ZNZ Zentrum für Neurowissenschaften Zürich
Neuroscience Center Zurich

University of Zurich[UZH]

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

ZNZ SYMPOSIUM 2020

10 September 2020

10.00 – 15.00

Virtual Symposium

OVERVIEW of the POSTER ABSTRACTS (listed by topics)

AUDITORY SYSTEM / HEARING

Poster Abstract number(s)

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WORD PROCESSING

Group Leader

PROTEIN AGGREGATION

Group Leader

AGING BRAIN

Group Leader

SPINAL CORD INJURY

Group Leader

SLEEP / AUDITORY STIMULATION

Group Leader

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DATA MANAGEMENT / ANALYSIS

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POSTER ABSTRACTS

SYNAPTIC HOMEOSTASIS / PLASTICITY

Group Leader: MARTIN MÜLLER

1 **Refined quantal analysis uncovers increased homeostatic capacity during chronic presynaptic homeostatic plasticity at the Drosophila NMJ:** S. Sydlik, M. Müller

Group Leader: GERHARD SCHRATT

2 **The local, dendritic role of microRNA in regulating transcript stability during homeostatic synaptic downscaling:** D. Colameo, M. Soutschek, P-L. Germain, M. Rajman, L. von Ziegler, J. Bohacek, and G. Schratt

Group Leader: MARTIN MÜLLER

3 **Rapid modulation of transsynaptically aligned glutamate receptor nanocluster rings during homeostatic plasticity:** P. Muttathukunnel, P. Frei, M. Müller

Group Leader: IGOR DELVENDAHL

4 **GluA4-containing AMPA receptors mediate fast excitation of cerebellar granule cells and are required for associative learning:** K. Kita, C. Albergaria, A.S. Machado, M.R. Carey, M. Müller & I. Delvendahl

Group Leader: AIMAN S. SAAB

5 **Decoupling astrocytes in adult mice impairs synaptic plasticity and spatial learning:** L. Hösli, N. Binini, L. Thieren, Z.J. Looser, K.D. Ferrari, M. Zuend, S. Berry, M. Holub, W. Möbius, T. Ruhwedel, K-A. Nave, C. Giaume, B. Weber and A.S. Saab

NEURODEVELOPMENTAL DISORDERS I

Group Leader: URS MEYER

6 Preclinical validation of the micropipette-guided drug administration (MDA) method in the maternal immune activation model of neurodevelopmental disorders: J. Scarborough, F. Müller, R. Arban, C. Dorner-Ciossek, U. Weber-Stadlbauer, H. Rosenbrock, U. Meyer and J.Richetto

7 When too little is too much: temporary prefrontal microglia deficiency during adolescence impairs adult brain functions: S.M. Schalbetter, K. Dawson, F. Müller, J. Scarborough, U. Weber, A. Ivanov, D. Mattei, J. Richetto, T. Notter, U. Meyer

Group Leader: THEOFANIS KARAYANNIS

8 Microglia-dependent development of cortical GABAergic circuits: L. Gesuita[1,2,*], E. Favuzzi[3,*], T. Stachniak[1], L.A. Ibrahim[3], A.O. Argunsah[1], M. De Gennaro[1], S. Utz[4], M. Greter[4], G. Fishell[3], T. Karayannis[1,2]

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*These authors contributed equally

Group Leader: ESTHER STOECKLI

9 Endoglycan plays a role in axon guidance and neuronal migration by negatively regulating cell-cell adhesion: T. Baeriswyl, A. Dumoulin, M. Schaettin, G. Tsapara, V. Niederkofler, D. Helbling, E. Avilés, J.A. Frei, N. H. Wilson, M. Gesemann, and E.T. Stoeckli

Group Leader: RUXANDRA BACHMANN-GAGESCU

10 Unravelling the role of the primary cilia protein CEP290 in human iPSC-derived neural stem cells: A. Abidi-Ostorero, M. Eschment, J. Figueiro Da Silva, R. Bachmann-Gagescu

NEURODEVELOPMENTAL DISORDERS II

Group Leader: NICOLAS LANGER

11 Interconnected effects of in-scanner head motion and ADHD diagnosis on white mater integrity: S. Dziemian, Z. Baranczuk, N. Langer

Group Leader: SEBASTIAN JESSBERGER

12 Linking metabolic regulation of neural stem cells to brain development and cognition: D. Gonzalez-Bohorquez, M. Bowers, T. Liang, I. Gallego López, T. Morais de Almeida, S. Jessberger

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13 Elucidating the link between components of the mediator complex and congenital heart defects & intellectual disability: H. Nguyen, E. Stoeckli

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14 Neurometabolic changes in infants with congenital heart defects: C. Steger, M. Feldmann, W. Knirsch, B. Latal, A. Jakab, R. Tuura

EPIGENETICS

Group Leader: ISABELLE MANSUY

15 Study of Sertoli cell signalling between brain and germ line for epigenetic inheritance: K.M. Thumfart, F. Manuella, N. Obrist, D. Tanwar, A. Jawaid, I.M. Mansuy

16 Study of the role of circulating RNA carriers in epigenetic inheritance in mammals: A. Alshanbayeva, D. Tanwar, I. Mansuy

Group Leader: KATHARINA GAPP

17 The effects of paternal glucocorticoid receptor activation on germline and offspring neuropsychiatric disease risk: M. Kretschmer[1,2], A. Corcoba[3], P-L. Germain[1,2], J. Bohacek[1,2], E. Miska[3,4,5], K. Gapp[1,2,3,4]

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VISION

Group Leader: RUXANDRA BACHMANN-GAGESCU

18 Loss of the Bardet-Biedl protein Bbs1 leads to aberrant protein localization in zebrafish photoreceptor outer segments: M. Masek, C. Etard, U. Strähle, R. Bachmann-Gagescu

Group Leader: SHIH-CHII LIU

19 Stimulation of mouse retinal ganglion cells with the dynamic vision sensor: B. Rueckauer, J. Ahn, Y-S. Goo, T. Delbruck, S-C. Liu

Group Leader: WOLFGER VON DER BEHRENS

20 Deviant stimuli improve perceptual and neuronal signal detection in the mouse somatosensory system: N. Ghasemi Nejad, G. English, M.F. Yanik, W. von der Behrens

Group Leader: GIOVANNI BERTOLINI

21 Effect of the stimulus duration on the adaptation of the optokinetic afternystagmus: J. Gygli, F. Romano, C. Bockisch, N. Feddermann-Demont, D. Straumann, G. Bertolini

AUDITORY SYSTEM / HEARING

Group Leader: NATHALIE GIROUD

22 Hearing loss is associated with cortical decline in auditory areas in older adults - a surface-based morphometry study: R. Schmitt[1], P. Neuschwander[2], M. Meyer[2], & N. Giroud[1]

[1]Phonetics and Speech Sciences, Dep. of Computational Linguistics, University of Zurich
[2]Neuropsychology, Dep. of Psychology, University of Zurich

Group Leader: ALEXANDER HUBER

23 Investigation of quasi-static 3-DOF-stiffness and 3D-morphometry of the human stapedial annular ligament: M. Schär, R. Hopf, I. Dobrev, A. Huber, J.H. Sim

Group Leader: RICHARD HAHNLOSER

24 Computations involved in birdsong template formation: T. Tomka, D. Lipkind, A.T. Zai, H. Toutounji & R.H.R. Hahnloser

Group Leader: ALEXIS HERVAIS-ADELMAN

25 TACS induced modulation of interhemispheric connectivity predicts auditory integration: B. Preisig, L. Riecke, M. Sjerps, A. Kösem, B. Kop, B. Bramson, P. Hagoort & A. Hervais-Adelman

26 Seeing is Hearing: Can visual rhythms replace acoustic envelope information in speech perception?: D. Krasovskaya

WORD PROCESSING

Group Leader: ALEXIS HERVAIS-ADELMAN

27 Cerebro-acoustic coherence while listening to stories predicts word-in-noise recognition: R. Becker, A. Hervais-Adelman

Group Leader: SILVIA BREM

28 Neural adaptation to written words and objects in school children: an fMRI study: S.V. Di Pietro, D. Tanner, S. Brem

29 Flashing words - Automatic letter string processing in school children as revealed by fast periodic visual stimulation: an EEG study: C. Lutz, S. Coraj, G. Fraga-González, S. Brem

PROTEIN AGGREGATION

Group Leader: PAUL G. UNSCHULD

30 **Beta-amyloid associated episodic memory variation correlates with subicular volume in non-demented old aged individuals:** S.M. Kagerer, C. Schroeder, J.M.G. van Bergen, S. Schreiner, R. Meyer, S.C. Steininger, L. Vionnet, A.F. Gietl, V. Treyer, A. Buck, K.P. Pruessmann, C. Hock, P.G. Unschuld

31 **Neurofilament light chain as a potential peripheral blood biomarker for Alzheimer's Disease:** C.B. Späni, S. Awasti, A. Maceski, S. Kagerer, S. Walitza, S. Ripke, E. Grünblatt, J. Kuhle*, P.G. Unschuld*
*equally contributing.

Group Leader: RUIQING NI

32 **High precision in vivo assessment of Alzheimer's β-amyloid deposits with multi-scale optical imaging - from single plaques to whole brain mapping:** R. Ni, Z. Chen, X.L. Deán-Ben, D. Kirschenbaum, G. Shi, A. Villois, Q. Zhou, A. Crimi, P. Arosio, F. Voigt, M. Rudin, R.M. Nitsch, F. Helmchen, P.R. Nilsson, A. Aguzzi, J. Klohs, and D. Razansky

Group Leader: JUAN GEREZ (ZNZ Associate)

33 **Spreading of alpha-synuclein in Parkinson's disease:** N. Prymaczok, R. Riek and J. Gerez.

AGING BRAIN

Group Leader: MARIA BLATOW (ZNZ Associate)

34 **The musicians aging brain:** O.G. Rus-Oswald, J. Benner, C.N. Bürki, J. Reinhardt, E. Hofmann, C. Stippich, R.W. Kressig, P. Schneider & M. Blatow

Group Leader: NICOLAS LANGER

35 **Aging effects of inhibitory control for saccadic eye movements:** M.B. Płomecka, B.V. Ehinger, N. Langer

36 **Decomposing the role of alpha oscillations during brain maturation:** M. Tröndle, C. Pfeiffer, N. Langer

Group Leader: SEBASTIAN JESSBERGER

37 **Intravital imaging defines age-dependent changes of hippocampal stem cells:** Y. Wu, S. Bottes, B. Jaeger, G. Pilz, F. Helmchen, S. Jessberger

SPINAL CORD INJURY

Group Leader: MARTIN E. SCHWAB

38 Deep brain stimulation of the mesencephalic locomotor region to improve motor function after incomplete spinal cord injury in rats: M.I. Scheuber, A-S. Hofer, A.M. Sartori, M.E. Schwab

Group Leader: MARC BOLLIGER

39 Inclusive trial protocols: stratification of individuals with thoracolumbar spinal cord injury based on walking function: A. Cathomen, R. Willi, A. Curt, M. Bolliger

40 Validity and reliability of the 2-minute walk test in spinal cord injured patients: R. Willi, M. Bolliger

Group Leader: THOMAS M. KESSLER

41 Protocol for a nationwide randomized, sham-controlled, double-blind clinical trial of transcutaneous Tibial nerve stimulation in patients with Acute Spinal Cord Injury to prevent neurogenic detrusor overactivity (TASCI): S. Büeler, V. Birkhäuser, M.D. Liechti, C.E. Anderson, L.M. Bachmann, S. Baumann, M. Baumberger, L.A. Birder, S.M. Botter, C.D. Cruz, G. David, P. Freund, S. Friedl, O. Gross, M. Hund-Georgiadis, K. Husmann, X. Jordan, M. Koschorke, L. Leitner, E. Luca, U. Mehnert, S. Möhr, F. Mohammadzada, K. Monastyrskaya, N. Pfender, D. Pohl, H. Sadri, A.M. Sartori, M. Schubert, K. Sprengel, S.A. Stalder, J. Stoyanov, C. Stress, A. Tatu, C. Tawadros, S. van der Lely, J. Wöllner, V. Zubler, A. Curt, J. Pannek, M.W.G. Brinkhof, T.M. Kessler

42 Development of an appropriate sham procedure to investigate transcutaneous tibial nerve stimulation in randomized, sham-controlled, double-blind clinical trials: S.A. Stalder, M.D. Liechti, S. van der Lely, V. Birkhäuser, C.E. Anderson, J. Tornic, U. Mehnert, T.M. Kessler

Group Leader: MARTIN E. SCHWAB

43 Spinal circuits involved in the lower urinary tract function of the rat: A.M. Sartori, A.S. Hofer, T.M. Kessler and M.E. Schwab

SLEEP / AUDITORY STIMULATION

Group Leader: STEVEN A. BROWN

44 **The forebrain synaptic transcriptome is organized by clocks but its proteome is driven by sleep:** S.B. Noya, D. Colameo, F. Brüning, A. Spinnler, D. Mircsof, L. Opitz, M. Mann, S. Tyagarajan, M.S. Robles, and S.A. Brown

45 **Circadian VIPergic neurons of the suprachiasmatic nuclei directly control siesta sleep:** S. Pierre-Ferrer , B. Collins, C. Muheim, A. Spinnler, C. Gutierrez Herrera , M.D.C. Belle, H.D. Piggins , M. Hastings , A. Loudon, A. Adamantidis, S. Wen, J. Yan, C. Földy and S.A. Brown

Group Leader: HANS-PETER LANDOLT

46 **Shift work-related circadian disruption on diurnal rest-activity and sleep patterns in morning- and evening-type first responders under naturalistic conditions:** I. Clark*, B. Stucky*, Y. Azza, S. Müller, W. Karlen, E. Seifritz, B. Kleim, H-P. Landolt

*co-first authors

Group Leader: CHRISTIAN BAUMANN

47 **Exploring closed-loop acoustic stimulation of slow waves as a potential therapeutic tool in TBI rats:** C.G. Moreira[1], A. Müllner[1*], P. Hofmann[1*], V.R. Ginde[1], S. Erdogan[1], M. Scandella[1], M. Morawska[1], S. Masneuf[1], D. Noain[1#], C. Baumann[1#]

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Group Leader: CAROLINE LUSTENBERGER

48 **Within-night comparison of auditory stimulation modalities on efficacy to enhance slow wave activity:** S. Huwiler, S. Huwyler, L. Kiener, C. Lustenberger

Group Leader: DANIELA NOAIN

49 Role of slow-wave sleep delta power on amyloid beta deposition and cognitive performance in a mouse model of Alzheimer's disease: S. Kollarik, C. Goncalves-Moreira, D. Bimbiryte, A. Sethi, C. Baumann, D. Noain

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Group Leader: MICHELE HUBLI

50 Investigating pain-autonomic readouts of sensitization in complex regional pain syndrome: P.S Scheuren, I. De Schoenmacker, J. Rosner, F. Brunner, A. Curt, M. Hubli

51 Endogenous pain modulation efficiency is associated with increased resting connectivity and structure of pain modulatory regions: V**.** Huynh, R. Luetolf, J. Rosner, R. Luechinger, A. Curt, S. Kollias, M. Hubli, L. Michels

Group Leader: PATRICK FREUND

52 Midsagittal tissue bridges are predictive of neuropathic pain emergence after spinal cord injury: D. Pfyffer, K. Vallotton, A. Curt, and P. Freund

Group Leader: PETRA SCHWEINHARDT

53 How do anxiety and uncertainty influence pain? - A pilot study: A. Guekos, G. Sharvit, P. Schweinhardt

54 The role of endogenous opioids in mediating the pleasant feeling of pain relief in humans: L. Sirucek, R.C. Price, W. Gandhi, M-E. Hoeppli, E. Fahey, A. Qu, S. Becker, and P. Schweinhardt

Group Leader: PETER BRUGGER

55 Neural correlates of body integrity dysphoria: G. Saetta, J. Hänggi, M. Gandola, L. Zapparoli, G. Salvato, M. Berlingeri, M. Sberna, E. Paulesu, G. Bottini, P. Brugger

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Group Leader: SUSANNE WEGENER

56 Optic Nerve Sonography to monitor Intracranial pressure afTer large vessel ischemic strokE - The ONSITE study: P. Baumgartner, M. Hänsel, K. Geier, S. Petrus, L. Kook, A. Luft, S. Wegener

57 Different spreading hyperaemia patterns are associated with neurological outcome after stroke: N. Binder, W. Middleham,

Group Leader: ANNA-SOPHIA WAHL

58 Microlesions affect the formation and degeneration of memory circuits in the hippocampus: H. Heiser[1], A. Hoffmann[1], M. Wieckhorst[1], E. Erlebach[2], A. Schmidt-Rohr[1], B. Weber[2], A. Meyer-Lindenberg[3], F. Helmchen[1], A-S. Wahl[1,3]

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[3]Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany

Group Leader: JAN KLOHS

59 Investigating the effects of hypercholesterolemia on neutrophil-mediated thromboinflammation after cerebral ischemia: G. Louloudis[1,2], S. Ambrosini[3], F. Paneni[3], J. Klohs[1,2]

[1]Institute for Biomedical Engineering, University of Zurich & ETH Zurich, 8093 Zurich, Switzerland
[2]Zurich Neuroscience Center, University of Zurich, 8057 Zurich, Switzerland
[3]Center for Molecular Cardiology, University of Zurich, 8952 Zurich, Switzerland

Group Leader: ROGER GASSERT

60 Feasibility, reliability and validity of robot-assisted assessments of hand proprioceptive, motor and sensorimotor impairments: M. Zbytniewska, O. Lambercy, C. Salzmann, J. Liepert, R. Gassert

STRESS

Group Leader: BORIS B. QUEDNOW

61 Reinstatement of the HPA axis reactivity after repeated exposure to psychosocial stress at a 4-months interval: A-K. Kexel, B. Kluwe-Schiavon, B.B. Quednow

Group Leader: JOHANNES BOHACEK

62 Translatomic profiling of the locus coeruleus: R. Waag, A. Floriou-Servou, L. von Ziegler, Y. Vermeiren, P. De Deyn, J. Bohacek

Group Leader: CHRISTOPHER PRYCE

63 Effects of chronic social stress on the oligodendrocyte lineage and myelin in prefrontal cortex and amygdala in mice: G. Poggi, J. Albiez and C. Pryce

64 Viral vector inhibition of basal amygdala-nucleus accumbens glutamate neurons leads to a reduced reward-directed learning and effortful motivation in mice: L. Madur. H. Sigrist, C. Ineichen, J.C. Paterna, D. Kukelova, C.R. Pryce

DEPRESSION / ADDICTION

Group Leader: SILVIA BREM

65 Depression severity is associated with hyperactivity in the dorsolateral prefrontal cortex related to expected reward value in adolescents: D. Willinger, I.I. Karipidis, P. Dimanova, S. Emery, C. Rauch, I. Häberling, G. Berger, S. Walitza, S. Brem

Group Leader: HANS H. STASSEN

66 Inflammatory processes linked to major depression & schizophrenic disorders and the effects of polypharmacy in psychiatry: evidence from a longitudinal study of 279 patients under therapy: H.H. Stassen, S. Bachmann, R. Bridler, K. Cattapan, D. Herzig, A. Schneeberger and E. Seifritz

Group Leader: GERHARD SCHRATT

67 Contribution of microRNAs to the development of affective disorders: H. Martins, M. Pelzl, S. Khudayberdiev, M. Braun, T. Kisko, A.Ö. Sungur, D. Seffer, M. Wöhr, A. Forstner, A. Hofmann, T. Möbius, A. Dempfle, M. Nöthen, R. Schwarting, G. Schratt

Group Leader: CHRISTOPHER PRYCE

68 Next generation sequencing of the serum extracellular vesicle miRNome for biomarker discovery in multiple sclerosis and depression: N. Haymour, S. Kaiser, M. Otto, A. Huss, G. Russo, G. Bergamini, L. Kulic, I. Knuesel, C. Pryce

Group Leader: KATRIN PRELLER (ZNZ Associate)

69 Clinical and mechanistic effects of psilocybin in alcohol addicted patients: N.M. Rieser, C. Rossgoderer, R. Bitar, L. Gubser, L. Meinhold, M. Herdener, F.X. Vollenweider, and K.H. Preller

Group Leader: BORIS B. QUEDNOW

70 Effects of chronic cocaine use on frontostriatal functional connectivity: a longitudinal study: D.M. Cole, E. Engeli, S. Hirsiger, M. Kirschner, M. Herdener, B.B. Quednow

HIGH PRECISION RECORDING OF ACTIVITY

Group Leader: JOHANNES SARNTHEIN

71 **Functional synchronization between hippocampal sEEG, parietal ECoG and scalp EEG during a verbal working memory task:** V. Dimakopoulos, E. Boran, P. Hilfiker, L. Stieglitz, T. Grunwald, P. Mégevand, J. Sarnthein

72 **A spiking neural network with an artefact rejection stage detects high frequency oscillations in intraoperative ECoG recordings:** K. Burelo, M. Sharifshazileh, E. Boran, G. Indiveri, J. Sarnthein

Group Leader: MEHMET FATIH YANIK

73 **Flexible low-impedance microelectrode arrays for stable chronic single-unit recordings:** T.B. Yasar, W. von der Behrens, M.F. Yanik

Group Leader: FRITJOF HELMCHEN

74 **Distinct lateral habenula circuits govern subjective preference during risky decision-making:** D. Groos, A.M. Reuss, P. Rupprecht, Y. Sych, A. Aguzzi, F. Helmchen

Group Leader: AIMAN S. SAAB

75 **The role of potassium in axon-glial signaling and metabolic coupling:** Z.J. Looser, M.J. Barret, J. Hirrlinger, D.E. Bergles, F. Barros, K-A. Nave, B. Weber and A.S. Saab

NEUROFEEDBACK

Group Leader: ANNETTE BRÜHL (ZNZ Associate)

76 Emotion regulation using implicit closed-loop amygdala neurofeedback: A. Watve, A. Haugg, Y. Koush, D. Willinger, A. Brühl, P. Stämpfli, F. Scharnowski, R. Sladky

Group Leader: LARS MICHELS

77 The effects of real-time fMRI neurofeedback on supraliminal and subliminal response inhibition: preliminary EEG-fMRI results: R. Mazloum[1,2,3], J. Popovova[1,2], G. Macauda[1], P. Stämpfli[4], S. Frühholz[2,6], P. Vuilleumier[5], F. Scharnowski[7], V. Menon[8], R. Gassert[2,3], L. Michels[1,2]

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78 The effects of real-time fMRI neurofeedback on supraliminal and subliminal response inhibition: preliminary fMRI results: J. Popovova[1,2], R. Mazloum[1,2,3], G. Macauda[1], P. Stämpfli[4], P. Vuilleumier[5], S. Frühholz[2,6], R. Gassert[2,3], V. Menon[7], F. Scharnowski[8], L. Michels[1,2]

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[7]Stanford Neurosciences Institute, Stanford University School of Medicine, Stanford, United States
[8]Department of Basic Psychological Research and Research Methods, Faculty of Psychology, University of Vienna, Vienna, Austria

Group Leaders: ROGER GASSERT & CHRISTIAN BAUMANN

79 Deep brain electrical neurofeedback allows Parkinson patients to control pathological oscillations and quicken movements: O. Bichsel, L. Stieglitz, M. Oertel, C. Baumann, R. Gassert*, L. Imbach*
*: co-senior authors

MRI TECHNOLOGY

Group Leader: ANDRAS JAKAB

80 Efficient multi-class fetal brain segmentation in high resolution MRI reconstructions: K. Payette, R. Kottke, A. Jakab

Group Leader: PATRICK FREUND

81 The offset and error due to B_1^+ inhomogeneities in g-ratio weighted imaging: T.M. Emmenegger, A. Behnam, F.J. Fritz, G. David, I. Ellerbrock, P. Freund, S. Mohammadi

Group Leader: SPYROS KOLLIAS

82 Medial nucleus component of juxtacaudate bundle: preliminary results of first diffusion tensor imaging-fiber tractography: U. Ahmadli, L. Acu, A. Lamb, S. Winklhofer, A. Valavanis, S. Kollias

DATA MANAGEMENT / ANALYSIS

Group Leader: ROGER GASSERT

83 Towards the clinical integration of digital health metrics: a data-driven framework enabling their automated selection and validation: C.M. Kanzler, R. Gassert, O. Lambercy

Group Leader: DAVID P. WOLFER

84 Role of environment and experimenter in reproducibility of behavioural studies with laboratory mice: M. Nigri, D.P. Wolfer, V. Voikar

Group Leader: MEHMET FATIH YANIK

85 SIPEC: the deep-learning swiss knife for behavioral data analysis: M. Marks, O. Sturman, J. von Ziegler, J. Qiuhan, S. Kollmorgen, W. von der Behrens, V. Mante, J. Bohacek, M.F. Yanik

Group Leader: FRITJOF HELMCHEN

86 A deep learning toolbox for noise-optimized, generalizable spike inference from calcium imaging data: P. Rupprecht, S. Carta, A. Hoffmann, M. Echizen, K. Kitamura, R. Friedrich, F. Helmchen

NEUROMORPHIC DEVICES / MACHINE LEARNING

Group Leader: GIACOMO INDIVERI

87 **End-to-end neuromorphic solution for edge computing:** A. Rubino, M. Sharif Shazileh, C. Frenkel, M. Nair, S. Narayanan, M. Cartiglia, Y. Demirag, E. Donati, M. Payvand, G. Indiveri

88 **Distilling brain models for mixed-signal neuromorphic computing devices:** N. Risi, R. Krause, A. Renner, R. Kreiser, M. Sorbaro, J. Zhao, E. Donati, S. Solinas, G. Indiveri

Group Leader: WOLFGER VON DER BEHRENS

89 **A model for stimulus-specific adaptation evaluated on neuromorphic hardware:** N. Vanattou-Saïfoudine, C. Han, R. Krause, W. von der Behrens, E. Vasilaki and G. Indiveri

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90 **Towards the prediction of hydration status from sweat biomarkers using machine learning methods:** S. Wang, M. Saubade, C. Lafaye, V. Gremeaux, J.M. Margarit-Taulé, S-C. Liu

Group Leader: TOBI DELBRUCK

91 **Recurrent neural network control of a hybrid dynamical transfemoral prosthesis with EdgeDRNN accelerator:** C. Gao, R. Gehlhar*, A.D. Ames*, S-C. Liu and T. Delbruck
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