

Poster Program

Poster session 1 (odd numbers P001, P003, etc): 13:00–14:00 Thursday, October 15, 2015

Poster session 2 (even numbers P002, P004, etc): 13:30–14:30 Friday, October 16, 2015

[P001]	Organic electronics to record and control neuronal activity C. Bernard* ¹ , G. Malliaras ² , A. Williamson ^{1,2} , J. Rivany ² , M. Ferro ² , S. Inal ² , ¹ Inserm - Aix Marseille Université, France, ² Ecole des Mines de St Etienne, France
[P002]	Fast random-access two-photon microscopy for full 3D calcium imaging of entire neurons in awake brain K. Podgorski*, S. Opushnyev, K. Haas, <i>University of British Columbia, Canada</i>
[P003]	Long-term chronic two-photon calcium imaging on awake macaque monkey S.T. Tang*, M.L. Li, F.L. Liu, H.J. Jiang, <i>Peking University, China</i>
[P004]	Measuring and manipulating corticostriatal functional neural circuitry in the socially monogamous prairie vole E.A. Amadei* ^{1,2} , Z.V. Johnson ² , J. Kwon ² , A.C. Shpiner ² , V. Saravanan ² , W.D. Mays ² , L.J. Young ² , R.C. Liu ² , ¹ Georgia Institute of Technology, USA, ² Emory University, USA
[P005]	Antidepressant potential of silymarin in olfactory bulbectomized (OBX) induced depression in rats: Neurochemical and biochemical investigation V.N. Thakare* ^{1,2} , R.N. Kane ¹ , B.M. Patel ² , ¹ Sinhgad Institute of Pharmaceutical Sciences, India, ² Nirma University, India
[P006]	Cortical effects of low frequency deep brain stimulation of the human subthalamic nucleus R. Azodi Avval* ¹ , G. Naros ¹ , F. Grimm ¹ , D. Weiss ² , A. Gharabaghi ¹ , ¹ Eberhard Karls University Tuebingen, Germany, ² German Centre of Neurodegenerative Diseases (DZNE), Germany
[P007]	Engineering light-controllable kinases with photodissociable dimeric fluorescent protein domains X.X. Zhou* ¹ , L.Z. Fan ² , M.Z. Lin ¹ , ¹ Stanford University, USA, ² Harvard University, USA
[P008]	A calcium transient detection algorithm optimized for GCaMP6 kinetics, tested in layer 2/3 of mouse somatosensory cortex C.S. Copeland*, S. Reynolds, L.A. Annecchino, J. Onativia, P.L. Dragotti, S.R. Schultz, <i>Imperial College, UK</i>
[P009]	Optogenetic manipulation of neonatal circuits S.H. Bitzenhofer, J. Ahlbeck, A. Wolff, J.S. Wiegert, T.G. Oertner, I.L. Hanganu-Opatz*, <i>University Medical Center Hamburg-Eppendorf, Germany</i>
[P010]	Probing the role of motor cortex in motor skill learning S.B.E. Wolff*, B.P. Olveczky, <i>Harvard University, USA</i>
[P011]	Pretreatment with Evans blue, a stimulator of BKca channels, inhibits neurogenic inflammation in rat trachea induced by capsaicin and substance P H.T. Huang* ¹ , S.Y. Shen ¹ , S.J. Chen ¹ , Y.H. Huang ² , Y.W. Huang ³ , S.F. Liu ⁴ , Y.S. Fu ¹ , ¹ Kaohsiung Medical University, Taiwan, ² University of Illinois at Chicago, USA, ³ Purdue University, USA, ⁴ Chang Gung Hospital at Kaohsiung, Taiwan
[P012]	Effects of liver SAA1 overexpression on neurodegeneration B.R. Lee*, H. Kim, K-I. Joo, E. Kim, <i>Daegu Gyeongbuk Institute of Science & Technology, Republic of Korea</i>
[P013]	Coherent anti-Stokes Raman scattering (CARS) observation of label-free imaging in brain micro-vessels B.R. Lee*, H. Kim, K-I. Joo, E. Kim, <i>Daegu Gyeongbuk Institute of Science & Technology, Republic of Korea</i>
[P014]	Silver nanoparticle aggregates as a new sensor platform for label-free detection of brain inflammatory proteins using Raman spectroscopy E.S. Choi*, H. Kim, E. Kim, <i>DGIST, Republic of Korea</i>
[P015]	Flexible multi-electrode arrays for acute and chronic recordings at multiple spatial scales C.M. Lewis* ¹ , E. Fiedler ² , M.J. Jutras ³ , B. Buffalo ^{3,4} , T. Stieglitz ² , P. Fries ¹ , ¹ Ernst Strungmann Institute (ESI) for Neuroscience, Germany, ² University of Freiburg, Germany, ³ University of Washington, USA, ⁴ Washington National Primate Research Center, USA
[P016]	Regulation of dendritic spines in brain development Q. Liu, R. Feng, T. Wen*, <i>Shanghai University, China</i>
[P017]	Neuroimaging endophenotypes and neuromodulatory effects of N-acetylcysteine in a mouse model of autism M.M. Petrinovic* ¹ , A. Durieux ² , M. Saxe ¹ , M. von Kienlin ¹ , D. Murphy ² , G. McAlonan ² , B. Kuennecke ¹ , ¹ Hoffmann-La Roche, Switzerland, ² King's College London, UK
[P018]	SynGENEering - genetic engineering of synaptic connections for modifying the connectome I. Rabinowitch* ¹ , W.R. Schafer ² , J. Bai ¹ , ¹ Fred Hutchinson Cancer Research Center, USA, ² MRC Laboratory of Molecular Biology, UK

[P019]	Optical recordings and manipulations demonstrate how medial septal glutamatergic neurons control locomotion and link hippocampal theta oscillations to locomotion speed F. Fuhrmann* ¹ , D. Justus ¹ , L. Sosulina ¹ , H. Kaneko ¹ , T. Beutel ¹ , D. Friedrichs ¹ , S. Schoch ² , M.K. Schwarz ² , M. Fuhrmann ¹ , S. Remy ^{1,2} , ¹ German Center for Neurodegenerative Diseases, Germany, ² University of Bonn Medical Center, Germany
[P020]	Inhibitory luminopsins: genetically encoded bioluminescent opsins for versatile, scalable, and hardware independent optogenetic inhibition J.K.T. Tung* ^{1,2} , C.G. Gutekunst ² , K.B. Berglund ² , R.E.G. Gross ^{1,2} , ¹ Georgia Institute of Technology, USA, ² Emory University, USA
[P021]	Combined in-vivo optical and electrophysiological recordings reveal the circuit controlling theta oscillations and the locomotion speed correlated firing of hippocampal neurons D. Justus* ¹ , F. Fuhrmann ¹ , L. Sosulina ¹ , H. Kaneko ¹ , T. Beutel ¹ , D. Friedrichs ¹ , S. Schoch ² , M.K. Schwarz ² , M. Fuhrmann ¹ , S. Remy ^{1,2} , ¹ German Center for Neurodegenerative Diseases, Germany, ² University of Bonn Medical Center, Germany
[P022]	Toward technology for understanding distributed brain circuits: polymer probes allow long-lasting, high-density recordings in awake, freely behaving animals J.E. Chung* ¹ , L.M. Karlsson ³ , M.P. Karlsson ³ , D.F. Liu ¹ , V. Tolosa ² , A. Tooker ² , K.Y. Lee ² , K.G. Shah ² , S. Felix ² , L.M. Frank ¹ , ¹ University of California, USA, ² Lawrence Livermore National Laboratory, USA, ³ SpikeGadgets, USA
[P023]	Application of the <i>in utero</i> electroporation technique to the study of the pathological mechanism of focal heterotopias in the brain K. Kubo* ¹ , K. Ishii ¹ , T. Endo ² , K. Yoshida ¹ , S. Benner ² , Y. Ito ³ , H. Aizawa ³ , M. Aramaki ¹ , A. Yamanaka ⁴ , K. Tanaka ³ , ¹ Keio University School of Medicine, Japan, ² The University of Tokyo, Japan, ³ Tokyo Medical and Dental University, Japan, ⁴ Nagoya University, Japan, ⁵ Waseda University, Japan
[P024]	Graphene as a novel tool for cell membrane manipulation and regulation of neurotransmission K.E. Kitko*, T. Hong, R.L. Lazarenko, Y. Xu, Q. Zhang, Vanderbilt University, USA
[P025]	Brain activity mapping at multiple scales with silicon microprobes L.D. Claar*, J.L. Shobe, K. Lee, S. Parhami, K.I. Bakhurin, S.C. Masmanidis, University of California, USA
[P026]	Two-photon patterned photoactivation of efficiency-enhanced opsin E. Ronzitti* ¹ , R. Conti ¹ , V. Zampini ¹ , N. Klapoetke ² , D. Tanese ¹ , A.J. Foust ¹ , E. Chaigneau ¹ , E. Papagiakoumou ¹ , E. Boyden ² , V. Emiliani ¹ , ¹ University Paris Descartes, France, ² MIT Media Lab and McGovern Institute, USA
[P027]	Closed-loop communication between biological and artificial neuronal assemblies S. Buccelli ¹ , J. Tessadori* ¹ , M. Ambroise ^{3,4} , P. Nowak ² , P. Massobrio ² , Y. Bornat ^{3,4} , T. Levi ³ , M. Chiappalone ¹ , ¹ Istituto Italiano di Tecnologia, Italy, ² University of Genova, Italy, ³ University of Bordeaux, France, ⁴ CNRS, France
[P028]	Step-function luminopsin for prolonged activation of neurons by bioluminescence K. Berglund* ¹ , C-A. Gutekunsut ¹ , J. Tung ¹ , U. Hochgeschwender ² , R.E. Gross ¹ , ¹ Emory University, USA, ² Central Michigan University, USA
[P029]	Probing the retinal circuit with computer-generated holography and two photon calcium imaging G.L.B. Spampinato* ^{1,2} , E. Ronzitti ^{3,4} , E. Papagiakoumou ^{3,4} , H. Khabou ^{1,2} , D. Dalkara ^{1,5} , S. Picaud ^{1,5} , O. Marre ^{1,5} , V. Emiliani ¹ , ¹ The Vision Institute, France, ² UPMC, France, ³ University Paris Descartes, France, ⁴ CNRS, France, ⁵ INSERM, France
[P030]	Engineering a 3D platform to mimic in vivo neural network morphology and activity S.C. Liu*, M.K. Lee, B.J. Slater, G.N. Kouzehgarani, M. Yu, O.V. Cangellaris, D.A. Llano, H.J. Kong, M.U. Gillette, University of Illinois at Urbana-Champaign, USA
[P031]	Connectome-on-a-chip: Optophysiological mapping of neuronal connectivity in a microscale network with designed morphology in vitro M.J. Jang* ^{1,2} , Y. Nam ² , W. Sun ¹ , ¹ Korea University College of Medicine, Republic of Korea, ² KAIST, Republic of Korea
[P032]	Automatic inference system of spike trains and cell shapes from large-scale calcium imaging data using non-negative sparse model T. Takekawa* ¹ , M. Sato ² , N. Ohkawa ³ , H. Inokuchi ³ , Y. Hayashi ¹ , T. Fukai ¹ , ¹ Kogakuin University, Japan, ² RIKEN BSI, Japan, ³ University of Toyama, Japan
[P033]	Imaging subcellular voltage dynamics in vivo with improved genetically encoded indicators F. St-Pierre*, H. Yang, M. Pan, X. Ding, Y. Yang, T. Clandinin, M. Lin, Stanford University, USA
[P034]	Cell-type-specific optogenetic stimulation of dopamine neurons modulates monkey behavior W.R. Stauffer* ¹ , A. Lak ¹ , A. Yang ² , E. Boyden ² , W. Schultz ¹ , ¹ University of Cambridge, UK, ² Massachusetts Institute of Technology, USA
[P035]	Estimation of multi-frequency coupling among neural oscillations T. Onojima* ¹ , K. Ota ² , H. Mizuhara ¹ , T. Aoyagi ¹ , ¹ Kyoto University, Japan, ² Cybozu Inc., Japan
[P036]	Modeling the relationship between the anatomical structure and the functional connectivity of the brain P.M. Abeyasinghe*, T.K. Das, D.R. Paula, A. Owen, A. Soddu, University of Western Ontario, Canada

[P037]	Gold nanorod-mediated photothermal stimulation for inhibition of neural activity S.J. Yoo*, J.H. Park, Y.K. Nam, <i>KAIST, Republic of Korea</i>
[P038]	Electrical stimulation of the auditory brainstem: Effect of electrodes configuration A.A. Guex* ¹ , A.E. Hight ² , N.V. Vachicouras ¹ , M.C. Brown ² , D.J. Lee ² , S.P. Lacour ¹ , ¹ <i>EPFL, Switzerland</i> , ² <i>Massachusetts Eye and Ear Infirmary, USA</i>
[P039]	Nitric oxide and hydrogen sulfide as modulators of classical neurotransmitter systems and controls of adult neurogenesis in fish brain E.V. Pushchina* ¹ , A.A. Varaksin ¹ , D.K. Obukhov ² , S. Shukla ³ , M.E. Stukaneva ¹ , ¹ <i>A.V. Zhymunsky Institute of Marine biology FEB RAS, Russia</i> , ² <i>St. Petersburg State University, Russia</i> , ³ <i>L.V. Prasad Eye Institute, India</i>
[P040]	Semi-chronic chamber system for multi-scale electrophysiology in non-human primates A.L. Orsborn* ¹ , C. Wang ² , K. Chiang ² , M.M. Maharbiz ³ , J. Viventi ² , B. Pesaran ¹ , ¹ <i>New York University, USA</i> , ² <i>Duke University, USA</i> , ³ <i>University of California, USA</i>
[P041]	Deep-tissue super-resolution imaging using an index-optimized clearing agent M-T. Ke ¹ , S. Fujimoto ¹ , Y. Nakai ² , R. Takayama ² , S. Yoshida ¹ , T.S. Kitajima ¹ , M. Sato ² , T. Imai* ¹ , ¹ <i>RIKEN Center for Developmental Biology, Japan</i> , ² <i>Kanazawa University, Japan</i>
[P042]	A multicellular three-dimensional (3D) brain-like model for cancer migration and drug-response studies M. Herrera-Perez*, J. Rickus, S. Voytik-Harbin, <i>Purdue University, USA</i>
[P043]	Continuous recordings and automated clustering of large populations of single units in behaving rodents A.K. Dhawale* ¹ , R. Poddar ¹ , E. Kopelowitz ¹ , V. Normand ^{1,2} , B.P. Ölveczky ¹ , ¹ <i>Harvard University, USA</i> , ² <i>École normale supérieure, France</i>
[P044]	An easily penetrable, flexible, and large-area cranial window for longitudinal imaging and electrophysiological recording C. Heo*, H. Park, T.H. Kim, T.I. Kim, S.G. Kim, M. Suh, <i>Sungkyunkwan University, Republic of Korea</i>
[P045]	Implatable hydrogel-based optrodes for glutamate sensing L.N. Kahyaoglu*, Q. Yuan, P. Irazoqui, J.L. Rickus, <i>Purdue University, USA</i>
[P046]	Ultra-compact integrated electrical and optical probe for recording and illumination in vivo M. Welkenhuysen ¹ , S. Libbrecht ² , L.D.L. Hoffman ¹ , V. Baekelandt ² , D. Braeken ¹ , S. Haesler* ¹ , ¹ <i>IMEC, Belgium</i> , ² <i>KU Leuven, Belgium</i> , ³ <i>Neuroelectronics Research Flanders, Belgium</i>
[P047]	Wireless optofluidic systems for programmable in vivo pharmacology and optogenetics J.G. McCall* ¹ , J.W. Jeong ^{2,3} , G. Shin ³ , Y. Zhang ^{4,5} , R. Al-Hasani ¹ , Y. Huang ⁴ , J.A. Rogers ³ , M.R. Bruchas ¹ , ¹ <i>Washington University in St. Louis, USA</i> , ² <i>University of Colorado, USA</i> , ³ <i>University of Illinois at Urbana-Champaign, USA</i> , ⁴ <i>Northwestern University, USA</i> , ⁵ <i>Tsinghua University, China</i>
[P048]	Neural stem cells graft promoting the neurological function recovery in the traumatic brain injury rats via B-cell lymphoma-extra large up-regulation W.Y. Wang* ¹ , L.F. Liu ² , L.S. Liu ¹ , X.Q. Xia ¹ , W.T. Wang ³ , L.N. Lin ³ , L.L. LV ³ , Z.Y. Zou ¹ , W.T. Wang ^{1,3} , ¹ <i>Sichuan University, China</i> , ² <i>Wenzhou Medical University, China</i> , ³ <i>Kunming Medical University, China</i>
[P049]	Rapid, multiplexed generation of gene-edited human neural progenitor cells using CRISPR-Cas9 K. Saha*, J. Carlson-Stevermer, M. Goedland, B. Steyer, R. Prestil, N. Angenent- Mari, G. Knight, R. Ashton, <i>University of Wisconsin-Madison, USA</i>
[P050]	Multiplexed super-resolution neuronal synapse imaging using PAINT S. Guo, S. Gordonov, R. Veneziano, A. Kulesa, D. Park, P. Blainey, E. Boyden, M. Bathe*, <i>MIT, USA</i>
[P051]	A large-scale interface for optogenetic stimulation and recording in non-human primates A. Yazdan-Shahmorad* ¹ , C. Diaz-Botia ^{1,2} , T. Hanson ¹ , P. Ledochowitsch ² , M.M. Maharbiz ² , P.N. Sabes ¹ , ¹ <i>UCSF, USA</i> , ² <i>UC Berkeley, USA</i>
[P052]	Real-time estimation of hippocampal replay content D.F. Liu* ¹ , X. Deng ² , M.P. Karlsson ¹ , L.M. Frank ¹ , U.T. Eden ² , ¹ <i>University of California, USA</i> , ² <i>Boston University, USA</i>
[P053]	Tapered fiber optical waveguide for homogeneous in-vivo light delivery in extended brain structures F. Pisanello* ¹ , I.A. Oldenburg ^{3,4} , L. Sileo ¹ , M.S. Emará ^{1,2} , A. Della Patria ¹ , G. Mandelbaum ^{3,4} , M. Pisanello ¹ , B. Spagnolo ¹ , B.L. Sabatini ^{3,4} , M. De Vittorio ^{1,2} , ¹ <i>Istituto Italiano di Tecnologia, Italy</i> , ² <i>Università del Salento, Italy</i> , ³ <i>Harvard Medical School, USA</i> , ⁴ <i>Howard Hughes Medical Institute, USA</i>
[P054]	Cortex-wide cellular-resolution imaging access in head-fixed behaving mice using chronically implanted glass cranial windows covering the entire dorsal cortical surface B.S. Huang*, S. Vrontou, A. Bellafard, P. Golshani, <i>UCLA School of Medicine, USA</i>
[P055]	Generation of stably expandable human neural progenitor cells for innervating multiple tissue models D.M. Cairns*, D.L. Kaplan, <i>Tufts University, USA</i>
[P056]	Bioengineering brain matrix composition to establish in vitro 3D physiological brain cultures D. Sood* ¹ , M. Tang-Schomer ² , K. Chwalek ¹ , L. Black ¹ , D. Kaplan ¹ , ¹ <i>Tufts University, USA</i> , ² <i>Connecticut Children's Medical Center, USA</i>
[P057]	A scalable approach to high-density recording across brain circuits T.L. Hanson, M.M. Maharbiz, P.N. Sabes*, <i>University of California, USA</i>

[P058]	Refining optogenetic protocols to optimize gain modulation in distinct neuronal populations S. Jarvis*, S.R. Schultz, <i>Imperial College London, UK</i>
[P059]	Functional BOLD MRI: Translational tool and predictor for pain treatment success A. Hess*, J. Rech, R. Atreya, A. Doerfler, M.F. Neurath, G. Schett, <i>University of Erlangen-Nuremberg, Germany</i>
[P060]	Infrared diffraction phase microscopy for nanoscale imaging of live brain slices E. Min* ^{1,2} , S. Kim ¹ , L. Ma ^{1,3} , W. Jung ^{2,4} , Y. Wang ¹ , G. Popescu ¹ , C. Best-Popescu ¹ , ¹ <i>University of Illinois at Urbana-Champaign, USA</i> , ² <i>Ulsan National Institute of Science and Technology, Republic of Korea</i> , ³ <i>Zhejiang Normal University, China</i> , ⁴ <i>Center for Soft and Living Matter, Institute of Basic Science, Republic of Korea</i>
[P061]	Phase lock loop for acoustic stimulation during slow-wave sleep G. Santostasi*, R. Malkani, K. Paller, P. Zee, <i>Northwestern University, USA</i>
[P062]	Shifting the neural compass: Reversible optical disruption of the head direction signal in vivo W.N. Butler*, K.S. Smith, J.S. Taube, <i>Dartmouth College, USA</i>
[P063]	Nanophotonic light delivery system for high-resolution optogenetic neuromodulation E. Shim* ¹ , Y. Chen ¹ , S. Masmanidis ² , M. Li ¹ , ¹ <i>University of Minnesota, USA</i> , ² <i>University of California, USA</i>
[P064]	A multi-site array for combined local electrochemistry and electrophysiology in the non-human primate brain A.A. Disney, <i>Vanderbilt University, USA</i>
[P065]	Bidirectional interactions between neuronal and hemodynamic responses during transcranial electrical stimulation A. Dutta, <i>Université Montpellier, France</i>
[P066]	Controlling epileptiform activity with organic electronic ion pumps A. Williamson* ^{1,2} , C. Bernard ¹ , ¹ <i>Inserm, France</i> , ² <i>Aix-Marseille Université, France</i>
[P067]	Central amygdala neurotensin neurons regulate alcohol consumption, reward, and sedation Z. McElligott*, S.P. Faccidomo, G. Tipton, J. McHenry, G. Patel, J.R. Vandenberg, J.A. Hardaway, N.A. Crowley, G. Reid, T.L. Kash, <i>University of North Carolina at Chapel Hill, USA</i>
[P068]	3D Murine brain connectome reconstruction using spatial light interference microscopy (SLIM) S. Kim* ¹ , E. Min ^{1,2} , L. Ma ^{1,3} , W. Jung ² , G. Popescu ¹ , C. Best-Popescu ¹ , ¹ <i>University of Illinois at Urbana-Champaign, USA</i> , ² <i>Ulsan National Institute of Science and Technology, Republic of Korea</i> , ³ <i>Zhejiang Normal University, China</i>
[P069]	Dissecting the circuit for blindsight in macaque monkeys T. Isa* ¹ , M. Kinoshita ^{1,2} , R. Kato ¹ , K. Kobayashi ¹ , K. Isa ¹ , H. Onoe ³ , ¹ <i>National Institute of Physiological Sciences, Japan</i> , ² <i>Hirosaki University, Japan</i> , ³ <i>Center for Life Science Technologies, RIKEN, Japan</i>
[P070]	Circuit architecture of ventral tegmental area dopamine neurons revealed by systematic input-output mapping K.T. Beier* ¹ , E.E. Steinberg ¹ , K.E. DeLoach ¹ , S. Xie ¹ , K. Miyamichi ¹ , L. Schwarz ¹ , X.J. Gao ¹ , E.J. Kremer ² , R.C. Malenka ¹ , L. Luo ¹ , ¹ <i>Stanford University, USA</i> , ² <i>Institut de Génétique Moléculaire de Montpellier, France</i>
[P071]	Emergence of coordinated neural dynamics supports neuroprosthetic skill learning V.R. Athalye* ^{1,2} , K. Ganguly ³ , R.M. Costa ² , J.M. Carmena ¹ , ¹ <i>UC Berkeley, USA</i> , ² <i>Champalimaud Neuroscience Programme, Portugal</i> , ³ <i>UC San Francisco, USA</i>
[P072]	Mapping optogenetic activation of the non-human primate brain using MEG G.E. Alberto*, D.C. Klorig, I. McGowin, J. Stapleton-Kotloski, V. Popli, C. Constantinidis, J.B. Daunais, D.W. Godwin, <i>Wake Forest School of Medicine, USA</i>
[P073]	Rapid sensorimotor control and feedback rates enhance neuroprosthetic control via feedforward and feedback mechanisms M.M. Shanechi* ¹ , A.L. Orsborn ² , H.G. Moorman ² , S. Gowda ² , S. Dangi ² , J.M. Carmena ² , ¹ <i>USC, USA</i> , ² <i>UC Berkeley, USA</i>
[P074]	Acoustical neuro-modulation normalizes EEG current source density and coherence in functional neural networks through unique auditory disentrainment D.S. Foster* ^{1,3} , L.A. Foster ^{1,3} , N.L. Izvarina ^{2,3} , A. Amosov ^{2,3} , ¹ <i>Memphis Integral Neurofeedback Institute, USA</i> , ² <i>BioSensor Inc., USA</i> , ³ <i>The Hartwell Foundation, USA</i>
[P075]	Nanowire light-emitting diodes: A new light for optogenetic application tested in vitro J. Wickham, D. Suyatin, K. Storm, M. Andersson*, L. Samuelson, L. Montelius, J. Schouenborg, M. Kokaia, <i>Lund University, Sweden</i>
[P076]	Mechanisms underlying the modulation of motor patterns during epidural electrical stimulation of the lumbar spinal cord M. Capogrosso* ^{1,2} , E. Formento ¹ , E. Martin Moraud ¹ , S. Micera ^{1,2} , G. Courtine ¹ , ¹ <i>EPFL, Lausanne, Switzerland</i> , ² <i>The BioRobotics Institute, Scuola Superiore Sant'Anna, Italy</i>
[P077]	A brain spinal interface to restore gait after spinal cord injury M. Capogrosso ^{1,3} , T. Milekovic ¹ , D. Borton ⁵ , F. Wagner ¹ , E. Martin Moraud ¹ , T. Denison ⁴ , E. Bezar ⁶ , S. Micera ^{1,3} , J. Bloch ² , G. Courtine* ¹ , ¹ <i>EPFL, Lausanne, Switzerland</i> , ² <i>Lausanne University Hospital, Switzerland</i> , ³ <i>The BioRobotics Institute, Scuola Superiore Sant'Anna, Italy</i> , ⁴ <i>Medtronic Neuromodulation, USA</i> , ⁵ <i>Brown University, USA</i> , ⁶ <i>Institute of Neurodegenerative diseases, Bordeaux Institut of Neuroscience, France</i>

[P078]	Network constraints dictate the timescale of learning new brain-computer interfaces E. Oby*, A. Degenhart, E. Tyler-Kabara, B. Yu, A. Batista, <i>University of Pittsburgh, USA</i>
[P079]	Direct intracellular electrical recordings from dendritic spines using nano-pipettes K. Jayant*, J.J. Hirtz, I.J.L. Plante, D. Tsai, W.D.A.M. De Boer, D.S. Peterka, J.S. Owen, O. Sahin, K.L. Shepard, R. Yuste, <i>Columbia University, USA</i>
[P080]	Selective optogenetic control of tectal output pathways: Induction of orienting vs fear responses K. Isa* ¹ , T. Sooksawat ^{1,2} , K. Kobayashi ^{1,3} , T. Isa ^{1,3} , ¹ <i>National institute for physiological sciences, Japan</i> , ² <i>Chulalongkorn University, Thailand</i> , ³ <i>The Graduate University for Advanced Studies (SOKENDAI), Japan</i>
[P081]	Quantifying the effects of ion channel modulators on firing patterns of human iPSC-derived neurons using all-optical electrophysiology G.T. Dempsey* ¹ , T. Brookings ¹ , N. Atwater ¹ , V. Joshi ¹ , C. Nguyen ¹ , S. Brizard ¹ , C. Werley ¹ , O. McManus ¹ , H. Lin ² , J.D. McNeish ² , ¹ <i>Q-State Biosciences, USA</i> , ² <i>GlaxoSmithKline, USA</i>
[P082]	Data-driven approach for extracting nonlinear spatiotemporal dynamics in neural systems T. Omori* ¹ , K. Hukushima ² , ¹ <i>Kobe University, Japan</i> , ² <i>The University of Tokyo, Japan</i>
[P083]	Dual microscope for simultaneous voltage-sensitive dye imaging of all neurons in a behavioral circuit Y. Tomina, D.A. Wagenaar*, <i>University of Cincinnati, USA</i>
[P084]	Neural probe array for fast neural imaging of group cellular events using electrical impedance tomography D. Scott, M. Kim, H. Yoon*, <i>Norfolk State University, USA</i>
[P085]	Brain stimulation for cognitive symptoms of Parkinson's disease Y-C. Kim*, S.L. Alberico, S-W. Han, K.L. Parker, K-H. Chen, N.S. Narayanan, <i>University of Iowa, USA</i>
[P086]	Multi-beam SEM for high-throughput brain imaging K. Crosby* ¹ , T. Garbowski ² , A.L. Eberle ² , C. Riedesel ² , ¹ <i>Carl Zeiss Microscopy LLC, USA</i> , ² <i>Carl Zeiss Microscopy GmbH, Germany</i>
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