dr. S. Giszter, Department of Neurobiology and Anatomy; Medical PA, Hahnemann Medical School, Allegheny University, Health Science, EPPI Building, 3200 Henry Avenue, Philadelphia, PA 19129, Tel. +1 215-842-4627, Fax: +1 215-843-9082, email: *ncm-satellite-98-organizers@ai.mit.edu*

CIFED '98: Colloque International Francophone Symposium sur l'Écrit et le Document (International French-speaking Conference on Handwriting and Document Analysis)*

11-13 May, 1998. Place: Laval University, Quebec City, Québec, Canada. Chair: Prof. R. Plamondon, École Polytechnique de Montréal, Canada. Conference themes: document analysis techniques, document image processing, production of handwriting, segmentation of handwriting, automatic recognition of handwriting, graphic design analysis techniques, signature verification, hypermedia, human-computer interactions, and applications. Deadline of abstract submission: August 31, 1997. More than 64 papers from 11 countries have been received, 35 have been accepted for oral presentation and 14 as posters. Two members of IGS have been invited as guest speakers: Prof. Ching Y. Suen and Dr. Lambert R.B. Schomaker. Contact: Robert Sabourin, Ph.D, ing, École de technologie supérieure, Département de génie de la production automatisée, 110 rue Notre-Dame Ouest, Montréal, Québec, Canada, H3C 1K3, Tel: 514.396.8932, Fax: 514.396.8595, E-mail: *sabourin@gpa.etsmtl.ca*.



SRCLD '98: 19th Symposium on Research in Child Language Disorders

4-6 June, 1998. The Symposium on Research in Child Language Disorders, organised by the University of Wisconsin, Madison, Wisconsin, to be held at the new Monona Terrace™ Convention Centre, provides a forum for the presentation of research in child language disorders. The sequential session format of the meeting is designed to foster program continuity and interaction among participants. A noteworthy component of this Symposium is student participation which is promoted through the provision of NIH travel awards to a select group of student researchers. Program Committee: Elin Thordardottir, co-chair, Michelle Weissman, co-chair, Donna Boudreau, Anne Calhoon, Stephanie Cawthon, Peter Flipsen Jr., Sally Miles, Beth Miller Swanson. Contact: SRCLD c/o Helen Hartman, Waisman Center, Room 481, University of Wisconsin-Madison, 1500 Highland Avenue, Madison, WI 53705-2280, U.S.A.. More information can be found on the Internet at: www.waisman.wisc.edu/srcld/call98.htm

Third IEEE European Workshop on Handwriting Analysis and Recognition

14-15 July, 1998. This workshop which will be held at the Hotel Metropole, Brussels, will bring together principal European researchers in handwriting analysis to explore the current state of the art and future directions in this topic area. Topics of the workshop are: techniques and algorithms for character and word level processing, text segmentation, online/off-line processing, contextual processing and applications in text processing, biometrics, document analysis and forensic science. Contributions addressing the theory of handwriting generation and biological/psychophysical aspects of handwriting analysis are also welcomed. Deadline for submission of abstracts (2 A4 pages): 27th March 1998. Contact: Prof. Michael Fairhurst, Electronic Engineering Laboratory, University of Kent at Canterbury, Kent CT2 7NT, U.K.. Tel: +44 (0) 1227.823389; Fax: +44 (0) 1227.456084; E-mail: M.C.Fairhurst@ukc.ac.uk.

ICPR'98: 14th International Conference on Pattern Recognition

17-20 August, 1998. To be held at: Brisbane Convention and Exhibition Centre, Brisbane, Queensland, Australia. ICPR'98 is the international conference sponsored by the International Association for Pattern Recognition (IAPR). The conference is held every two years. ICPR'98 covers a broad range of topics related to the development of representations and techniques for the encoding, recognition and interpretation of information in most sensing modalities, primarily visual information. Presentations will be made by experts from many different countries and the conference has a strong multicultural flavour. General Co-Chairs: Terry Caelli, Curtin University; Anthony Maeder, University of Ballarat. Technical Co-Chairs: Anil Jain, Michigan State



University; Svetha Venkatesh, Curtin University. Local Organisation Chair: Brian Lovell, University of Queensland. Tutorial Co-Chairs: Athula Ginige, University of Technology, Sydney; Paul Jackway, University of Queensland. ICPR'98 will consist of four parallel tracks. A set of tutorials/workshops will be given by prominent researchers the day before the conference. There will also be a competition involving the running and evaluation of computer vision and pattern recognition techniques on different data sets with known ground truths. Details on this will appear shortly and, for more details, contact Robert Haralick at haralick@ptah.ee.washington.edu or visit george.ee.washington.edu. Paper submission deadline: 15 January, 1998. Contact: 14th ICPR'98, c/o Conventions Queensland, PO Box 4044, St. Lucia South, Queensland 4067, Australia, Tel.: +61.7.3870.8831; Fax: +61.7.3371.9514 ; E-mail: icpr14@convqld.org.au.

IWFHR '98: 6th International Workshop on Frontiers in Handwriting Recognition*

1-3 September, 1998. The conference will be held at KAIST in Teajon, Korea. Chair: J.H. Kim. Topics: handwriting recognition algorithms, pre-processing, linguistic post-processing, emerging techniques, segmentation techniques, handwriting acquisition, and innovative applications. Deadline for paper submission: February 28th, 1998. Program Chair: Prof. Seong-Whan Lee, Department of Computer Science and Engineering, Anam-dong, Songbok-ku, Seoul 136-701, Korea. Tel/Fax: +82.2.920.2168, E-mail: swlee@human.korea.ac.kr. More information can be found on the Internet at: www.ai.kaist.ac.kr.iwfh98.

AAAI '98: Artificial Intelligence and Link Analysis

23-25 October, 1998. To be held in Orlando, Florida, U.S.A.. Computer-based link analysis is increasingly used in law-enforcement investigations, insurance fraud detection, telecommunications network analysis, pharmaceuticals research, epidemiology, and other specialised applications. Link analysis explores associations among large numbers of objects of different types. For example, a law enforcement application might examine familial relationships among suspects and victims, the addresses at which those persons reside, and the telephone numbers that they called during a specified period. The ability of link analysis to represent relationships and associations among objects of different types has proven crucial in assisting human investigators to comprehend complex webs of evidence and draw conclusions that are not apparent from any single piece of information. However, there is both a need and opportunity to apply new technologies. Much of the current software for link analysis is little more than a graphical display tool. While visualising networks has proven useful, many advanced applications of link analysis involve thousands of objects and links as well as a rich array of possible data models. Manual construction and analysis of such networks has proven



difficult. In addition, a large number of related techniques in artificial intelligence and several other fields have the potential to assist human reasoning about complex networks of relationships. These techniques draw on work from search, semantic networks, ontological engineering, autonomous agents, inductive logic programming, graph theory, social network analysis, knowledge discovery in databases, entity-relationship modelling, information extraction, information retrieval, and metaphor. This two-and-a-half day symposium will bring two communities into contact: 1) Members of the research community who currently have (or could soon develop) useful technology; and 2) Users of link analysis techniques whose needs go beyond the capabilities of current software. Note that the focus of the symposium is new technologies, not capabilities and applications embodied in current software such as Netmap (Alta Analytics, Inc.), Watson (Harlequin, Inc.), and the Analyst's Notebook (i2 Ltd.). These products have enabled current applications and may eventually incorporate new technologies. However, the focus of the workshop is on techniques that can be developed and deployed within 3-5 years. Contact: David Jensen, Computer Science Department, University of Massachusetts (co-chair; email: jensen@cs.umass.edu). More information can be found on Internet at: eksl-www.cs.umass.edu/aila/