

10th Israeli Conference on Artificial Intelligence, Computer Vision and Neural Networks

Tel-Aviv, December 27-28, 1993

Monday, December 27, 1993

(8:30-9:15) REGISTRATION

Session 1.1 AI VISION NN (9:15-11:15) PLENARY SESSION

AI Keynote Speaker:

D. Gabbay, Imperial College of Science and Technology, London.

LENA - An automated car saleswoman capable of belief revision, abduction action and small lies.

Vision Keynote Speaker:

Yiannis Aloimonos, University of Maryland, College Park MD.

Interpretation of visual patterns: Navigation & Manipulation.

(11:15-11:45) COFFEE BREAK

Session 1.2 AI (11:45-13:00) FORMAL TECHNIQUES

Rocchetti Marco, Teolis Antonio G.B. (University of Bologna)

The Use of Moebius Function in Probabilistic Rule-Based Expert Systems

Meisels Amnon, Eil-sana' Jihad, Gudes Ehud (Ben-Gurion University)

Comments on CSP Algorithms Applied to Timetabling

Shechory On, Kraus Sarit (Bar-Ilan University)

Coalition Formation Among Autonomous Agents: Strategies and Complexity

Session 1.3 NN (11:45 - 13:00) SPEECH AND SIGNAL PROCESSING

I Voitovetsky, S Dahan, Y Menashe, H Guterman (Ben Gurion University)

Speaker Independent Vowel Recognition Using Neural Networks

Zvi Boger (Negev Nuclear Research Center)

ANNs for Quantitative Stationary Spectrometric Measurements

Yaakov Stein (Efrat Future Technology)

False Alarm Rate Reduction for ASR and OCR

Session 1.4 VISION (11:45 - 13:00) SHAPE DESCRIPTION

Ilan Shimshoni, Jean Ponce (University of Illinois)
Finite resolution aspect graphs of polyhedral objects.

R.L. Ogniewicz, G. Szekely, O. Kubler
(Communication Technology Laboratory, Zurich)
Detection of prominent boundary points based on structural characteristics of the heirarchic medial axis transform.

Daphna Weinshall, Michael Werman, Naftali Tishbi (Hebrew University)
Stability and likelihood of two dimensional views of three dimensional objects.

(13:00-14:30) LUNCH BREAK

Session 1.5 AI (14:30-15:45) DESIGN METHODOLOGY

Ndjatou Gilbert (CUNY)
Modelling Objects and Distributed Object-Based Systems

Nygate Yossi (AT&T-Bell), Sterling Leon (Case Western Reserve University)
ASPEN - Designing Complex Knowledge Based Systems

Weiss Richard J., Tamir D. E., Schneider Moti (Florida Institute of Technology)
Efficient Resource Allocation for Parallel Prolog Interpretation

Session 1.6 NN (14:30 - 15:45) OPTICAL CHARACTER RECOGNITION AND RELATED TOPICS

Jacob (Yak) Shaya, Jonathan Eran Kali, Gideon Y Ben-Zvi (Ligatura)
A Stochastic Approach -- Advantages in Character Recognition

Oded Comay, Nathan Intrator (Tel Aviv University)
Ensemble Training: Some recent experiments with Postal Zip data

B Lerner, H Guterman, I Dinstein (Ben Gurion University)
Global Features and Simple Transformation to Chromosome Classification

Session 1.7 VISION (14:30-15:45) MODELS FOR HUMAN VISION

Yael Moses, Shimon Ullman, Shimon Edelman (Weizmann Institute)
Generalization to novel images in upright and inverted faces.

Ehud Grunfeld, Hedva Spitzer (Tel Aviv University)
Spatio-temporal model for subjective colours based on colour coded cells.

Haya Ruchvarger (Bar Ilan University)
A mathematical derivation on possible aid of eye movements to depth perception.

(15:45-16:00) COFFEE BREAK

Session 1.8 AI (16:00-16:45) LOGIC

Ben-Eliyahu Rachel (UCLA)
Back to the Future: Program Completion Revisited

Slobodova Anna (Slovak Academy of Science)
On a Special Case of Probabilistic Logic

Session 1.9 NN (16:00-16:50) HARDWARE IMPLEMENTATIONS

Ronny Agranat (Hebrew University)
An Electroholographic Artificial Neural Network

U Sandler (Jerusalem College of Technology)
Multimode Laser As a Multi-Neuron

Session 1.10 VISION (16:00 - 17:15) FEATURES FOR RECOGNITION

Dieter Koller (University of California at Berkeley)
Moving object recognition and classification based on recursive
shape parameter estimation.

Antti Yla-Jaaski, F. Ade (Mapvision Ltd., Finland)
Grouping symmetrical structures for image segmentation and description.

Yui-Liang Chen, D.C. Hung (New Jersey Institute of Technology)
Shape recognition using hypothetical feature.

Session 1.11 AI (16:45-17:45) TUTORIAL

S. Engelson (Yale University)
"Where am I, and where am I headed?"
(Map Learning for Mobile Robots)

Session 1.12 NN (16:50 - 18:00) BIOLOGICAL AND MEDICAL APPLICATIONS

Itiel E Dror (Harvard University)
Neural Network Models of Bat Sonar

H Guterman (Ben Gurion University), A Yarkoni (Soroka Hospital)
Classification of Labor Contractions by Neural Networks and Fuzzy Logic

P Tandaitnik, H Guterman (Ben Gurion University)
System Identification of Engineering and Biological Processes

Tuesday, December 28, 1993

(8:00-9:00) REGISTRATION

Session 2.1 AI VISION NN (9:00-11:00) PLENARY SESSION

NN Keynote Speaker

S. Kirkpatrick, IBM Yorktown Heights and HU
Satisfaction Thresholds and other Disorderly Things

Vision Keynote Speaker

Davi Geiger, Siemens Corporate Research, NJ.
Perceptual mechanisms for images and stereo pairs

(11:00-11:30) COFFEE BREAK

Session 2.2 AI (11:30-13:15) Learning

Sprotte-Kleiber Lucia (Zurich University)

GAAR - A System for Solving Geometric Analogy Problems with Analogical Representations

Koppel M., Feldman R. (Bar-Ilan University), Segre A. (Cornell University)
Theory Revision Using Noisy Examples

Biberman Yoram (Hebrew University)

A Context Similarity Measure for Nominal Variables

Reich Yoram, Karni Reuven, Fournier Fabiana (Technion)

An Investigation of Machine Learning Approaches to Knowledge Extraction from Databases

Session 2.3 NN (11:30 - 13:15) ARCHITECTURES AND LEARNING

Nathan Intrator (Tel Aviv University), Orna Intrator (Hebrew University)
Interpreting Neural-Network Models

Orly Yadid-Pecht, Moshe Gur (Technion)

Modified MAXNET with Fast Convergence Rate

Lev Tsitolovsky (Bar Ilan University), Maxim Kovalenko (Weizmann Institute)
Structure Independent Learning in Neural Networks

Session 2.4 VISION (11:30 - 13:15) RECOVERY AND GEOMETRY

Patrick Gros, Long Quan (LIFIA/INRIA, France)
3D projective invariants from two images.

Ron Kimmel, Guillermo Sapiro (Technion)
Shortening three dimensional curves via two dimensional flows.

Michal Irani, Benny Rousso, Shmuel Peleg (Hebrew University)
Recovery of ego-motion using image stabilization.

Quang-Tuan Luong, Rachid Deriche, Olivier Faugeras, Theodore Papadopoulos (INRIA, France)
On determining the fundamental matrix: analysis of different methods and experimental results.

(13:15-14:30) LUNCH BREAK

Session 2.5 AI (14:30-15:45) APPLICATIONS

Tomer Amir (Rafael)
An Implementation Methodology with Constructive Inheritance

Stilman Boris (University of Colorado)
Hierarchical Networks for Systems Control

Tabakman T, Exman I. (Hebrew University)
Towards Real-Time Self-Organising Maps with Parallel and Noisy Inputs

Session 2.6 NN (14:30 - 15:45) FUZZY LOGIC, EXPERT SYSTEMS, PATTERN RECOGNITION

Alon Cohen (Bar Ilan University)
A Legal Expert Neural Network

Usiel Sandler (Jerusalem College of Technology)
Fuzzy Dynamics

Yaakov Stein (Efrat Future Technology)
A Hypersphere Classifier Which Trains Like A Hyperplane One

Session 2.7 VISION (14:30-15:45) GROUPING AND SEGMENTATION

Gady Agam, Its'hak Dinstein (Ben Gurion University)
Pre-processing of metaphase images for automatic chromosome classification.

Antti Yla-Jaaski (Mapvision Ltd., Finland), Nahum Kiryati (Technion)
Adaptive termination of voting in probabilistic hough algorithms.

Victor Brailovsky, Yulia Kempner (Tel Aviv University)
Restoring the original range image structure using probabilistic estimates.

(15:45-16:00) COFFEE BREAK

Session 2.8 AI (16:00-17:30) Tutorial

Dan Geiger (Technion)
Probabilistic Reasoning: Learning and Inference

Session 2.9 NN (16:00 - 17:00) IMAGE PROCESSING

Sorin Costiner, Maxim Kovalenko (Weizmann Institute)
A Multigrid Neural Network with Applications to Image Processing

S Greenberg, H Guterman (Ben Gurion University)
Rotation and Shift Invariant Image Classifier using NN

Session 2.10 VISION (16:00-17:00) NON RIGID OBJECTS

Eyal Shavit, Allan Jepson (University of Toronto)
The pose function: an intermediate level representation for motion understanding.

Yaacov Hel-or (Weizmann Institute) and Michael Werman (Hebrew University)
Pose estimation of articulated and constrained models.

Session 2.11 NN (17:00 - 18:00) PANEL DISCUSSION

Industry and Academia Interaction

REGISTRATION INFORMATION

Registration forms should be sent by December 6, 1993, to the following address:

Ms. Ruth Cooperman
10th IAICVNN Secretariat
IPA, Kfar Maccabiah
Ramat Gan 52109
ISRAEL

The registration fee for the conference (including lunch, coffee, and proceedings) is as follows:

IPA members (*) (before Dec. 6) :	\$200 or 350 NIS
IPA members (*) (after Dec. 6) :	\$250 or 400 NIS
Non-IPA members (before Dec. 6) :	375 NIS
Non-IPA members (after Dec. 6) :	425 NIS
Students (**) (before Dec. 6) :	\$100 or 200 NIS
Students (**) (after Dec. 6) :	\$125 or 225 NIS

(*) Visitors from abroad are entitled to the IPA member rate. (Payment in US\$ only.)

(**) The student rate will be approved only for students who are enrolled in a full time study program and with documents confirmed by the university. The student registration fee does not include lunch. Lunch-tickets may be obtained for an additional \$25/50 NIS (for two tickets).

A block of rooms has been reserved at Kfar Maccabiah Hotel, a 4-star hotel at the conference site. Prices, including breakfast and service charge, are \$77 for a double room, \$60 for a single room per night (+ VAT for Israeli residents). A deposit of \$50 per person is required with this reservation.

The accomodation form should be sent to IPA together with the registration form.

REGISTRATION FORM

Name _____
Last First Title

Affiliation _____

Position/Department _____

Address _____

Country Telephone

Home address _____

Preferred mailing address
 Home Business

Registration fees:

IPA member \$200/350 NIS

non-IPA member 375 NIS

Student \$100/200 NIS

Late registration (after December 6, add as specified above)

Total

Payment can be in US\$ or NIS only, by bankers draft or personal check payable to: IPA.

Signature _____ **Date** _____

ACCOMODATION FORM

Name _____
Last First Title

Address _____

_____ Country Telephone

I wish to reserve a single/double room from _____ to _____
for a total of _____ nights.

Payment can be in US\$ or NIS only, by bankers draft or personal check payable to: IPA.

Signature _____ Date _____

Note : The FAX number of IPA is +972-3-574 4374.

The FAX number of Kfar Maccabiah Hotel is +972-3-574 4678.