

NEURONatSFN2022

Nov. 12

058.18 / T7 - Magnetic stimulation of peripheral nerves using an implantable miniature coil November 12, 2022, 1:00 PM - 5:00 PM SDCC Halls B-H K. LEE, B. PARK, J.-W. JANG, S. KIM

Nov. 13

025.14 / ZZ15 - Reducing barriers-to-entry for computational neuroscience using web-based tools in the classroom November 13, 2022, 8:00 AM - 12:00 PM SDCC Halls B-H D. DONLEY, Z. CHEN, G. GLICKERT, D. BERGIN, D. SCHULTZ, S. S. NAIR

116.16 / D34 - Computational model provides a key role for chandelier interneurons in generation of sharp wave ripples in the CA1 Hippocampus November 13, 2022, 8:00 AM - 12:00 PM SDCC Halls B-H D. DOPP, G. GLICKERT, B. LATIMER, M. BHAGAVATHI PERUMAL, P. SAH, S. S. NAIR

135.20 / S14 - The impact of surround inhibition in striatum in silico November 13, 2022, 8:00 AM - 12:00 PM SDCC Halls B-H J. FROST NYLEN, J. HJORTH, A. KOZLOV, I. CARANNANTE, W. THUNBERG, J. HELLGREN KOTALESKI, S. GRILLNER

144.19 / CC8 - Computational tutorials to illustrate fear learning in the amygdala November 13, 2022, 8:00 AM - 12:00 PM SDCC Halls B-H G. GLICKERT, S. NAIR, S. JOHNSON, J. VELASQUEZ, I. BANKS, S. S. NAIR

183.08 - Interactive, Easy-to-Use, Online-Accessible Planning Tool for Classic and Temporal Interference Brain Stimulation November 13, 2022, 2:45 PM - 3:00 PM SDCC 5 A. M. CASSARA, M. STEINER, K. ZHUANG, M. GUIDON, O. MEITZ, N. KUSTER, S. J. REGEL, E. NEUFELD

205.05 / I1 - An ultra-realistic model of spinal cord stimulation to control lower urinary tract function and optimize bladder neuroprosthetics November 13, 2022, 1:00 PM - 5:00 PM SDCC Halls B-H M. K. JANTZ, X. FANG, A. DAMIANI, L. LIANG, C. GOPINATH, F. LIU, U. AGBOR, T. NEWTON, E. NEUFELD, A. FASSE, T. K. HITCHENS, L. E. FISHER, E. PIRONDINI, M. CAPOGROSSO, R. A. GAUNT

205.06 / I2 - An open-source realistic model simulating the selectivity of the spinal pudendo-vesical reflex for predicting the neurostimulation effect on bladder control November 13, 2022, 1:00 PM - 5:00 PM SDCC Halls B-H X. FANG, M. JANTZ, R. GAUNT, M. CAPOGROSSO

205.07 / I3 - An open-source high-resolution and anatomically realistic computational model of the cat lumbosacral spinal cord November 13, 2022, 1:00 PM - 5:00 PM SDCC Halls B-H A. DAMIANI, L. LIANG, M. K. JANTZ, T. NEWTON, A. FASSE, L. FANG, U. AGBOR, M. DEL BROCCO, L. E. FISHER, M. CAPOGROSSO, E. NEUFELD, K. T. HITCHENS, E. PIRONDINI, R. GAUNT

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| 222.03 / BB7 - Biophysically detailed cellular and network models of right atrial ganglionic plexus principal neurons identified from transcriptomics data | November 13, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | S. GUPTA, A. J. H. NEWTON, A. MOSS, J. S. SCHWABER, R. VADIGEPALLI, W. W. LYTTON |
| 246.04 / XX57 - Validated computational models of autonomic nerve stimulation | November 13, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | N. PELOT, E. MUSSELMAN, D. MARSHALL, M. HUSSAIN, A. UPADHYE, O. BUYUKCELIK, A. SHOFFSTALL, W. GRILL |
| 246.09 / XX62 - The recruitment of afferents in response to dorsal root ganglion stimulation: A modelling study | November 13, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | J. FAROOQUI, A. C. NANIVADEKAR, M. CAPOGROSSO, S. F. LEMPKA. L. E. FISHER |
| Nov. 14 | | | |
| 272.08 / C25 - The substantia nigra pars reticulata in vitro and in silico | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | W. S. THOMPSON, J. J. J. HJORTH, A. KOZLOV, G. SILBERBERG, J. HELLGREN KOTALESKI, S. GRILLNER |
| 272.10 / GG12 - Anatomical and computational investigation of ventral pallidal modulation of the basolateral amygdala | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | T. BANKS, T. TUNA, C. SEVINÇ, G. UNAL, S. S. NAIR |
| 272.11 / C27 - Self-learning neurophysiology tutorials in the medical curriculum | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | S. NAIR, G. GLICKERT, M. WALKER, S. S. NAIR |
| 290.02 / L12 - Effects of non-uniform distributions of voltage-gated Na ⁺ channels on spike propagation through the dorsal root ganglion in non-myelinated axons: a computational modeling study | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | D. B. JAFFE, N. GAMPER |
| 330.02 / YY66 - Computational advantages of magnetic sensor arrays for recording neural activity | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | Z. ALI, A. POON |
| 330.08 / ZZ2 - Reduced order realistic neuron models for network simulations | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | D. R. FAGUE, J. VON RAUTENFELD, T. WILLIAMS, S. S. NAIR |
| 330.09 / ZZ3 - Data-driven efficient surrogate-assisted evolutionary method for multi-objective optimization of high-dimensional neural dynamical systems | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | P. MOOLCHAND, I. RAIKOV, I. SOLTESZ |
| 330.19 / ZZ12 - Inference of neuron morphology and orientation from LFP data | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | Z. CHEN, D. DOPP, S. S. NAIR |

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| 331.09 / ZZ19 - The NetPyNE multiscale modeling tool: latest features and models | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | V. BRAGIN, E. URDAPILLETA, J. W. GRAHAM, D. DEL PIANO, N. GOMEZ, P. FAIVRET, F. LEDDA, A. SINHA, E. Y. GRIFFITH, C. KELLEY, A. NEWTON, S. GUPTA, S. A. NEYMOTIN, M. L. HINES, W. W. LYTTON, P. GLEESON, M. CANTARELLI, S. DURA-BERNAL |
| 332.19 / ZZ40 - Amplitude modulated high-frequency stimulation elicits asynchronous axonal spiking activity | November 14, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | B. BARRA, R. KUMAR, C. GOPINATH, E. MIRZAHKALILI, S. F. LEMPKA, R. A. GAUNT, M. CAPOGROSSO, L. FISHER |
| 383.09 / Y4 - Cortical control of thalamocortical cell burst/tonic firing mode in open- and closed-loop circuit organizations | November 14, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | J. MOREIRA, B. KOCAOGLU, S. AHMAD, C. VARELA, S. DURA-BERNAL |
| Nov. 15 | | | |
| 455.20 / H9 - Multiscale simulations of spreading depolarization with ischemic effects | November 15, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | A. NEWTON, C. KELLEY, R. A. MCDUGAL, W. W. LYTTON |
| 458.06 / L16 - Neural mechanisms underlying the recovery of volitional motor control after paralysis during spinal cord stimulation | November 15, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | J. BALAGUER, G. PRAT- ORTEGA, L. LIANG, J. HO, E. GRIGSBY, V. KARAPETYAN, A. MAHROUS, J. A. GONZÁLEZ-MARTÍNEZ, P. GERSZTEN, C. HECKMAN, D. J. BENNETT, E. PIRONDINI, M. CAPOGROSSO |
| 523.09 / C45 - Role of NMDA receptors in signal transmission in a model lateral amygdala | November 15, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | B. LATIMER, G. GLICKERT, P. SAH, S. S. NAIR |
| 524.07 / Web Only - Modification of the information processing in granule cells depending on the local network | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | N. NAKAJIMA, T. KAMIJO, H. HAYAKAWA, E. SUGISAKI, T. AIHARA |
| 524.13 / B48 - Oscillatory stimuli produce nonstationary spiking activity in computer model of neocortical pyramidal neuron: spike-phase advance and retreat | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | C. KELLEY, J. L. KUBIE, S. D. ANTIC, W. W. LYTTON |
| 524.15 / B49 - Determining the effects of ion channels on spiking behavior by interfacing a real-time dynamic clamp system with computational models of ion channels simulated with NEURON | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | M. W. NOWAK, L. KORBEL, A. KANE, B. PANAMA, M. L. HINES, N. T. CARNEVALE, G. C. L. BETT, R. L. RASMUSSEN |

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| 574.02 / XX14 - Altered action potential propagation caused by age-related myelin dystrophies leads to impaired working memory in dIPFC neuron and circuit models | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | N. SENGUPTA, S. IBAÑEZ, M. MEDALLA, K. WIMMER, J. I. LUEBKE, C. M. WEAVER |
| 578.03 / YY28 - Intrinsic oscillatory dynamics in a model neocortical circuit | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | S. S. NAIR, Z. CHEN, D. FAGUE |
| 578.16 / YY40 - Analyzing the origin of cortical oscillation events in a data-driven biophysical model of the primate auditory thalamocortical system | November 15, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | E. Y. GRIFFITH, S. DURABERNAL, A. BARCZAK, M. N. O'CONNELL, T. M. MCGINNIS, C. E. SCHROEDER, W. W. LYTTON, P. LAKATOS, S. A. NEYMOTIN |

Nov. 16

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| 667.23 / ZZ1 - HNN-core: an open-source Python interface to the Human Neocortical Neurosolver (HNN) software for cellular and microcircuit interpretation of human MEG and EEG signals | November 16, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | R. THORPE, M. JAS, N. TOLLEY, C. BAILEY, B. CALDWELL, M. A. SHERIF, M. HAMALAINEN, S. R. JONES |
| 667.24 / ZZ2 - Laminar Specificity of the Auditory Awareness Negativity Under Multitone Masking: A Biophysical Modeling Study | November 16, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | C. FERNANDEZ PUJOL, A. R. DYKSTRA, E. G. BLUNDON |
| 667.25 / ZZ3 - Adaptation to Repetitive Stimuli Associated with Increased Gamma Oscillations in an Auditory Cortex Computer Model | November 16, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | M. W. M. ELSAYED, W. W. LYTTON, M. A. SHERIF |
| 667.26 / ZZ4 - Simulation based inference in the Human Neocortical Neurosolver software reveals a calcium-mediated decoupling between spiking and field activity underlying macroscale M/EEG event related potentials | November 16, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | N. M. TOLLEY, P. L. C. RODRIGUES, S. PUGLIESE, A. GRAMFORT, S. R. JONES |
| 667.27 / ZZ5 - Biophysical circuit-mechanisms of the stop-signal P3 during action-stopping | November 16, 2022, 8:00 AM - 12:00 PM | SDCC Halls B-H | D. A. DIESBURG, J. R. WESSEL, S. R. JONES |
| 690.17 / C4 - Computational modeling of induction of plateau bursting via simulated application of blockade of M-type potassium channels | November 16, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | C. KNOWLTON, T. ZIOUZIYOU, J. ROEPER, C. C. CANAVIER |
| 690.18 / C5 - An in vivo patch-clamp and modelling study of K-ATP Channels in midbrain dopamine neurons | November 16, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | R. EGGER, C. J. KNOWLTON, C. C. CANAVIER, J. ROEPER |
| 690.21 / C8 - Striatal mechanisms for entrainment to high frequency components - an in silico study | November 16, 2022, 1:00 PM - 5:00 PM | SDCC Halls B-H | K. PAJO, J. J. J. HJORTH, J. FROST NYLÉN, I. CARANNANTE, A. KOZLOV, S. GRILLNER, J. HELLGREN KOTALESKI |

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752.25 / ZZ5 - Low-intensity Single Pulse
Transcranial Magnetic Stimulation (TMS)
Increases Detection Accuracy of Perceptual-
Threshold Level Tactile Stimuli

November 16, 2022,
1:00 PM - 5:00 PM

SDCC Halls D. D. SLIVA, C. KOHL, D. S.
B-H DANIELS, R. M. THOMPSON,
N. CHEN, S. R. JONES