



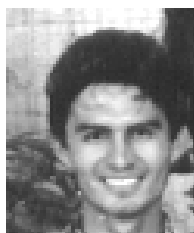
Bulletin of the International Graphonomics Society

BIGS
Volume 14, Nr. 1
April 2000

Aims of the International Graphonomics Society (IGS)

During the second international graphonomics conference in 1985, the decision was made to establish the International Graphonomics Society (IGS). The general aims of the IGS are the advancement of research in the field of graphonomics. These aims include an exchange of views and expertise, joint-project research, and the dissemination and application of knowledge wherever appropriate. Some means to achieve these goals are: the organization of conferences and workshops and the publication of their proceedings, the stimulation of communication and research contacts by any other means, the transmission of information through a regular bulletin (BIGS), an electronic list (Scrib-L) and the maintenance of a graphonomics research directory. The IGS has the status of a legal non-profit organization. It was established as a foundation ('stichting') under the law of the Netherlands on January 30th, 1987.

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From the Editors



This is the 27th Bulletin of the International Graphonomics Society, BIGS 14, 1. First, we would like to invite our readers to participate in a series of regional reviews on graphonomic research, which will start in our next issue of BIGS with a review of research in Nijmegen by Dr. Meulenbroek. One of the aims of this series of reviews is to foster international research collaborations among IGS members, and to facilitate the exchange of recent research. Readers are also invited to submit letters, regular or occasional columns, book reviews, or news. Consider submitting brief tutorial papers or research notes. For more information, please email us at pepeum@wam.umd.edu or asgledham@ntu.edu.sg.

This issue of BIGS contains the Call for Papers for IGS 2001, a commentary by Dr. Contreras-Vidal on the use of handwriting as a diagnostic and evaluation tool in Parkinson's disease. Next, Prof. Thomassen, in his usual book review contribution, comments on Marie-Jeanne Sedeyn's Standard handwriting objective examination. Dr. Ruud Meulenbroek also presents the 1999 financial overview in this issue of BIGS. In addition, a list of news and recent publications relevant to IGS membership are compiled in this issue. As usual, BIGS is completed with an update of the Conference Agenda, workshops and other special events.

José L. Contreras-Vidal
Graham Leedham

IGS Board

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Message from the President



Montreal, March 14, 2000.

Dear Fellow members,

This is the 27th issue of BIGS and it is already time to plan for our next conference which will be held in Nijmegen August 6-8, 2001. It will be the 10th edition in our series of biennial conferences and we would like to make it a special meeting as we are coming back to where it started, in the Netherlands. Do you have any suggestion to make IGS 2001 really outstanding? To make it a landmark in the development of our field? As you can see from our financial report, the society's finance is in good shape and it will be possible to put some money into a few specific IGS activities. If you have any bright idea, please share it with us or contact directly the conference organizer, Dr. Ruud Meulenbroek (meulenbroek@nici.kun.nl). For more information about the conference, you can also consult the conference website at: www.socsci.kun.nl/psy/igs/igs_2001/.

I would like to give our best regards to Professor Arnold J.W.M. Thomassen, the first president of our Society who has played a key role in its development and evolution. Professor Thomassen will officially retire in November 2000 and in June 2000 a special workshop is organized, in collaboration with IGS, to celebrate with him the achievements of a successful career. Those who would like to have more information about this event can also contact Dr. Ruud Meulenbroek.

Finally, we have been informed that professor Jean-Claude Simon passed away on February 16th of this year. As a leading figure in pattern recognition over the last 30 years he has made important contributions to the field of off-line processing of handwriting, particularly with respect to the recognition of handwritten words on bank checks. Professor Simon received numerous awards and honors throughout his career and will be missed by his many friends throughout the world.

Réjean Plamondon
President of IGS



IGS Feature

Towards non-invasive diagnostic tools and biological markers for Parkinson's disease: A commentary. Jose L. Contreras-Vidal, Cognitive-Motor Behavior Laboratory, Department of Kinesiology, Neuroscience and Cognitive Science Program, and Center on Aging, University of Maryland, College Park, MD 20742. E-mail: pepeum@wam.umd.edu



Symptomatic pharmacotherapy with the dopamine precursor, levodopa, or dopamine agonists, is used to replace the deficient levels of the neurotransmitter dopamine in the brain of persons with Parkinson's disease. The duration and extent of the effects of pharmacological therapy on motor behavior (i.e., the so-called pharmacodynamics or dose-response relationship) vary amongst individuals, depending on age, disease severity, metabolism, food consumption, and genetic makeup (Nutt, 1993). Consequently, it is necessary to estimate the appropriate dosage (e.g., amount, timing and spacing of the doses) for each patient individually. It is often necessary to alter the pharmacological strategy as the therapeutical benefits of the medication get shorter or inefficient (e.g., the so-called wearing-off effect). Unfortunately, patient's dosages are adjusted mostly on a trial-and-error basis based on motor scores obtained during clinical examination, such as subsets of the Unified Parkinson's Disease Rating Scale (UPDRS), and fluctuation diaries self-reported by the patients. Thus, there is a need for simple, non-invasive tools for assessing the pharmacodynamics of levodopa and other dopamine agonists in individual patients, which could allow for optimization of pharmacological therapy according to disease progression and daily-life requirements of each patient (Contreras-Vidal et al., 1998).

In this regard, fine motor control analysis of handwriting and eye movements may be useful in the developing of optimal intervention procedures, including medication dosage. Handwriting, for example, is a well-learned motor skill that can be recorded accurately (via an inexpensive portable digitizer tablet attached to a laptop computer) and that is minimally affected by inertia, gravity, and friction. Nevertheless, handwriting exhibits complex motor processing requiring coordination in time and space, and yet it contains distinct components that can be precisely analyzed. The measured data could then be used to estimate the dose-response curves using optimization theory (Hacisalihzade et al., 1989) or neural network techniques (Contreras-Vidal et al., 1998). Similar arguments can be made for the measurements of eye movements in Parkinson's disease patients using state-of-the-art eye tracking technology. Moreover, recent data suggest that many years before the clinical onset of Parkinson's disease, handwriting may show specific features, such as increased jerk or discontinuous movements, reduced modulation between small and large strokes, and fewer garlands (Helsper et al., 1996). Overall, these data suggest that it may be possible to use



handwriting and eye movements as biological markers in preclinical Parkinsonism. Further research on these topics is needed.

References:

Contreras-Vidal JL, Poluha P, Teulings HL, Stelmach GE (1998) Neural dynamics of short and medium term motor control effects of levodopa therapy in Parkinson's disease. *Artificial Intelligence in Medicine* 13: 57-79.

Hacisalihzade SS, Mansour M, Albani C (1989) Optimization of symptomatic therapy in Parkinson's disease. *IEEE Transactions Biomedical Engineering*, 36: 363-372.

Helsper E, Teulings HL, Kamarat E, Stelmach (1996) Preclinical Parkinson features in optically scanned handwriting. In MI Simmer, CG Leedham, AJWM Thomassen (Eds) *Handwriting and Drawing Research: Basic and Applied Issues*, IOS Press, pp. 241-250.

Nutt JG (1993) Pharmacotherapy of Parkinson's disease. *Clinical Neuroscience*, 1:64-68.

IGS 2001

10th Biennial Conference of
The International Graphonomics Society
6-8 August 2001
University of Nijmegen, The Netherlands



Invitation

It is a pleasure to invite you to participate in IGS 2001, the 10th biennial conference of the International Graphonomics Society. The conference will be held from *Monday 6 to Wednesday 8 August, 2001* at the University of Nijmegen in The Netherlands. IGS 2001 will be the 10th in the series of IGS conferences. Since 1982 nine meetings have been held of which four in Europe, three in North America and two in Asia.

Organizing Committee

As chairman of IGS 2001, I will be assisted by the Organizing Committee consisting of Dutch colleagues who represent several areas of special interest to IGS. The committee will consist of Professor Gerard Van Galen (NICI, University of Nijmegen), Dr. Wouter Hulstijn (NICI, University of Nijmegen), Dr. Angelo Marcelli (University of Salerno, Italy), Dr. Bouwien Smits-Engelsman (NICI, University of Nijmegen), Dr. Marina Schoemaker (University of Groningen), Dr. Hanneke Van Mier (University of



Maastricht), Ir. Chris Bouwhuisen (NICI, University of Nijmegen), and Dr. Ir. Frans Maarse (NICI, University of Nijmegen).

Scope of Submission

Papers are invited on all aspects of the science and technology of handwriting and graphic skills including, but not necessarily limited to, the following topics:

MOTOR DISORDERS Diagnostics and treatment Central and peripheral disorders Neurological basis and neuro-imaging	FORENSIC SCIENCE Document examination Case studies and new scientific techniques Writer-identification procedures
MOTOR CONTROL Neurocognitive processes Biomechanics, biophysics, neuroimaging Motor development	EDUCATION Cross-sectional and longitudinal studies Teaching and learning disabilities Letter design and remediation
COMPUTER SCIENCE Recording and analysis techniques On-line and off-line processing Pattern recognition and artificial intelligence	PALEOGRAPHY History and calligraphy Oriental languages Automatic processing

Special Theme

The special theme of IGS 2001 will be *Motor Disorders*. This important topic is of interest to many disciplines represented in the IGS. Also because of the growing impact of the use of neuro-imaging techniques in the multidisciplinary study of human (dys)functions, the motor-disorder theme deserves to be focused on at the next IGS meeting. We emphasize, however, that all aspects of the science and technology of handwriting and graphic skills will be considered for presentation at IGS 2001.

Important Dates

The important dates to put into your agenda are as follows:

Paper submission	15 March, 2001
Notification of acceptance *	31 May, 2001
Camera-ready papers and registration	1 July, 2001
Conference	6-8 August, 2001

* For those who prefer to receive the 'Notification of acceptance' of their submitted papers earlier than 31 May 2001 - for example in order to apply for financial support or to book a flight early in 2001 - , the paper submission deadline is 15 January 2001. The organization committee will try to accommodate these requests.



Registration

The registration fees* for IGS 2001 are:

<i>Member</i>	
Before July 1st, 2001	EUR 250,-
After July 1st, 2001	EUR 275,-
<i>Non-member</i>	
Before July 1st, 2001	EUR 275,-
After July 1st, 2001	EUR 300,-
<i>Accompanying person's programme</i>	
Welcome buffet on Sunday, August 5th, 2001	EUR 20,-
Banquet on Tuesday, August 7th, 2001	EUR 35,-

* *Registration fees include conference information package, a copy of the proceedings of IGS 2001, the welcome buffet on Sunday 5th August at the Auditorium and Conference Centre of the University of Nijmegen, lunches, coffee and/or tea, conference banquet on Tuesday August 7th and the social programme. The exchange rates for major currencies are (18 February 2000): 1,0 EUR = 2,20 NLG; 1,0 EUR = 0,99 USD; 1,0 EUR = 1,10 DEM; 1,0 EUR = 0,61 GBP; 1,0 EUR = 6,56 FRF.*

Letter of Invitation

The Conference Secretariat (address see below) will be pleased to send official letters of invitation to assist potential participants to secure visas and/or funding for conference-related expenses.

Information on the Internet

Regularly updated information about IGS 2001 can be found at the following Web-site: www.socsci.kun.nl/psy/igs/igs_2001. The site contains all information relevant to IGS 2001 such as the Call For Papers, Authors' Guide (including a preformatted paper), Registration Form, and Hotel Reservation Form. Hard-copy registration and hotel reservation forms will be sent to you later this year.

Author's Guide

Detailed information about the required format of the manuscripts that you are invited to submit to IGS 2001 is given in the separate handout included in this BIGS mailing. A preformatted electronic version can be found on the Internet. The paper, including diagrams and references, should preferably be up to 4 pages (max.: 6 pages).

Presentation

IGS 2001 will include oral and poster presentations and invited talks by distinguished researchers. All presentations will be in English. No simultaneous translation will be provided. Those wishing to provide a (commercial) demonstration are requested to contact the organizers.



Venue

IGS 2001 will be held at the Auditorium and Conference Center of the University of Nijmegen, Comeniuslaan 2, Nijmegen, The Netherlands.

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www.kun.nl/congres



Accommodation

The Conference Organization will negotiate special hotel prices with a number of hotels in Nijmegen for IGS 2001 attendees and we will advise you on these rates in January 2001. These hotels are all situated in Nijmegen centre. Regular bus services are maintained to the University. The Conference Agency (see address below) will assist you in making hotel reservations. The hotel reservation form will be sent to you later this year but it can already be found at the IGS 2001 Web-site.

Secretariat and Conference Agency

PAPER SUBMISSIONS	REGISTRATION AND HOTEL RESERVATION
IGS 2001 Secretariat	Conference Agency
Marianne Stienen	Mary Bluysen
NICI - University of Nijmegen P.O. Box 9104 6500 HE Nijmegen The Netherlands Tel: +31.24.361.2633 Fax: +31.24.361.6066 E-mail: IGS2001@nici.kun.nl	Conference Agency – University of Nijmegen P.O. Box 9111 6500 HN Nijmegen The Netherlands Tel: +31.24.361.2184 Fax: +31.24.356.7956 E-mail: M.Bluysen@bureau.kun.nl

I hope you will attend IGS 2001 and point out the meeting to colleagues who might be interested in joining you, and perhaps our Society.

Ruud Meulenbroek
 NICI, University Nijmegen



Book Review

A protocol for the examination of handwritten documents by Arnold J.W.M. Thomassen



Sedeyn, M.J. (1998). Standard handwriting objective examination: A manual for physicians, sociologists, researchers, examiners of questioned documents. Meyreuil, France: FOVEA S.A.R.L.(104 pages; ISBN 2-9512835-1-2). Order from FOVEA S.A.R.L., Les Roux, F-13590 Meyreuil, France. Fax +33 442.65.99.02.

Marie Jeanne Sedeyn, presently honorary handwriting expert at the Court of Appeal in Paris, France, has for some time now been engaged in the professional forensic training offered by the school of medicine at Montpellier, formerly at Brest. The unique two-year diploma course, supervised by professor Eric Baccino of the department of forensic medicine at Montpellier, aims in particular at specialised expertise in the examination of handwriting and documents resulting in a competent approach of judicial files. The curriculum entails theoretical parts and practical courses related to the many laboratory techniques and devices that are currently available. The present volume is the recent English translation of the basic text of the less technical part of the course as taught by Mme Sedeyn. It supposes the availability and use of only the very simplest tools, such as ruler, compass, transparent graduated paper, protractor, magnifying glass, and mirror.

Sedeyn highlights the fact that French law recognises that each individual's handwriting is unique in the sense that it comprises sufficient idiosyncratic elements for the identification of the writer. Thus, along with fingerprints and genetic codes, handwriting must contribute to the evidence considered in police investigations and courts of law. Consequently, the experts must exert themselves to derive maximally objective information from handwritten documents, however complex the materials and however difficult the procedures may be. Indeed, greatly improved technical and scientific methods have recently been developed for the comparison and identification of handwriting. Yet, Sedeyn finds reason to deplore the wildly varying quality of the experts' results and conclusions. She finds that graphologists in France have developed a 'psychological bias', aiming at the discovery of information of a psychological nature, while lacking objectivity and neglecting complete, detailed observation. It is beyond my competence to evaluate the state of affairs in this discipline in other countries; it might be highly similar in several places.

In certain cases, an individual's handwriting may be informative with respect to his or her level of education, frequency of practising handwriting,



etcetera. But a question is what the former adds to the information provided by other sources, such as the person's curriculum vitae, and what the latter means in view of the frequent contemporary use of the keyboard. It is of interest to note that, in Sedeyn's view, a training in graphology is of no use for the objective examination of a document according to her protocol. On the contrary, graphologists, having had a training as such, appear to have the habit of investigating a document 'psychologically', and the inclination to take certain objective methods less seriously, even though these yield the very best results. They sometimes merely omit parts of the protocol because they find these of minor importance. Trained 'lay' people, in contrast, do adhere to the protocol, and end up with more favourable results. Nevertheless, the step from paying attention to every detail to the extraction of the essential global information from a document, to see the forest through all those trees, appears to be difficult for everyone, requiring lasting practical experience.

This brings up the old question to what extent graphology can be considered as a science, or even a respectable profession. Where this discipline is concerned with making conclusive, evaluative statements about other people's psychological qualities, rather than critically reflecting upon its own methods and practice, and constantly evaluating the latter, Sedeyn's answer is that the profession has many very serious limitations. Sedeyn is of the opinion that if and when a graphologist arrives at a correct assessment, this could be, like an art, the result of a special personal talent of some sort, rather than the product of transferable technical knowledge that conforms to objective rules and principles.

Based on her experience of over 30 years, Sedeyn proposes a rigorous methodological tool for the observation of handwriting with scientific precision. Her Standard Handwriting Objective Examination (SHOE) is introduced as an easy-to-use manual or tool that enables the trained expert to describe and assess handwritten documents in a methodical, disciplined manner. It comprises some 400 items for describing the document both quantitatively and qualitatively. These items intend to support handwriting comparisons and writer identification as well as the assessment of his or her physical, mental, and emotional state at the moment of writing. Also the group to which the writer belongs may be assessed, e.g., as defined by nationality, social background, age, and perhaps even disease. Handwriting will thus also reflect socio-cultural trends and changes. The latter observation is an obvious argument for the adoption of 'sociologists' in the subtitle of the publication.

Needless to say that Sedeyn regards specimens of handwriting not just as an object, but as the highly personal, dynamic trace resulting from the writer's hand: "the mark of living human presence". Yet, when analysing a document, the expert should refrain from reading the content of the message, but concentrate objectively and without any bias on the physical appearance of the graphic product on the medium. The protocol itself constitutes the main body of the 104-page volume. It comprises 12 chapters, each with a list of some 20-40 items to be assessed. The lists deal with such features as the (paper) medium and writing instrument used, the use of the space in the medium, the



orientation of the letters, their horizontal-vertical proportion, their connectedness and global shape, the baseline of the text, pressure, velocity and rhythm. Later chapters deal with the appearance of unnecessary spacing, specific habits in layout and graphic peculiarities including the dotting of the i, and signatures. There is a permanent insistence on the complete obedience to the protocol in all details.

Sedeyn does not attempt to classify individual letter shapes. Her reasons are that she finds these particular characters 'not meaningful' in relation to the whole trace under study; that a forger will always pay attention to these shapes, disguise his own and imitate those of someone else; and that there is in fact no limit to the number of possible letter forms. Instead, she tends to concentrate on the type of script, i.e., its general style or font; its deviation from the school model; its legibility; its deterioration due to age, sickness, or emotion; and idiosyncrasies.

When scanning through the manual, I found it easy to find my way. Two questions, however, regarding the ordering in chapters were why 'density of the text', which includes spacing, is treated seven chapters later than 'layout', which likewise includes spacing; and why stroke direction and shape are discussed under 'pressure'. One is, furthermore, inclined to wonder how easy or difficult it is to derive rhythm and speed from the finished product, including that of a 'slow signature'. This is one example where, obviously, the manual needs the support of a class course in which these relationships are elucidated. Indeed, these relationships themselves need scientific evaluation involving comparisons between dynamically recorded handwriting movements and the resulting products (see Thomassen and Van Galen, 1997). More such instances of wanting background information are present elsewhere in the text, which unfortunately does not contain a single illustration. Another question is whether the objective description of a specimen of handwriting allows the use of concepts such as 'habits' or 'uselessly complicated' to refer to graphical peculiarities. Finally, several principles and findings, in particular the cryptic observation on common features in 855 suicide notes in Zürich (p. 92) is so intriguing that one wants to learn more about these. But, alas, there is no reference note; a bibliography supporting the volume is lacking altogether.

On the positive side, it is good to be reminded by Sedeyn of the fact that, in handwriting, measurements are never absolute, but that all dimensions are related to one another on the page as well as within letters. It is the proportions that cannot be modified at will as easily as absolute size and orientation can. Of great value are also her comments on respect for the original document, on the revealing potential of inspecting it at arm's length or in a mirror. I was also struck by Sedeyn's suggestion of making the strokes of a signature audible. This could easily be tried in a number of different ways, and it could indeed support the online assessment of authenticity. The human ear is well equipped for the detection of temporal features.

The volume is concluded by wise warnings against prejudice and the wish to gain wealth or celebrity by making statements in attention provoking cases.



It makes an appeal to modesty and readiness to reconsider earlier insights, and to refrain from unjustified claims and pretensions in view of the limitations that unavoidably characterise handwritten material. It promotes exactly those qualities that in my opinion are justifiably assigned to the author by Eric Baccino in his foreword, namely her "integrity, discipline, stringent standards, and open mindedness". To conclude, also in Baccino's words, the volume is a "valuable research tool ... destined for a healthy development".

Reference

Thomassen, A.J.W.M., & Van Galen, G.P. (1997). Temporal features of handwriting: Challenges for forensic analysis. *Journal of Forensic Document Examination*, 10, 85-108.

IGS News

Professor Réjean Plamondon has been named Fellow of the IEEE for contributions to signature verification, handwriting recognition, assisted learning and biosignal analysis. Each year, following a rigorous evaluation procedure, the IEEE Fellow Committee recommends a select group of recipients for one of the Institute's most prestigious honors, election to IEEE Fellow. Less than one in one thousand members of the IEEE will receive this honor in 2000.

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 (2000) by following the instructions specified on the payment slip enclosed in this BIGS mailing. Membership entitles you to reduced rates for publications and conferences sponsored by IGS.

Results from Search for Information on the Internet

Information which is relevant to IGS members and which 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*.



On-line handwritten Japanese character pattern database for research purposes without charges is available. Due to the copyright of the Japanese newspaper from which the text was used to collect hand-written characters, the data made available at this time is only less than 10% of the total database, but we hope it is useful for evaluation purposes.

The environment that this database is accessed needs to support a Japanese character code system and font in the operating system (Windows, Japanese version). Please note that all the manuals are written in Japanese at the moment and we cannot respond to each request to translate them. We hope that you can ask someone in your group who can read Japanese. Details are in the following page: <http://hands.ei.tuat.ac.jp/ipdb/>. In order to make the total database available for unlimited applications, the newspaper company requests us to pay 2% of the sale. However, Japanese national universities are not so free to sell their products. Nevertheless, we are trying to find a solution. The total database stores 300 million character patterns so that it could be used for practical developments. Please contact: Masaki Nakagawa, Dept. of Computer, Information and Communication Sciences, Tokyo Univ. of Agree. & Tech. Naka-Cho 2-24-16, Koganei, Tokyo, 184-8588, Japan, phone: +81-423-88-7144, fax: +81-423-87-4604, e-mail: nakagawa@cc.tuat.ac.jp, <http://www.tuat.ac.jp/~nakagawa/>

One year postdoctoral fellowship. Institut national des télécommunications (Int), Evry, France and Laboratoire d'Informatique de Paris VI (Lip 6), Paris, France. Pen interfaces for mobile devices and recognition of handwriting. The applicant must possess a Ph.D., if possible in the domain of handwriting or speech recognition. He/she must also have aptitudes for the development of software applications. For more information, please contact:

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Summer School on Learning: The Acquisition of Behavioral Competence. Call for Applications. We are happy to announce that under the auspices of the European Society for Cognitive Psychology (ESCOP), the Department of Cognitive Psychology at the University of Wuerzburg is organizing a Summer School on the topic "Learning: The Acquisition of Behavioral Competence", funded by the Volkswagen Foundation. TIME: 22nd -27th of September 2000. PLACE: Department of Cognitive Psychology at the University of Wuerzburg, Roentgenring 11, 97070 Wuerzburg, Germany. AIM: The aim of the summer school is to provide a forum for young European scientists engaged in learning research for a discussion and exchange of ideas on current developments,



methods, and applications, above all in the interconnected but still separated research areas of animal learning, associative learning in humans (including implicit learning), motor skill acquisition, learning to control voluntary behavior, perceptual learning, cortical structures involved in learning, and simulations of Learning processes by connectionist networks and by adaptive algorithms in machine learning. LECTURERS AND TOPICS: We are very pleased that a number of distinguished researchers will contribute to the summer school by reporting on their area of expertise: Prof. Axel Cleeremans: Free University Brüssel: Learning and consciousness in humans and computers. Prof. Mark Gluck: Center for Molecular & Behavioral Neuroscience, Rutgers University, New Jersey: Cortico-Hippocampal Function in Associative Learning. Interdisciplinary approaches from psychobiology of animal learning, cognitive neuroscience of human memory, and neurocomputational modeling. Prof. Joachim Hoffmann: University of Wuerzburg: Learning to control voluntary behavior. Prof. Claes von Hofsten: Uppsala University: Motor learning and skill development. Prof. Jean-Arcadi Meyer: Animat Lab, Laboratoire d'Informatique de Paris 6(Lip6), Paris: Learning paradigms in the context of Animats and Artificial Life. Prof. John M. Pearce: University of Wales: Associative learning in animals. Prof. Philippe G. Schyns: University of Glasgow: Perceptual learning in categorizations. Prof. David R. Shanks: University College, London: Associative learning processes in humans. More information at: http://www.psychologie.uni-wuerzburg.de/summer_school/index.html.

FUNDING: We expect participants to make use of all possibilities to gain external funding. For those participants who do not receive financial support from elsewhere, we are able to contribute to travel and accommodation costs, thanks to the grant of Volkswagen Foundation. Support should be sufficient to cover travel costs from European countries, accommodation at a local youth hostel and lunch. APPLICATION PROCEDURE: The number of participants is limited to 40. Graduate students and post-docs who are doing research on the topic "Learning" are invited to apply. Participants should not be older than 33. The application should entail a CV, a publication list, a short description of current research interests, and an abstract for a poster. A recommendation from a senior researcher is welcome. Applications will be considered in the order of reception date and with regard to the quality of the poster-abstracts as well as to the relevance of research interests. Applications should be sent to the following address: Prof. Joachim Hoffmann, Universitaet Wuerzburg, Psychologie III, Roentgenring 11, D - 97070 Wuerzburg, GERMANY via email or fax to: email: hoffmann@psychologie.uni-wuerzburg.de, fax: + (0)931 312815, DEADLINE: Applications should be submitted by May 15, 2000. Applicants will be notified about admission by May 30, 2000.

Recent Publications

In this section of BIGS the bibliographical details of recent publications relevant to the IGS are reported. In addition to publications by IGS members that were reported to the IGS office, the results of searches in Medline are given that were directed at papers on handwriting and related graphic skills,



which were published during the six months prior to the distribution of BIGS. IGS members are invited to report the bibliographic details of their recent publications to the IGS office.

Blank R, Miller V, von Voss H, von Kries R (1999) Effects of age on distally and proximally generated drawing movements: a kinematic analysis of school children and adults. *Dev Med Child Neurol.* 41(9):592-6.

Contreras-Vidal JL (1999) The gating functions of the basal ganglia in movement control. *Prog Brain Res.* 121:261-76.

Fu HC, Xu YY, Chang HY (1999) Recognition of handwritten similar Chinese characters by self-growing probabilistic decision-based neural network. *Int J Neural Systems,* 9(6):545-61.

Mergl R, Tigges P, Schroter A, Moller HJ, Hegerl U (1999) Digitized analysis of handwriting and drawing movements in healthy subjects: methods, results and perspectives. *J Neurosci Methods.* 90(2):157-69

Minguez-Castellanos A, Carnero-Pardo C, Gomez-Camello A, Ortega-Moreno A, Garcia-Gomez T, Arjona V, Martin-Linares JM (1999) Primary writing tremor treated by chronic thalamic stimulation. *Mov Disord.* 14(6):1030-3.

Plamondon R, Srihari S, On-Line and Off-Line Handwriting Recognition: A Comprehensive Survey, Special Issue at 20th Anniversary of the IEEE Transactions on Pattern Analysis and Machine Intelligence, January 2000.

Siebner HR, Ceballos-Baumann A, Standhardt H, Auer C, Conrad B, Alesch F (1999) Changes in handwriting resulting from bilateral high-frequency stimulation of the subthalamic nucleus in Parkinson's disease. *Mov Disord.* 14(6):964-71.

Tseng MH, Chow SM (2000) Perceptual-motor function of school-age children with slow handwriting speed. *Am J Occup Therapy,* 54(1):83-8.

Recent Conferences

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

VI'99*: Vision Interface

18-21 May, 1999. Hotel Delta, Trois-Rivieres, Quebec, Canada. VI'99 is a unique event with two international research conferences on computer vision



and quality control by artificial vision. These conferences were sponsored by the Canadian Image Processing and Pattern Recognition Society (CIPPRS). VI was also sponsored by the International Association for Pattern Recognition (IAPR). General Chair: Fathallah Nouboud, UQTR, Canada. Vision Interface'99 had the theme: 'Computer Vision for Industrial Applications'. Web site: www.dmi.usherb.ca/conferences/VI-99/.

CIMA'99*: International ICSC Congress on Computational Intelligence

22-25 June, 1999. CIMA'99, International Congress on Computational Intelligence took place at the Rochester Institute of Technology, NY, USA. CIMA'99 featured the following symposia: Fuzzy logic and applications (ISFL'99), Advances in Intelligent Data Analysis (AIDA'99), Soft Computing in Biomedicine (SCB'99), and Soft Computing in Financial Markets (SCFN'99). Website: www.icsc.ab.ca.

Performance Evaluation Issues in Multilingual OCR*

September 19th, 1999. Just before ICDAR'99 an International Workshop on performance evaluation Issues in multilingual Optical Character Recognition (OCR) was held in Bangalore, India. The Workshop's co-chairs were be Tapas Kanungo, University of Maryland, College Park, MD USA and Henry S. Baird, Xerox PARC, Palo Alto, CA USA. More information can be found on the Internet at: www.cfar.umd.edu/~kanungo/workshop/mlocr.html.

ICDAR'99*: Fifth International Conference on Document Analysis and Recognition

20-22 September, 1999. ICDAR'99 was held at the new technology center of Bangalore, India. General Chair: Sargur N. Shrihari. The conference was sponsored by the International Association for Pattern Recognition (IAPR) [Technical Committees 10 and 11], Indian Institute of Science and the Computer Society of India. This conference is a unique international forum for identifying, encouraging and exchanging ideas on research, development and novel applications dealing with documents--in any language--and how to make the contents of document computer-accessible. For more information visit: www.cedar.buffalo.edu/icdar99.html.

WMC'99*: Second World Manufacturing Congress

27-30 September, 1999. WMC'99 was organized by the University of Durham, United Kingdom. Contact: Jeanny S. Ryffel - Planning Division, ICSC International Computer Science Conventions, P.O. Box 279 - Millet, AB T0C 1Z0 - Canada. For more information please visit: www.icsc.ab.ca/wmc99.htm.



IJCN99*: International Joint Conference on Neural Networks

IJCN'99 was held on 10-16 July, 1999 in Washington, D.C. Among the sessions was Handwritten/Printed Text Recognition with Neural Networks. Web-site:

<http://www.cas.american.edu/~medsker/ijcnn99/cfp.html>.

From Basic Motor Control To Function Recovery*

22-26 September 1999. This conference was held at the Black Sea, near Varna (Albena or Golden sands) in Bulgaria. The conference having the subtitle 'Concepts, Theories and Models – Present State and Perspectives', tries to link clinical and theoretical point of views in Motor Control by bringing together leading scientists, leading clinicians as well as young scientists and clinicians who work in the same field but adopt different approaches in their research, particularly by focusing on different levels of the nervous system and by using different techniques of movement analysis. Further information can be obtained by contacting Nikolai Gantchev, UPR Neurobiologie et Movements, CNRS, 31 Chemin Joseph-Aiguier, 13402 Marseille cedex 20 FRANCE, Tel: +33.4.91.16.41.00, Fax: +33.4.91.77.50.84; Email: gantchev@Inf.cnrs-mrs.fr.

First International Colloquium of Experts in Handwriting and Documents*

This conference organized by the European Academy of Experts in Handwriting and Documents (AEEED) was held in Paris on December 3, 1999. Preliminary research on the nature and existence of graphic reflexes, including whether or not they are conscious or unconscious, how they are expressed, and if they can be applied in the process of subject identification will be presented. For more information contact: cs@magic.fr.

Forthcoming Conferences

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

Third International Conference on Cognitive Modelling*

23-25 March 2000. This conference was held at the University of Groningen, Netherlands. Special interest groups on human computer interaction and eye and hand coordination and external tasks interacted



in this conference. For enquires contact: Niels Taatgen
(niels@tcw3.ppsw.rug.nl) or Jans Aasman
(J.Aasman@research.kpn.com).

Seventh International Workshop on Frontiers in Handwriting Recognition

(IWFHR-7) 11-13 September 2000 in Amsterdam, The Netherlands (in the week after the International Conference on Pattern Recognition ICPR'2000 in Barcelona). The IWFHR series of conferences aims at providing a platform for researchers in the areas of on-line and off-line recognition of handwriting, in the area of pen-based interface development and systems for the processing of handwritten documents and forms in all languages. For further information see the web page: <http://hwr.nici.kun.nl/7th.iwfhf.2000/> or contact Dr Lambert Schomaker, Program Chair, at iwfhf7@unipen.org.

Society for Neuroscience (SFN) 30th Annual Meeting

November 4-9, 2000, New Orleans, Louisiana (USA). Join researchers from around the globe for the presentation of the latest findings in neuroscience while enjoying the sights, sounds and cuisine of SFN's most popular meeting destination. Featuring over 14,000 scientific presentations across the field, thought-provoking symposia and special lectures. Attendees can also register for this year's timely short courses a Neurobiology of Disease Workshop on Parkinson's disease.

Graphics Interface 2000

15-17 May 2000, Palais des Congres, Montreal, Quebec, Canada. This event will present the latest results in computer graphics and human-computer interaction, and will take place in conjunction with four other conferences: AI 2000 (Artificial Intelligence), VI 2000 (Vision Interface), the 10th Annual PRECARN-IRIS (Institute for Robotics and Intelligent Systems), and ISR 2000 (31st International Symposium on Robotics). Contributions are due on November 19, 1999. For more information visit <http://www.dgp.toronto.edu/gi> or email poulin@iro.umontreal.ca

Fourth International Workshop on Document Analysis Systems (DAS'2000).

Rio Othon Palace Hotel, Copacabana Beach, Rio de Janeiro, Brazil, December 10-13, 2000. The first three workshops were successfully held, respectively, in Germany, United States, and Japan. DAS'2000 will be a single-track and 100% participation workshop. It will aim at bringing together outstanding research and developments in Document Analysis Systems. The workshop will be held over four days. The first day is



reserved for tutorials. The technical program will consist of invited talks, given by expert in the field, oral presentations, and panel discussions. Panel discussions will focus on 10 Years of Document Image Analysis, and will attempt to pinpoint the areas where progress has been fast and where it has been slow. In addition, panel discussions will attempt to identify new directions toward the third millennium. More details can be found on the workshop home page: www.utp.br/das2000.

International Congress on Intelligent Systems and Applications (ISA'2000)

University of Wollongong (near Sydney), Australia, December 12-15, 2000 <http://www.icsc.ab.ca/isa2000.htm>. The ISA'2000 Congress aims to provide researchers and practitioners from academia and industry with a forum to report on the latest developments in intelligent systems and their applications within the four major areas of computational intelligence, interactive and collaborative computing, industrial systems, and biologically inspired systems. The Congress will also provide a unique opportunity for dialogue and synergy between scientists and engineers from different backgrounds with the common interest in intelligent systems. The congress consists of the following four Symposia: 1. COMPUTATIONAL INTELLIGENCE (CI'2000). Chair: Prof. Franz J. Kurfess, Canada, Email: franz@cs.concordia.ca. 2. INTERACTIVE AND COLLABORATIVE COMPUTING (ICC'2000). Chairs: Prof. Yoneo Yano and Prof. Hiroaki Ogata, Japan. Email: yano@is.tokushima-u.ac.jp, ogata@is.tokushima-u.ac.jp. 3. INDUSTRIAL SYSTEMS (IS'2000). Chair: Prof. Edward Szczerbicki, Australia. Email: mees@cc.newcastle.edu.au. 4. BIOLOGICALLY INSPIRED SYSTEMS (BIS'2000). Chair: Hans-Heinrich Bothe, Denmark Email: hnb@it.dtu.dk. For details see <http://www.icsc.ab.ca/154-info.html>.