



28th Ocular Motor Meeting Zurich-Munich-Tubingen

January 26-27, 2018
Department of Neurology
University Hospital Zurich



UniversityHospital
Zurich

2be in the Monakow Hörsaal, in the Neurology building. See the map page 8.

Friday, January 26

13:00: Registration, snacks, loading/testing of Power Point presentations, hanging posters.

14:00 Welcome

14:05 **Konrad P. Weber**, Zurich: *Strabismus measurements with novel video goggles*

14:25 **Aristides Arrenberg**, Tübingen: *An investigation of the neuronal tuning to motor variables during horizontal eye movements in the oculomotor system of larval zebrafish*

14:45 **Rawan Omary**, Zurich: *Buzzing sympathetic nerves: A new test to enhance reflex pupil dilation in suspected Horner syndrome*

15:05 Coffee, poster session

15:30 **Viviana Mucci**, Antwerp: *Mal de Debarquement Syndrome: New Diagnostic Guidelines, Hormonal findings in female patients and optokinetic treatment*

15:50 **Thomas Mergner**, Freiburg: *Posture control tests become an issue in humanoid robotics*

16:10 Poster Blitz 1

1. Bernhard Hess	Zurich	<i>Ocular torsion in binocular visual matching</i>
2. Simon Renner	Munich	<i>Period tuning of the optokinetic reflex in <i>Xenopus laevis</i></i>
3. Mehrdad Salmasi	Munich	<i>Energy-efficient information transmission in depressing synapses</i>
4. Ria Maxine Rühl	Munich	<i>Functional hierarchy of subnetworks within the human cortical optokinetic system</i>
5. Suzanne Nooij	Tübingen	<i>Is optokinetic afternystagmus related to vection?</i>
6. Alicia Costalago Meruelo	Munich	<i>Predicting neural responses in area MST during smooth pursuit from probabilistic tuning functions</i>
7. Ziad Hafed	Tübingen	<i>The foveal visual representation of the primate superior colliculus</i>
8. Jonathan Oesterle	Tübingen	<i>The influence of superior colliculus inactivation on catch-up saccades during smooth pursuit</i>
9. Konstantin Willeke	Tübingen	<i>Memory-guided microsaccades: Behavior and physiology</i>
10. Marie Estelle Bellet	Tübingen	<i>Saccade and microsaccade detection using convolutional neural networks</i>

16:30 Coffee, poster session

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- 17:00 **Luigi Cuturi**, Genoa: *Biases in perceived verticality when laterally tilted: The role of visual experience*
- 17:20 **Magdalena Wirth**, Zurich: *Repetitive ocular vestibular evoked myogenic potentials (oVEMP) stimulation for myasthenia gravis: Comparison of stimulation paradigms*
- 17:40 **Thomas Eggert**, Munich: *Relations between retinal disparity, vergence, and stereopsis: Differences between monocular and binocular fixation?*

18:00 **Poster Blitz 2**

11. Tatiana Malevich	Tubingen	<i>Neuronal dynamics in the alpha-band oscillations in an exogenous orienting task</i>
12. Buonocore Antimo	Tubingen	<i>Visual transient effects on smooth pursuit, catch-up saccades and fixational eye movements</i>
13. Thilo Weber	Zurich	<i>Saccade and smooth pursuit detection by model-based signal separation</i>
14. Giovanni Bertolini	Zurich	<i>Vestibular and optokinetic responses in post-concussion syndrome</i>
15. Fausto Romano	Zurich	<i>Does the sensory organization test discriminate between athletes and non-athletes?</i>
16. Ting-Feng Lin	Zurich	<i>Optokinetic set-point sensory adaptation in zebrafish larvae</i>
17. Eberhard Koenig	Munich	<i>Effects of robot-assisted gait training on pusher behavior in subacute stroke patients: a randomized controlled clinical trial</i>
18. Antonella Pomante	Nijmegen	<i>The role of visual verticality cues during static roll tilt in the adaption of the visual vertical</i>

18:15 Coffee, posters, lab visits

19:30 **Dinner, The Alehouse**

Saturday, January 27

8:30 Coffee, loading/testing of Presentations

- 9:00 **Alexander Tarnutzer**, Zurich: *Effects of optokinetic stimulation on verticality perception are domain-specific and restricted to vision-based paradigms*
- 9:20 **Ghislaine Traber**, Zurich: *Assessment of objective cyclotorsion using SLO fundus imaging in patients with and without fourth nerve palsy – The CySLO-IV study.*
- 9:40 **Peter zu Eulenburg**, Munich: *Human area MST - a hub predominantly for visual motion processing, ocular motor control or vestibular signal integration?*
- 10:00 **Uwe Ilg**, Tübingen: *Anticipatory smooth pursuit eye movements in video game players and non-players*
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10:20 Coffee, posters

- 10:40 **Viviana Mucci**, Antwerp: *Investigating visual induced dizziness (VID) and optokinetic stimulation treatment*
- 11:00 **Cornelia Meier**, Zurich: *Oculomotor rehabilitation after concussion- single case study*
- 11:20 **Jörn Pomper**, Tübingen: *Functional distinction between blink associated resetting eye movements (BARMS) and microsaccades during visual fixation*
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Talks

Strabismus measurements with novel video goggles

Konrad P. Weber, Interdisciplinary Center for Vertigo and Neurological Visual Disorders, Neurology & Ophthalmology Departments, University Hospital Zurich
Daniel Rappoport, Ophthalmology Department, University Hospital Zurich
Muriel Dysli, Ophthalmology Department, University Hospital Zurich
Tanja Schmückle Meier, Ophthalmology Department, University Hospital Zurich
Guy B. Marks, Woolcock Institute of Medical Research, Sydney Australia
Christopher J. Bockisch, Neurology & Ophthalmology and ENT Departments, University Hospital Zurich

An investigation of the neuronal tuning to motor variables during horizontal eye movements in the oculomotor system of larval zebrafish

Aristides Arrénberg, University of Tübingen, Institut für Neurobiologie
Christian Brysch, Graduate Training Centre for Neuroscience, Tübingen, Germany
Claire Leyden, Graduate Training Centre for Neuroscience, Tübingen, Germany

Buzzing Sympathetic Nerves: A new test to enhance reflex pupil dilation in suspected Horner syndrome

Rawan Omary, University Hospital Zurich, Ophthalmology
Randy Kardon, Department of Ophthalmology, University of Iowa and Veteran Medical Center
Christopher Bockisch, Departments of Ophthalmology, Neurology and ENT, University Hospital Zurich
Klara Landau, Department of Ophthalmology, University Hospital Zurich
Konrad Weber, Departments of Ophthalmology and Neurology, University Hospital Zurich

Mal de Debarquement Syndrome: New diagnostic guidelines, hormonal findings in female patients and optokinetic treatment.

Mucci Viviana, Antwerp University - Western Sydney University , AUREA - School of Medicine Western Sydney University.

Canceri, J., School of Science and Health, Western Sydney University, NSW, Australia
Dai, M., Icahn School of Medicine, Mount Sinai Hospital, NY, United States of America
Wuyts, F., Icahn School of Medicine, Mount Sinai Hospital, NY, United States of America
Browne, C., School of Science and Health, Western Sydney University, NSW, Australia

Posture control tests become an issue in humanoid robotics

Thomas Mergner, University Clinics of Freiburg, Neurology

Biases in perceived verticality when laterally tilted: The role of visual experience

Luigi Cuturi, Istituto Italiano di Tecnologia, Genoa (Italy), Unit for Visually Impaired People
Monica Gori, Istituto Italiano di Tecnologia

Repetitive Ocular vestibular evoked myogenic potentials (oVEMP) stimulation for myasthenia gravis: Comparison of stimulation paradigms

Magdalena Wirth, USZ, Ophthalmology/Neurology
Yulia Valko, Department of Neurology, University Hospital Zurich
Sally Rosengren, Department of Neurology, Royal Prince Alfred Hospital
Tanja Schmuckle-Meier, Department of Neurology, University Hospital Zurich
Christopher Bockisch, Department of Neurology, University Hospital Zurich
Dominik Straumann, Klara Landau, Konrad Weber, Department of Neurology/Ophthalmology, University Hospital Zurich

Relations between retinal disparity, vergence, and stereopsis: Differences between monocular and binocular fixation?

Thomas Eggert, Ludwig-Maximilians Universität, Neurology

Effects of optokinetic stimulation on verticality perception are domain-specific and restricted to vision-based paradigms

Alexander Tarnutzer, University Hospital Zurich, Neurology
Christopher J. Bockisch, University Hospital Zurich, Depts. of Neurology, Ophthalmology and ENT
Katja Dockheer, University Hospital Zurich, Neurology

Human area MST - a hub predominantly for visual motion processing, ocular motor control or vestibular signal integration?

Peter zu Eulenburg, Ludwig-Maximilians-University Munich, German Center for Vertigo & Balance Disorders
Theresa Raiser, Ludwig-Maximilians-University Munich
Matthias Ertl, Ludwig-Maximilians-University Munich
Ria Maxine Ruehl, Ludwig-Maximilians-University Munich

Anticipatory smooth pursuit eye movements in video game players and non-players

Uwe Ilg, Hertie-Institute for Clinical Brain Research, Cognitive Neurology

Investigating Visual induced dizziness (VID) and optokinetic stimulation treatment

Viviana Mucci, Antwerp University, AUREA - Faculty of Medical Science

Van Den Eede, F., Universitair Ziekenhuis Antwerpen (UZA), Antwerp University.

Van Ombergen, A. , AUREA - Antwerp University

Wuyts, F., AUREA - Antwerp University

Oculomotor Rehabilitation after concussion- single case study

Cornelia Meier, Swiss Concussion Center, Physiotherapy

Functional distinction between blink associated resetting eye movements (BARMs) and microsaccades during visual fixation

Jörn Pomper, Hertie Institute for Clinical Brain Research, University of Tübingen, Department of Cognitive Neurology

Mohammad Khazali, Hertie Institute for Clinical Brain Research, University of Tübingen

Peter Thier, Hertie Institute for Clinical Brain Research, University of Tübingen

Assessment of objective cyclotorsion using SLO fundus imaging in patients with and without fourth nerve palsy – The CySLO-IV study.

Ghislaine Traber. Department of Ophthalmology, University Hospital Zurich

S. Sele. Department of Ophthalmology, University Hospital Zurich

GP. Jaggi. Department of Ophthalmology, University Hospital Zurich

U. Held. Department of Biostatistics, University of Zurich,

K. Landau. Department of Ophthalmology, University Hospital Zurich

M. Kanku. Department of Ophthalmology, University Hospital Zurich

Posters

1. Ocular torsion in binocular visual matching

Bernhard Hess, University of Zurich, Neurology

2. Period tuning of the optokinetic reflex in *Xenopus laevis*

Simon Renner, Ludwig-Maximilians-Universität Munich, Center for Sensorimotor Research

Stefan Glasauer, Ludwig-Maximilians-Universität Munich

3. Energy-efficient information transmission in depressing synapses

Mehrdad Salmasi, German Center for Vertigo and Balance Disorders, Graduate School of Systemic Neurosciences, Ludwig-Maximilian University

Stefan Glasauer, Department of Neurology, Ludwig-Maximilian University

Martin Stemmler, Department of Biology II, Ludwig-Maximilian University

4. Functional hierarchy of subnetworks within the human cortical optokinetic system

Ria Maxine Rühl, German Center for Vertigo and Balance Disorders-IFB LMU, Department of Neurology, University Hospital, LMU Munich

Felix Hoffstaedter, Institute of Neuroscience and Medicine (INM-7) , Juelich

Andrew Reid, Department of Artificial Intelligence, Donders Centre for Cognition

Simon Eickhoff, Institute of Neuroscience and Medicine (INM-7) , Juelich

Peter zu Eulenburg, German Center for Vertigo and Balance Disorders-IFB LMU

5. Is optokinetic afternystagmus related to vection?

Suzanne Nooij, Max Planck Institute for Biological Cybernetics, Human perception, cognition and action

Paolo Pretto, MPI

Heinrich H. Buelthoff, MPI

6. Predicting neural responses in area MST during smooth pursuit from probabilistic tuning functions

Alicia Costalago Meruelo, LMU, Dept. of Neurology

Stefan Glasauer, LMU, Munich

Mike Mustari, University of Washington, Seattle

7. The foveal visual representation of the primate superior colliculus

Ziad Hafed, Werner Reichardt Centre for Integrative Neuroscience, Physiology of Active Vision Laboratory

Chih-Yang Chen, Werner Reichardt Centre for Integrative Neuroscience

Claudia Distler, Bochum University

Klaus-Peter Hoffmann, Bochum University

8. The influence of superior colliculus inactivation on catch-up saccades during smooth pursuit

Jonathan Oesterle, HiWi @ Physiology of Active Vision Laboratory, Physiology of Active Vision Laboratory

Ziad Hafed, Head of Research Group @ Werner Reichardt Centre for Integrative Neuroscience

9. Memory-guided microsaccades: Behavior and physiology

Konstantin Willeke, Werner Reichardt Centre for Integrative Neuroscience, Physiology of Active Vision Laboratory

Xiaoguang Tian, Werner Reichardt Centre for Integrative Neuroscience

Joachim Bellet, Werner Reichardt Centre for Integrative Neuroscience

Araceli Ramirez-Cardenas, University of Iowa Hospitals and Clinics, Dept. of Neurosurgery

Ziad M. Hafed, Werner Reichardt Centre for Integrative Neuroscience

10. Saccade and microsaccade detection using convolutional neural networks

Marie Estelle Bellet, Institute for Ophthalmic Research, Neural Data Science for Vision Research

Joachim Bellet, Werner Reichardt Centre for Integrative Neuroscience

Ziad Hafed, Werner Reichardt Centre for Integrative Neuroscience

11. Neuronal dynamics in the alpha-band oscillations in an exogenous orienting task

Tatiana Malevich, The University of Tübingen, Tübingen, Germany, The Werner Reichardt Centre for Integrative Neuroscience

Evgeny Blagoveshchenski, National Research University – Higher School of Economics, Moscow, Russia

Zafer Iscan, Université Paris-Saclay, NeuroSpin Center, Gif-sur-Yvette, France

Vadim V. Nikulin, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

W. Joseph MacInnes, National Research University – Higher School of Economics, Moscow, Russia

12. Visual transient effects on smooth pursuit, catch-up saccades and fixational eye movements

Buonocore Antimo, Werner Reichardt Centre for Integrative Neuroscience, Physiology of Active Vision Laboratory

Skinner Julianne, Werner Reichardt Centre for Integrative Neuroscience

Hafed Ziad M., Werner Reichardt Centre for Integrative Neuroscience

13. Saccade and Smooth Pursuit Detection by Model-based Signal Separation

Thilo Weber, Master student at ETH Zurich, Dept. of Information Technology and Electrical Engineering (ITET), ETH Zurich

Federico Wadehn, Signal and Information Processing Laboratory (ISI)

David J. Mack, Department of Neurosurgery, University Hospital Zurich

14. Vestibular and optokinetic responses in post-concussion syndrome

Giovanni Bertolini, University of Zurich, Dept. of Neurology/Swiss Concussion Center,

Fausto Romano, University of Zurich, Dept. of Neurology

Dominik Straumann, University of Zurich, Dept. of Neurology

Nina Feddermann, Swiss Concussion Center, Schulthess Clinic, Zurich

15. Does the sensory organization test discriminate between athletes and non-athletes?

Fausto Romano, University of Zurich, Department of Neurology and Swiss Concussion Center, Schulthess Clinic, Zurich

Alessandra Ventura, Swiss Concussion Center, Schulthess Clinic, Zurich

Karin Mani, Swiss Concussion Center, Schulthess Clinic, Zurich

Dominik Straumann, University of Zurich, Department of Neurology

Giovanni Bertolini, University of Zurich, Department of Neurology and Swiss Concussion Center, Schulthess Clinic, Zurich

Nina Feddermann, Swiss Concussion Center, Schulthess Clinic, Zurich

16. Optokinetic set-point sensory adaptation in zebrafish larvae

Ting-Feng Lin, University of Zurich, Department of Neurology

17. Effects of robot-assisted gait training on pusher behavior in subacute stroke patients: a randomized controlled clinical trial

E Koenig^{1,2}

J. Bergmann^{1,2}

C. Krewer¹

K. Jahn^{1,2}

F. Müller^{1,2}

¹ Schön Klinik Bad Aibling, Germany, ² German Center for Vertigo and Balance Disorders (DSGZ), Ludwig-Maximilians University of Munich, Germany

18. The Role of visual verticality cues during static roll tilt in the adaptation of the visual vertical

Antonella Pomante, Donders and Vertigolab, Donders

Fausto Romano, Vertigolab

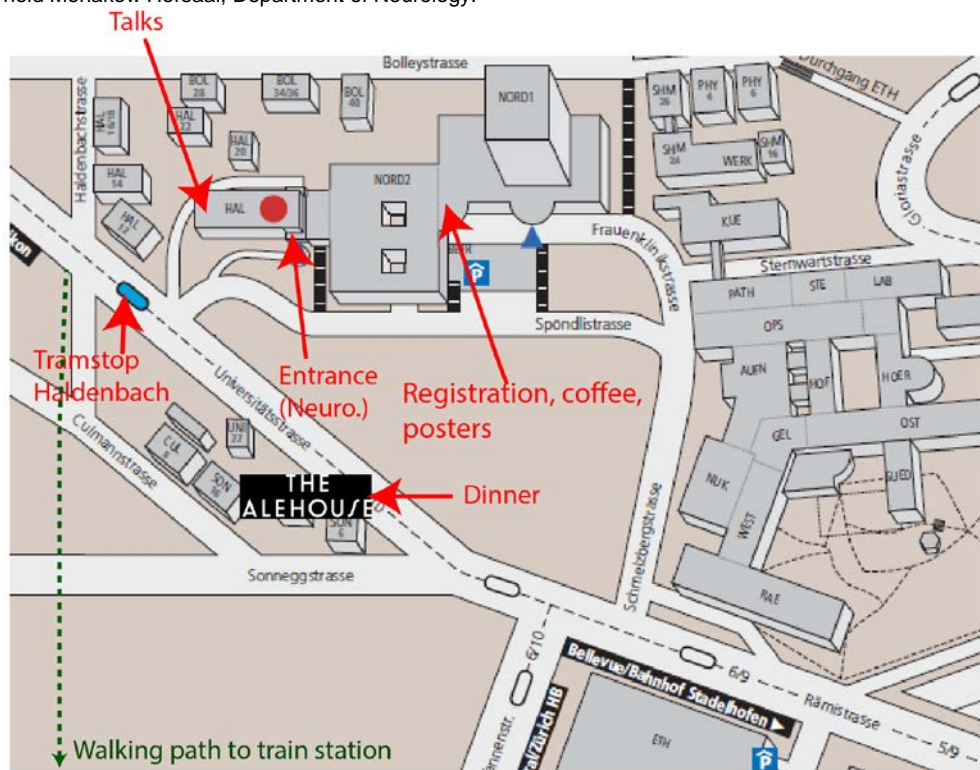
Luc Selen, Donders

Pietre Medendorp, Donders

Giovanni Bertolini, Vertigolab

Meeting location

Registration, coffee, and poster sessions will be held at the entrance to Nord2, A floor. Talks will be held Monakow Horsaal, Department of Neurology.



▶ Eingang Neurologie bzw. Haupteingang NORD1

● Klinik für Neurologie (HAL)

■ Tramhaltestelle Haldenbach