
Ninth European Conference on Eye Movements
Ulm, September 23rd - September 26th

Conference Organization

W. Becker (Ulm), T. Mergner (Freiburg)

Scientific Committee

W. Becker (Ulm/DE), H. Deubel (München/DE), G. d'Ydewalle (Leuven/BE), J. Findlay (Durham/UK), B. Fischer (Freiburg/DE), A.C.Gale (Derby/UK), G. Gauthier (Marseille/FR), R. Groner (Bern/CH), D. Heller (Aachen/DE), K. Koga (Nagoya/JP), T. Mergner (Freiburg/DE), D. Zambambieri (Pavia/IT), J. van Gisbergen (Nijmegen/NL).

Local organization

W. Becker (Ulm/DE), R. Jürgens (Ulm/DE), T. Mergner (Freiburg/DE)

Honorary President

R. Groner (Bern/CH)

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Daimler-Benz Aerospace / Sensorsysteme (see advertisement on last page)
EvoBus (formerly *Kässbohrer*).

CONFERENCE TIME TABLE

TUESDAY, 23rd September 1997

16:30 **Conference opening** *Lecture Hall of Medical School*

17:00-18:20 **Invited Lecture**
Parietal mechanisms for visuospatial attention
M. GOLDBERG
National Eye Institute, Bethesda, US

SOCIAL EVENT

18:30 Reception by Rector *Foyer in front of Lecture
Hall of Medical School*

19:00 Suebian Style Buffet *Foyer in front of Lecture
(Schwäbisches Vesper) Hall of Medical School*

WEDNESDAY, 24th September 1997

08:30 - 09:30 **Invited Lecture** *Lecture Hall H4/5*
Brainstem anatomy of saccades and ocular following
J. BÜTTNER-ENNEVER
Institute of Anatomy, University of Munich, München DE

09:30 - 09:50 Coffee & Tea

09:50 - 12:10 **Session A 1** *Lecture Hall H4/5*

Vestibular System and Neurophysiological Mechanisms
Chair: G. GAUTHIER, Marseille, FR

Oral Presentations

- 09:50 O1 c-FOS expression in the optokinetic nuclei of the rat following different visual stimulatory conditions
BIRAL G, FERRARI R, FONDA S
Dipartimento di Scienze biomediche, Modena, IT
- 10:10 O2 Primate vestibulo-ocular responses during linear motion
ANGELAKI DE, MCHENRY MQ, HESS BJM
Dept. of Surgery Univ. of Mississippi, Jackson, US
- 10:30 O3 Gravity-induced dynamic modulation of vestibulo-oculomotor coordinates
HESS BJM, ANGELAKI DE.
Dept. of Neurology, University Hospital Zürich, CH
- 10:50 O4 Listing's plane orientation with vergence: effect of disparity and accommodation
KAPOULA Z, HASLWANTER T, BERNOTAS M.
Lab. de Physiologie de la Perception et de l'Action, CNRS, Paris, FR
- 11:10 O5 Effects of alcohol on three-dimensional properties of eye movements
FETTER M, BORK M, HASLWANTER T.
Dept. of Neurology, Eberhard-Karls-University, Tübingen, DE
- 11:30 O6 The relationship between eyelid closure and associated eye movements
BOUR LJ, ONGERBOER DE VISSER BW, HETTEMA M, SWANEVELD A,
ARAMIDEH M.
Dept. of Neurology, Clin. Neurophysiol, Academic Med. Centre Amsterdam, NL

Poster Introductions

- 11:50 P1 Otoliths stabilize human torsional VOR in space
GROEN E, BOS JE, DE GRAAF B.
TNO Human Factors Research Institute Soesterberg, NL
- P2 Linear vestibulo-ocular responses in pigeons
DICKMAN JD, BEYER M, NEWLANDS SD, MCHENRY MQ, HESS BJM,
ANGELAKI DE
Dept. of Surgery and Anatomy, University of Mississippi Jackson, US
- P3 Optimisation rule for control of position in horizontal eye muscles
DEAN P. PORRILL J, WARREN PA.
Department of Psychology and AIVRU, University of Sheffield, UK
- P4 Eye movement control while inspecting afterimage of natural surrounding:
evidence against efferent contribution to visual stability.
BELOPOLSKY VI.
Institute of Psychology RAS Moscow, RU
- P5 Proprioceptive evoked eye movements
SCHWEIGART G, BOTTI F, LEHMANN A, MERGNER T.
Proprioceptive evoked eye movements
Neurological Clinic, Neurocenter, Freiburg, DE
- P6 Updating of visually perceived object location in space following retinal,
ocular, and vestibular displacements.
RUMBERGER A, NASIOS G, MAURER C, MERGNER T
Neurological Clinic, Neurocenter, Freiburg, DE
- P7 The effect of ocular muscle behavior on eye movement generation and limiting
velocity of smooth pursuit eye movement.
SHITAMOTO H, HORII K, KOTANI K
Graduate School of Kansai University, Osaka JP

09:50 - 12:10

Session B 1

Lecture Hall H3

Reading I

Chair: D. HELLER, Aachen, DE

Oral Presentations

- 09:50 O1 Parafoveal-on-foveal effects in word recognition.
KENNEDY A
Psychology Department, University of Dundee, UK

Wednesday

- 10:10 O2 Morphological structure of long compound words influences durations and locations of fixation during reading
HYÖNÄ J, POLLATSEK A
Department of Psychology, University of Turku, FI
- 10:30 O3 On the role of short duration fixations in eye movement control: evidence from reading and simple scanning paradigms
RADACH R, HELLER D, KRESSER R
Department of Psychology, Technical University of Aachen, DE
- 10:50 O4 The return sweep in reading
HOFMEISTER J, HELLER D, RADACH R
Department of Psychology, Technical University of Aachen, DE
- 11:10 O5 Eye guidance and the saliency of word beginnings
VONK W, RADACH R, VAN RIJN H
Max Planck Institute for Psycholinguistics, Nijmegen, NL

Poster Introductions

- 11:30 P1 Transient saccadic inhibition in reading
REINGOLD EM, STAMPE DM
University of Toronto, CA
- P2 Eye fixation patterns reveal individual reading strategies.
HYÖNÄ J, LORCH JR. RF
University of Turku, FI
- P3 Relationship between visual attention and saccade target selection in reading
DORÉ K, BEAUVILLAIN C
Lab. de Psychologie Expérimentale, Université René Descartes, Paris, FR
- P4 Working memory capacity and visual field size in sight-reading a musical score.
PETZOLD L
Technical University of Ilmenau, DE
- P5 Reading without eye-movements
GILCHRIST ID, BROWN V, FINDLAY JM
Department of Psychology, University of Durham, UK
- P6 Are reductions of reading speed by visual degradation of input caused by suboptimal retinal images interacting with cognitive templates?
KRISCHER C, ZIHL J, MEISSEN R
Forschungszentrum, Jülich, DE

Wednesday

- P7 How does a reader know the optimal viewing position (OVP) in a word?: comparison between the OVP effect in Japanese and English.
KAJII N, OSAKA N
Department of Psychology, Graduate School of Letters, University of Kyoto, JP
- P8 Eye movement measures for the assessment of reading comprehension in adults with neurological impairments: Methodological developments.
HALLOWELL B, KATZ RC, O'MALLEY L, RAGONE A
School of Hearing and Speech Sciences, Ohio University, Athens, US:
- 11:50 P9 Visual behaviour of drivers and passengers relative to roadside advertising posters.
BARBER P, COOPER S, HODGSON T
Department of Psychology, Birkbeck College, London, UK
- P10 How do we read sentences? Differences in eye movements between the young and aged.
FUKUDA R, FUCHIDA T, FUKUDA T
Keio University, Graduate School of Media and Governance, JP

12:10 - 14:00 Luncheon, Poster Viewing

14:00 - 15:20 **Session A 2** *Lecture Hall H4/5*

Functional Imaging and Brain Potentials
Chair: R. MÜRI, Bern, CH / HEIDE, Lübeck, DE

Oral Presentations

- 14:00 O1 Functional MRI of double step saccades. The role of the cingulate cortex?
MÜRI RM, NIRKKO AC, TOBLER P, HEID O, SCHROTH G, HESS CW
Bern, CH
- 14:20 O2 Network of cortical areas activated during sequences of memory-guided saccades in humans
HEIDE W, BINKOFSKI F, POSSE S, SEITZ RJ, MÜLLER-GÄRTNER HW, KÖMPF D, FREUND HJ
Department of Neurology University of Lübeck, DE
- 14:40 O3 The relationship between eye movements and motion perception in the human "dorsal stream" as revealed by fMRI
BRANDT SA, DALE AM; TAKAHASHI T, WENZEL R, TOOTELL R
Department of Neurology, Charité, Berlin, DE

Poster Introductions

- 15:00 P1 Functional magnetic resonance imaging of cerebellar activation during pursuit eye movements
NITSCHKE MF, MOSCHNER C, MELCHERT U, HAHN C, WESSEL K, KÖMPF D, HEIDE W
Department of Neurology, Medical University of Lübeck, DE
- P2 Sensorimotor visual-vestibular cerebral activation during optokinetic nystagmus: an fMRI study
DIETERICH M, BRANDT T, BUCHER SF, SEELOS KC
Department of Neurology, LMU University of Munich, DE
- P3 Effects of warning signals on saccadic reaction times and event-related potentials
SPANTEKOW A, KRAPPMANN P, EVERLING S, FLOHR H
Brain Research Institute, University of Bremen, DE
- P4 Frontal and parietal evoked potentials in saccadic and antisaccadic tasks.
JAGLA F, ZIKMUND V, FINDLAY JM
Department of Brain Physiology, Slovak Academy of Sciences, Bratislava, SK
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14:00 - 15:20

Session B 2

Lecture Hall H3

Perception

Chair: R. GRONER, Bern CH / K. KOGA, Nagoya JP

Oral Presentations

- 14:00 O1 Perception onset time during fixations in free viewing
MC CONKIE GW, LOSCHKY LC
University of Illinois at Urbana-Champaign, US
- 14:20 O2 Transsaccadic memory for position and orientation of saccade source and target
VERFAILLIE K
Department of Psychology, University of Leuven, BE
- 14:40 O3 The role of position, luminance, contrast, and spatial frequency in generating saccadic eye-movements
GRONER R, VON MÜHLENEN A, GRONER M
VISLAB, Department of Psychology, University of Bern, CH

Poster Introductions

- 15:00 P1 Encoding of non-target information in transsaccadic memory
LAMOTE C, DE GRAEF P, VERFAILLE, K
Department of Psychology, University of Leuven, BE

Wednesday

- P2 The role of coarse and fine peripheral information during the final part of fixations in scene perception
WAMPERS M, VAN DIEPEN PMJ
University of Leuven, BE
- P3 Unconscious effects of masked visual stimuli on eye movements
SCHWARZBACH J, VORBERG D
Department of Psychology, Technical University Braunschweig, DE
- P4 Updating the central representation of space during head rotations,
BLOUIN J, GAUTHIER GM, SIMONEAU M, VERCHER JL, LABROUSSE L
UMR, CNRS Mouvement et Perception, Univ. de la Méditerranée, Marseille, FR
- P5 Effect of vergence on size perception of stereoscopic images
MORITA T, HIRUMA N
NHK Science and Technical Research Laboratories Tokyo, JP
- P6 Passive eye movement modify the velocity perception of a moving target
KOGA K, GRONER R
Research Institute of Environmental Medicine, University of Nagoya, JP
- P7 Difference of shape constancy in upper and lower visual fields
YAMANOI T, KUBO K, TAKAYANAGI H
Dept. of Electronics and Inform. Eng., Hokkai Gakuen University, Sapporo, JP
- P8 Functional division of the visual field: Moving masks and moving windows
VAN DIEPEN PMJ, WAMPERS M, D'YDEWALLE G
Laboratory of Experimental Psychology, University of Leuven, BE

15:20 - 15:40

Coffee & Tea

15:40 - 16:40

Session A 3

Lecture Hall H4/5

Programming of Saccades I
Chair: B. FISCHER, Freiburg DE

Oral Presentations

- 15:40 O1 Erratic prosaccades in a gap antisaccade task: reaction and correction time.
FISCHER B, GEZECK S
Brain Research Unit, Institute of Biophysics, Freiburg, DE
- 16:00 O2 Neuronal activity in monkey superior colliculus during an antisaccade task
EVERLING S, DORRIS MC, MUNOZ DP
MRC Group in Sensory-Motor Neuroscience, Queen's University, Kingston, CA

Poster Introductions

- 16:20 P1 Saccade and smooth pursuit initiation in normal subjects and in "express-saccade makers"
KIMMIG H, MUTTER J, BISCALDI M, FISCHER B, MERGNER T
Neurologische Universitätsklinik Freiburg, DE
- P2 Different mechanisms of proerror-corrections in an antisaccade task
MOKLER A, FISCHER B
Brain Research Unit, Institute of Biophysics, Freiburg, DE
- P3 Auditory saccade latency in the gap and overlap paradigms
ZAMBARBIERI D, MAGNAGHI M, VERSINO M
Dipartimento di Informatica e Sistemistica, Università di Pavia, IT
- P4 Visual stimulation onset is subject to obligatory processing by the human saccadic system: evidence and implications
FINDLAY JM, WALKER R, DEUBEL H
Department of Psychology, University of Durham, UK
-

15:40 - 16:40

Session B 3

Lecture Hall H3

Reading II

Chair: J. HYÖNÄ, Turku, FI

Oral Presentations

- 15:40 O1 Eye movement control in reading: The programming of refixation amplitude
BEAUVILLAIN C
Lab. de Psychologie Expérimentale, Université René Descartes, Paris, FR
- 16:00 O2 Eye-movement measures for reading
KONIECZNY L, HEMFORTH B, SCHEEPERS C
Computerlinguistik, Universität Saarbrücken, DE
- 16:20 O3 Fixation control and antisaccades in dyslexia.
BISCALDI M, GEZECK S, FISCHER B
Brain Research Unit, Institute of Biophysics, Freiburg, DE
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SOCIAL EVENT

- 18:00 Guided Visit of Ulm Cathedral (*Münster*)
18:00 Guided Visit of Fishermen's Quarter (*Fischerviertel*)
19:30 Reception at City Hall (*Rathaus*)
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THURSDAY, 25th September 1997

08:30 - 09:50 **Invited Lecture** *Lecture Hall H4/5*
Finding the locus of saccadic gain plasticity in the monkey
A. FUCHS, Seattle, US

09:50 - 10:10 Coffee & Tea

10:10 - 12.10 **Session A 1** *Lecture Hall H4/5*

Programming of Saccades II
Chair: W. BECKER, Ulm, DE

Oral Presentations

10:10 O1 Saccade selection in visual search: evidence for two visual codes for stimulus location
GILCHRIST ID, FINDLAY JM, HEYWOOD CA
Department of Psychology, University of Durham, UK

10:30 O2 Saccadic latencies to visual targets under accessory auditory stimulation: modeling spatio-temporal effects
ARNDT PA, COLONIUS H
Institut für Kognitionsforschung, Universität Oldenburg, DE

10:50 O3 "Mental rotation" of saccade direction
FISCHER MH, DEUBEL H, WOHLSCHLÄGER A, SCHNEIDER WX
Department of Psychology, University of Munich, DE

11:10 O4 A common compensatory mechanism for double-step saccades and colliding saccades evoked from frontal eye field stimulation?
DOMINEY PF, SCHLAG JD, SCHLAG-REY M, ARBIB MA
Vision et Motricité - INSERM U94, Bron, FR

11:30 O5 The subjective direction of gaze shifts long before the saccade.
DEUBEL H, IRWIN DE, SCHNEIDER WX
Department of Experimental Psychology, University of Munich, DE

Poster Introductions

11:50 P1 A model of spatio-temporal dynamics in the collicular motor map
WERNER H, SCHIERWAGEN A
Institut für Informatik, Universität Leipzig, DE

- P2 The chicken or the egg? Predictive and feedback models of the role of the superior colliculus in saccade control.
GARCIA-TOBIN C, DENHAM MJ
Centre f. Neural & Adaptive Systems, School of Computing, Plymouth Univ., UK
- P3 Saccadic gaze shifts evoked by electrical stimulation of the superior colliculus are modified by cerebellar inactivation
GUILLAUME A, PÉLISSON D, GOFFART L
Vision et Motricité, INSERM U94, Bron, FR
- P4 Sequences of two successive memory-guided saccades: the double step revisited
ISRAËL I
LPPA, CNRS Collège de France, Paris, FR
- P5 Age differences in saccadic averaging as a function of distractor location
SCIALFA C, JOFFE K, JENKINS L
Department of Psychology, University of Calgary, CA
- P6 Deviation of rapid-targeting eye movement under a sensation of visually induced illusory self-motion.
FUJITA M
Communication Research Laboratory MPT, Tokyo, JP
-

10:10 - 12:10

Session B 1

Lecture Hall H3

Cognition

Chair: G. D'YDEWALLE, Leuven, BE

Oral Presentations

- 10:10 O1 Definition and computation of oculomotor measures in the study of cognitive processes.
INHOFF A
Dept. of Psychology, State University of New York at Binghamton, US
- 10:30 O2 Parallel object processing in real-world scenes
DE GRAEF P, SPITTAELS O
Laboratory of Experimental Psychology, University of Leuven, BE
- 10:50 O3 Eye movements dissociate levels of processing.
VELICHKOVSKY BM, SPRENGER A, POMPLUN M, UNEMA P
Department of Psychology, University of Technology, Dresden, DE
- 11:10 O4 Is there any need for the use of eye-movement recording during reasoning?
SCHROYENS W, SCHAEKEN W, D'YDEWALLE G
Laboratory of Experimental Psychology, University of Leuven, BE

Thursday

- 11:30 O5 Eye movement-based memory assessment
ALTHOFF R, COHEN NJ, McCONKIE G, WASSERMAN S, MACIUKENAS M, AZEN R,
ROMINE L
Neurosci. Program & College of Med., Univ. of Illinois, Urbana-Champaign, US

Poster Introduction

- 11:50 P1 A new way of looking at auditory linguistic comprehension
HALLOWELL B
School of Hearing and Speech Sciences, Ohio University, Athens, US
- P2 Visual and verbal focus patterns when describing pictures
HOLŠÁNOVÁ J, HEDBERG B, NILSSON N
Cognitive Science, Lund University, SE
- P3 Eye movements while viewing a foreign movie with subtitles
TAKEDA M
Faculty of Education, Dept. of Psychology, Wakayama University, JP
- P4 A three temporal spectrum-zone schema fixation curve for dealing with
preception, cognition, and language processing in reading
KITAMURA Y, HORII K, KOTANI K, D'YDEWALLE G
Faculty of Informatics, Kansai University, JP

12:10 - 14:00 Luncheon, Poster Viewing

14:00 - 16:00 **Session A 2** *Lecture Hall H4/5*

Clinical Aspects

Chair: U. BÜTTNER, München, DE

Oral Presentations

- 14:00 O1 Control of purposive saccadic eye movements and visual fixation in children with
attention deficit hyperactivity disorder
MUNOZ DP, GOLDRING JE, HAMPTON KA, MOORE KD
Department of Physiology, Queen's University, Kingston, CA
- 14:20 O2 A dissociation of internal representation and hypometric memory-guided saccades
in a de novo Parkinson's Disease.
CRAWFORD TJ, SHAUNAK S, O'SULLIVAN E, BLUNT S, LAW DEN M,
HENDERSON L, KENNARD C
Department of Psychology, University of Lancaster, GB

Thursday

- 14:40 O3 Ocular motor disorders associated with inborn chiasmal crossing defects; multi-planar eye movement recordings in see saw and congenital nystagmus
APKARIAN P, BOUR LJ, VAN DER STEEN J, COLLEWIJN H
Department of Physiology, Erasmus University Rotterdam, NL
- 15:00 O4 Parieto-temporal cortex contributes to velocity storage integration of vestibular information
VENTRE-DOMINEY J, NIGHOGHOSSIAN N, VIGHETTO A
Vision et Motricité, INSERM, Bron, FR

Poster Introductions

- 15:20 P1 Latencies of reflexive and predictive saccades in cerebellar disease
MACASKILL MR, ANDERSON TJ
Department of Medicine, Christchurch School of Medicine, Christchurch, NZ
- P2 Abnormal smooth pursuit initiation in patients with cerebellar lesion: Response to predictable and randomized step-ramp stimuli
MOSCHNER C, CRAWFORD TJ, TRILLENBERG P, HEIDE W, KÖMPF D, KENNARD C
Department of Neurology, Medical University of Lübeck, DE
- P3 Superior oblique myokymia: Quantitative characteristics of eye movements by means of a new video-oculography
ZINK R, DIETERICH M, STEDDIN S, WEISS A, BRANDT T
Department of Neurology, University of Munich, DE
- P4 Acquired downbeat/upbeat nystagmus impairs visual orientation and motion perception in vertical (pitch) plane
GRUENBAUER W, DIETERICH M, BRANDT T
Department of Neurology, University of Munich, DE
- P5 Static vestibulo-ocular brainstem syndromes: Three-dimensional modeling and simulation
GLASAUER S, WEIB A, DIETERICH M, BRANDT T
Department of Neurology, University of Munich, DE
- P6 Dissociation of brainstem pathways involved in otolith-ocular function? Evidence from off vertical axis rotation in patients with skew deviation
TILIKET C, VENTRE-DOMINEY J, NIGHOGHOSSIAN N, VIGHETTO A
Vision et Motricité, INSERM, Bron, FR
- P7 Saccadic eye movements hypometria in patients with Parkinson's disease: Influence of instruction
SEITZ P, KIMMIG H, MERGNER T
Neurologische Universitätsklinik Freiburg, DE

Thursday

- P8 Eye-hand coordination of patients with Parkinson's disease, Wilson's disease, cerebellar lesions and parietal lesions.
ROLL A, WOLF W, HEFTER H
Inst. für Mathematik und Datenverarb., Univ. der Bundeswehr, Neubiberg, DE
- 15:40 P9 Eye head coordination in patients with chronic loss of vestibular function.
MAURER C, MERGNER T, JÜRGENS R, BECKER W
Department of Neurology, University of Freiburg, Freiburg, DE
- P10 Subclinical saccadic adduction slowing in patients with monosymptomatic unilateral optic neuritis enhances certainty about subsequent development of multiple sclerosis
ANASTASOPOULOS D, TSIRONI E, PSILAS K
Departments of Neurology and Ophthalmology, University of Ioannina, GR
- P11 Vertical and horizontal saccades in generalised primary dystonia.
ANDERSON TJ, MARSDEN CD
Department of Neurology, Christchurch Hospital, Christchurch, NZ
- P12 Effect of right cerebral hemisphere lesions on visual scanning strategies
DEFOORT S, BUQUET C, CHARLIER J, DHELLEMMES P, HACHE JC
Service d'exploration fonctionnelle de la vision, CHU de Lille, FR
- P13 Characteristics of saccades in active Graves' ophthalmopathy
SCHWORM HD, KUNZE A, WELGE E, EGGERT T, BÜTTNER U, BOERGEN KP
Eye Hospital, Ludwig Maximilians University, München, DE
- P14 Pathological torsional pulsion of saccades: an observational study in seven patients (VIDEO)
ANDERSON TJ, MACASKILL MR
Department of Neurology, Christchurch Hospital, Christchurch, NZ
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14:00 - 15:40

Session B 2

Lecture Hall H3

Attention and Visual Search

Chair: J. FINDLAY, Durham GB

Oral Presentations

- 14:00 O1 Object recognition and goal-directed eye or hand movements are coupled by visual attention
PAPROTTA I, DEUBEL H, SCHNEIDER WX
Dept. of Experimental Psychology, Ludwig-Maximilians-University, Munich, DE
- 14:20 O2 TRANSIENT SACCADIC HINHIBITION IN GAZE CONTINGENT VIEWING
STAMPE DM, REINGOLD EM.
University of Toronto, CA

Thursday

14:40 O3 Neural network modeling of the effects of experience and task requirements on attentional processes in symmetry detection.
LATIMER C, JOUNG W, VAN DER ZWAN R, BEH H
Department of Psychology, University of Sydney, AU

15:00 O4 Visual search behaviour of radiologists interpreting mammographic images
MUGGLESTONE M, GALE A
Applied Vision Research Unit, University of Derby, UK

Poster Introductions

15:20 P1 Visual search for conjunctions of form and brightness: selective attention probed with eye movements
VAN LEEUWEN TH, VAN DER HEIDEN AHC
Dept. of Experimental and Theoretical Psychology, University of Leiden, NL

P2 Age differences in feature and conjunction search: Implications for theories of visual search and generalized slowing
SCIALFA C, HAMALUK E, PRATT J
Department of Psychology, University of Calgary, CA

P3 Eye Movements in Comparative Visual Search.
POMPLUN M, CARBONE E, SICHELSCHEIDT L, VELICHKOVSKY B, RITTER H
DFG Research Center 360, University of Bielefeld, DE

P4 Eye movement patterns during free search on a homogenous background
NIES U, BEDENK B, HELLER D, RADACH R
Institute of Psychology, Technical University of Aachen, DE

P5 Patterns of eye movements in visual search as measures of search efficiency
REINGOLD EM, WILLIAMS D
University of Toronto, CA

P6 Visual focus on gestures in conversational narratives.
HOLMQVIST K, GULLBERG M
Departments of Cognitive Science and Linguistics, Lund University, Lund, SE

P7 Monitoring behaviour: Old theories, new data.
SENDERS J
Mech. and Ind. Eng., University of Toronto, CA

16:00 - 16:20

Coffee & Tea

Thursday

16:20 - 17:20

Invited Lecture

Lecture Hall H4/5

Eye movements in reading: are two eyes better than one?

D. HELLER

Technical University of Aachen, Aachen DE

17:20 - 17:40

Coffee & Tea

17:40 - 18:40

Session A 3

Lecture Hall H4/5

Adaptation

Chair: H. DEUBEL, München, DE / J. VAN GISBERGEN, Nijmegen, NL

Oral Presentations

- 17:40 O1 Does visual background information influence the adaptation of the amplitude of visually guided reflexive saccades?
DITTERICH J, STRAUBE A, EGGERT T
Center for Sensorimotor Research, Ludwig-Maximilians-University, Munich, DE
- 18:00 O2 A model of human saccade adaptive system suggested by selective and delayed-cue adaptations.
FUJITA M
Neural Computation Section, Communications Res. Laboratory, MPT, Tokyo, JP

Poster Introductions

- 18:20 P1 Reactive, volitional, and memory-guided saccadic eye movements are controlled by separate adaptive mechanisms
DEUBEL H
Dept. of Experimental Psychology, Ludwig-Maximilians-University, Munich, DE
- P2 Saccadic suppression and adaptation: revisiting the methodology
MACASKILL MR, MUIR SR, ANDERSON TJ
Department of Medicine, Christchurch School of Medicine, Christchurch, NZ
- P3 Intra and postsaccadic disparity-induced vergence changes during repeated stimulations
ACCARDO A, PENSIERO S, PERISSUTTI P
D.E.E.I. Università di Trieste, IT
- P4 A mathematical model of VOR adaptation
RAMAT S, ZAMBARBIERI D
Dipartimento di Informatica e Sistemistica, Università di Pavia, IT
-

Thursday

18:40 - 19:20

Session A 4

Lecture Hall H4/5

Saccade Dynamics and Psychophysiology

Chair: T. MERGNER, Freiburg, DE

Oral Presentation

- 18:40 O1 Smoking affects oculomotor behavior
KUSSEROW S, GALLEY N
Psychological Institute, University of Cologne, DE

Poster Introductions

- 19:00 P1 Every saccade is an orienting (response?) behavior.
GALLEY N
Psychological Institute, University of Cologne, DE
- P2 Saccadic peak velocity and motivational task variables
APP E, DEBUS G
Department of Psychology, Technical University of Aachen, DE
- P3 Effects of size of a target and fixation point and brightness of a target upon dynamics of human visually guided voluntary saccade
EBISAWA Y, SUGIURA M
Faculty of Engineering, Shizuoka University, Shizuoka, JP

17:40 - 19:20

Session B 3

Lecture Hall H3

Methods, Ergonomics, Clinical Applications

Chair: A. GALE, Derby, UK

Oral Presentations

- 17:40 O1 Analysis of binocular eye movements using stereoscopic 3D-video-endoscopic-systems
FISCHER S, VON PICHLER C, RADERMACHER K, RAU G
Helmholtz-Institute for Biomedical Engineering, Technical University, Aachen, DE
- 18:00 O2 Easier analysis of point of gaze data
MUGGLESTONE M, GALE A
Applied Vision Research Unit, University of Derby, UK
- 18:20 O3 Saccadic suppression evaluated with the pupillary light reflex: methods and preliminary evaluation on normals and patients
ODOM JV, CHARLIER J
INSERM, Institut de Technologie Médicale, CHU de Lille, FR

Poster Introductions

- 18:40 P1 Visioboard: a gaze controlled multimedia computer for severely handicapped subjects
CHARLIER JR, VERMANDEL S, DUBUS F, HUGEUX JP
INSERM, Institut de Technologie Médicale, CHU de Lille, FR
- P2 The use of a commercially available eyetracking system by people with severe physical disabilities
CLEVELAND NR
LC Technologies, Inc., Fairfax, US
- P3 Development of EOG pointing device for physically handicapped people
KUNO, Y
School of Engineering, Nagoya University, Nagoya, JP
- P4 Assessing strategies for improving reading performance in patients with paramacular visual field loss
BAKER MR, HILL A, HENDERSON J
University of Oxford, Oxford, UK
- P5 Adaptation to visual field defects with virtual reality scotoma.
ZANGEMEISTER WH, OECHSNER U
Neurologische Universitätsklinik Hamburg, DE
- P6 Methods for image processing of human eye iris signature in video based torsional eye movement measurement
STEDDIN S
Department of Neurology, Ludwig-Maximilians-University Munich, DE
- P7 A simple approach to video based 3D eye movement measurement
STEDDIN S, WEISS A
Department of Neurology, Ludwig-Maximilians-University Munich, DE
- P8 Security limitations of near infrared illumination of the human eye in video based eye movement recording
WEISS A, STEDDIN S
Department of Neurology, Ludwig-Maximilians-University Munich, DE
- 19:00 P9 Improved three-dimensional eye movement measurement using smart vision sensors
CLARKE AH, SCHÜKER D, KRZOK W
Vestibular Res. Lab., Dept. of Otorhinolaryngology, FU Berlin, DE
- P10 An improved calibration technique for image-based eye movement measurement systems
CLARKE AH, ROHDE M
Vestibular Res. Lab., Dept. of Otorhinolaryngology, FU Berlin, DE

Thursday

- P11 Does the dual Purkinje image tracker measure only slow eye movements?
VISCHI MA, BRUNO P, INCHINGOLO P, FINDLAY JM
Dipartimento di Elettrotecnica, Elettrotecnica ed Informatica, Univ. of Trieste, IT
- P12 Flicker effect on saccadic control: the number of pulsation hypothesis
BACCINO T
Department of Psychology, University of Nice, FR
- P13 The use of eye movement research techniques in the design and layout of classified advertising directories
PURDY K, GOULD V, MUGGLESTONE M, GALE AG
Applied Vision Research Unit, University of Derby, UK
- P14 Visual INTERaction and human effectiveness in the cockpit (VINTHEC): the aims of the project.
AVERMATE JAG
National Aerospace Laboratory of the Netherlands (NLR), Amsterdam, NL

FRIDAY, 26th September 1997

08:30 - 09:30

Invited Lecture:

Lecture Hall H4/5

Does binocular gaze control rely on shared WHERE
and WHEN systems for saccades and vergence?

J VAN GISBERGEN

Dept. of Medical Physics and Biophysics, University of Nijmegen, NL

09:30 - 09:50

Coffee & Tea

09:50 - 11:50

Session A 1

Lecture Hall H4/5

Smooth Pursuit

Chair: G. BARNES, London, UK / D. ZAMBARBIERI, Pavia IT

Oral Presentations

- 09:50 O1 Short-term motor memory for anticipatory smooth eye movements
WELLS SG, BARNES GR
MRC HMBU, Inst. Neurology, London, UK
- 10:10 O2 Modelling ocular pursuit: the importance of short-term memory and positional
feedback
BARNES GR
MRC HMBU, Inst. Neurology, London, UK
- 10:30 O3 Predictive mechanisms and pursuit offset in humans.
SCHEURER W, HANDKE V, BÜTTNER U, STRAUBE A
Department of Neurology, Ludwig-Maximilians-University Munich, DE
- 10:50 O4 Optokinetic responses to optic flow in monkeys
LAPPE M, PEKEL M, HOFFMANN KP
Allgemeine Zoologie u. Neurobiologie, Ruhr-Universität Bochum, DE
- 11:10 O5 Smooth pursuit to a movement flow and associated perceptual judgements
CHEN Y, MCPEEK RM, INTRILIGATOR J, HOLZMAN PS, NAKAYAMA K
Department of Neurology, Harvard University, Cambridge, US

Poster Introductions

- 11:30 P1 Effects of analysing moving acuity targets on predictive ocular pursuit
WELLS SG, BARNES GR
MRC HMBU, Inst. Neurology, London, UK

Friday

- P2 Circular pursuit of different frequencies in humans
REICH J, HEFTER H, FREUND HJ
Department of Neurology, University of Duesseldorf, DE
- P3 Voluntary saccades after circular pursuit in humans
REICH J, HEFTER H, FREUND HJ
Department of Neurology, University of Duesseldorf, DE
- P4 Oculo-manual co-ordination in tracking of pseudo-random target motion stimuli
XIA RP, BARNES GR
MRC HMBU, Institute of Neurology, London, UK
- P5 A model of hand-eye coordination during self-moved target tracking
VERCHER JL, LAZZARI S, GAUTHIER G, BUIZZA A
Faculté des Sciences du Sport, Univ. de la Méditerranée CNRS, Marseille, FR
- P6 Independent control of head and eye movement during head-free pursuit
COLLINS CJS, BARNES GR
MRC HMBU, Institute of Neurology, London, UK
- P7 The errors of eye, head and hand movements during pursuit of predictable 2D target
LAURUTIS V, DAUNYS G
Department of Radioengineering, Kaunas University of Technology, Kaunas, LT
- P8 Parietal neurons are activated by smooth pursuit of imaginary targets
ILG UJ, THIER P
Sektion Visuelle Sensomotorik, Neurologische Universitätsklinik Tübingen, DE
-

09:50 - 10:50

Session B 1

Lecture Hall H3

Psychiatric Disorders

Chair: A. KORNHUBER, Ulm, DE

Oral Presentations

- 09:50 O1 Deficits of eye movements in families with multiple cases of schizophrenia and normal families. 1. Smooth pursuit performance.
LENCER R, KRECKER K, NOLTE A, MALCHOW C, AROLT V
Department of Psychiatry, University of Luebeck, DE
- 10:10 O2 Abnormalities in externally- and internally-triggered saccades in untreated and treated schizophrenic patients.
EGGERT T, RIEDEL M, MÜLLER N, STRAUBE A
Dept. of Neurology and Psychiatry, Ludwig-Maximilians University Munich, DE

Poster Introductions

- 10:30 P1 Antisaccades and the saccadic gap effect in subjects with a schizotypal personality
KLEIN C, BRÜGNER G, FOERSTER F, MÜLLER W, SCHWEICKHARDT A
Psychological Institute, University of Freiburg, DE
- P2 Asymmetric gap effect on smooth pursuit latency in a schizophrenic subject.
KNOX PC, BLACKWOOD D
Vision Sciences, Glasgow Caledonian University, Glasgow, UK
- P3 Deficits of eye movements in families with multiple cases of schizophrenia and normal families. 2. Performance in a reflexive saccadic task.
KRECKER K, LENCER R, NOLTE A, AROLT V
Department of Psychiatry, University of Luebeck, DE
- P4 Saccadic tracking in Schizophrenia: Incidence of hypometria and intrusions influenced by target background?
JÜRGENS R, BECKER W, SCHREIBER H, FEGERT B, KLAUSMANN S
Section of Neurophysiology and Dept. of Neurology, University of Ulm, DE
- P5 The role of acceleration saturation in smooth pursuit eye movement dysfunction in schizophrenia
TRILLENBERG P, HEIDE W, JUNGHANNS K, BLANKENBURG M, AROLT V
Departments of Neurology and Psychiatry, Medical University of Luebeck, DE
- P6 Eye movements of schizophrenics processing geometric and face stimuli.
MANOR B, GORDON E, LATIMER C, BARRY R
Cognitive Science Unit, Department of Psychiatry, University of Sydney, AU
- P7 Visual memory and eye movements in dementia patients
FUJII M, HATAKAYAMA Y, MURAKAMI S, HAYASHI S, NAKANO N, SAITO S, FUKATSU R, TAKAHATA N
Dept. Neuropsychiatry, School of Medicine, Medical University, Sapporo, JP
- P8 Eye movements of autistic children: Pilot studies with normal adults
VAN DER GEEST JN, KEMNER C, VERBATEN MN, VAN ENGELAND H
Department of Child and Adolescent Psychiatry, University of Utrecht, NL

10:50 - 12:10

Session B 2

Lecture Hall H3

Binocular Coordination

Chair: CJ ERKELENS, Utrecht NL / Z. KAPOULA, Paris, FR

Oral Presentation

- 10:50 O1 Naturalistic vs. analytical approaches to human oculomotor research
STEINMAN RM, EPELBOIM J, FOROFONOVA TI
Department of Psychology, University of Maryland at College Park, US

Friday

- 11:10 O2 The variation of torsion with vergence and elevation
PORRILL J, IVINS J, FRISBY J
Vision Research Unit, University of Sheffield, GB
- 11:30 O3 Distribution of smooth pursuit and vergence among the two eyes
ERKELENS CJ
Physics of Man, Helmholtz Institute, Utrecht University, Utrecht, NL

Poster Introductions

- 11:50 P1 Can we memorize target disparity if we do not make a saccade?
KAPOULA Z, BUCCI MP, BERNOTAS M
Lab. de Physiol. de la Percep. et de l'Action, CNRS, Collège de France, Paris, FR
- P2 Eye movement in binocular and monocular depth vision.
MURAKAMI S, FUJII M, HAYASHI S, NAKANO N, FUKATSU R, TAKAHATA N
Dept. of Neuropsychiatry, School of Medicine, Medical University, Sapporo, JP
- P3 Smooth and rapid vergence for the perception of motion in the depth direction
requires cooperative changes in retinal size and disparity
KOZAWA R, SUSAMI K
Department of Psychology, Chukyo University, Nagoya, JP
- P4 Modelling vergence eye movements using fuzzy logic.
EADIE AS, CARLIN P, GRAY LS
Department of Physical Sciences, Glasgow Caledonian University, Glasgow UK

12:10 - 15:00 Luncheon, Poster Viewing

15:00 - 16:00 **Invited Lecture** *Lecture Hall H4/5*

Eye movement deficits in cerebellar disease
U. BÜTTNER
Dept. of Neurology, University of Munich, München, DE

SOCIAL EVENT

16:30-18:30 Visit of Blaubeuren Monastery

20:00 Farewell Dinner
