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STRONG FINISH FOR 2015, OMNIPLEX DATA SOURCES, WORKSHOP REGISTRATION OPEN AND MORE!

PLEXON FINISHES 2015 STRONG – GOOD FOR RESEARCHERS

Plexon intends to be here for decades to come, providing new technology and support for researchers and labs long into the future. Each strong year-end lends greater credibility to that goal as more than an unwavering intention, but rather an absolute fact. In 2015, Plexon experienced another amazing year in response to your needs and demands. We are pleased to report that Plexon:

- Received and filled more orders than ever before,
- Serviced more returning customers than in any previous year,
- Expanded the number of countries we actively serve, and
- Doubled our sales force to meet the growing needs of the research community.

As many of you know, Plexon is completely dedicated to research labs. We are without clinical distractions. We are all about you and your needs. Thank you for the opportunity to continue serving you with such laser focused intensity from year to year.

As it should be, it is our goal to do even better in 2016. With the launch last year of products including Offline Sorter™ v4, the PlexBright® Lime LED Modules and Mono-coil Wrapped Optical Patch Cables, the Carousel™ Commutator for use with digital headstages and optogenetics, and CineLAB™ video tracking and analysis integrated with the Bussey-Saksida Touch Screen Chambers, we expect we are off to a good start.

Just wait and see what else we have planned for you in the coming months!

2015 FUN PLEXON STATS

We all love numbers, so here are a few fun stats from this past year:

- 83,000 documentation and software downloads from the website,
- 1,100 new newsletter readers,
- 850 new and upgraded software licenses
- 430 new publications citing use of Plexon equipment,
- 42 countries served,
- 32 years in business,

- 17 conferences/events supported,
- 16 new releases/installers/SDKs announced across seven products, and our
- 1st app launched.

2016 PLEXON WORKSHOP – REGISTRATION IS OPEN!

April 11-14, 2016

Less than three months away, Plexon's 7th Annual Neurophysiology and Behavior Workshop is gearing up for our most informative and educational event yet. Once again, we have prepared a robust program and secured very favorable rates at the Workshop hotel. You are now able to download the following from the 2016 Workshop web page:

- The Workshop Flyer – a comprehensive, one-page summary,
- The Workshop Basics – a dryer, one-page summary highlighting only the logistical and educational basics, and
- The Registration Form.

We are happy to provide invitations for visa applications. If you have any questions, please email workshop@plexon.com. We hope to see you there!

CONTENT TO EXPECT AT THE WORKSHOP

The Plexon Workshop is an intense, hand-on, exercise-based training experience. We offer ~25 hours of course work over three full days, plus additional customized, one-on-one training on practically any piece of software or hardware Plexon has or currently offers. For example, just for neural recording we will have independent, fully-functional workstations featuring:

- the original MAP Systems,
- OmniPlex® Systems with an analog amplifier subsystem,
- OmniPlex D Systems with a DigiAmp™ Digitizing Amplifier subsystem, and
- OmniPlex D Systems with the newest Digital Headstage Processor (DHP) subsystem.

For the main program, we will be offering several, in-depth sessions including:

- Neural Data Acquisition with the OmniPlex D System,
- Neural Data Acquisition with MAP System,
- Integrating Video Tracking with Neural Recording using the CinePlex® System,
- Multi-subject, Multi-trial Video Tracking and Analysis with CineLAB System,
- Optogenetic Stimulation with the PlexBright System,
- Specialty Probes with U- & V-probes,
- Offline Neural Spike Sorting with Offline Sorter,
- Neural Data Analysis with NeuroExplorer®, and
- An introduction to anything else that gets launched between now and then!

Come rested and ready to learn – as this Workshop is not for the faint! If you have special requests, reach out to us in advance so that we may be adequately prepared for our time together.

2016 CONFERENCES – MORE THAN EVER!

It will be even easier to meet with a Plexon representative live in 2016 since we will be at even more conferences, workshops and symposiums than ever before. Last year, we supported 17 events in nine countries on four continents. This year, you can expect us to support and promote scientific knowledge sharing at more than 20 events around the world . . . including the 49th Winter Conference on Brain Research taking place right now.

If you see us at an event, please take a moment to say “Hello.” In fact, we would also love to hear about your experience with our equipment, ideas for future products, or maybe recommendations regarding additional documentation.

If there is an amazing event that you think we might be missing out on, let us know! You can always check out where we will be next by clicking the on the Events page of our website.

DID YOU KNOW . . . THE OMNIPLEX RECORDS VARIOUS TYPES OF DATA SIMULTANEOUSLY?

The interactive data acquisition software for the OmniPlex Neural Data Acquisition Systems, known as PlexControl, offers users a convenient interface capable of quickly and conveniently selecting from a variety of different data types available for recording. For example, a researcher is able to record such diverse sources as “Continuous Wideband,” “Continuous Spike,” “Field Potential,” and “Spike.”

For the sake of simplicity, a source can be defined as the channels of data produced by a hardware or software device. In order for a specific source to be captured into a .PLX or .PL2 file, it first must be enabled in the PlexControl interface. It is useful to note that more than one source may be selected for the same channel at the same time.

To do so, open the “Properties Spreadsheet” tab in PlexControl. Ensure that the boxes under the desired “Rec” (Recording) sources are checked. Then, to ensure that a specific channel within a source is recorded, the “Enabled” checkbox must be checked as well. It is imperative that the box is checked for every channel of every source of data that is expected in the recorded file. It can be frustrating for a researcher to record a significant amount of data, only to learn that he or she has recorded data from unintended sources, or that the desired data never even showed up in the recording only because the configuration was not selected properly pre-recording.

Another friendly suggestion would be to record a very short sample file for verification. This can go a long way to ensuring that a long recording will contain all the desired data. We encourage researchers to be vigilant of this process before recording.

As always, if you have any questions or would like to discuss anything further, please feel free to email support@plexon.com and somebody from the team will be glad to get back to you.

PLEXON WORKSHOP ALUMNI SPEAK OUT: JONAS THELIN

“I had been working with Plexon systems for many years when I got the honour to speak at the Plexon workshop. Even though I considered myself an experienced Plexon user, I was amazed of all the things that I picked up. I realized that there were faster and smarter ways to use the systems, and I got new ideas on how to set up my lab in order to conduct better science.”

The workshop was very intense, but there was also time for interaction between the participants which led to good contacts and interesting scientific discussions. The organization and implementation of the workshop by the Plexon staff was impeccable and for once the concept of a workshop really lived up to its name.”

Jonas Thelin, PhD

Neuronano Research Center (NRC),
Lund University

WORKSHOP DATES

Welcome reception: April 11, 6:00 pm

Workshop: April 12-14, all day, each day

WORKSHOP LOCATION

The DoubleTree Hotel, Campbell Centre
Dallas, Texas, USA

REGISTRATION PRICING

Same great pricing since 2012!

Before March 21: \$900

System Purchasers*: \$500

After March 21: \$1,100

***½ PRICED WORKSHOP REGISTRATIONS**

When you purchase a PlexBright System with a 4 Channel Optogenetic Controller, any OmniPlex System, and CinePlex System or and CineLAB System, your lab is eligible for unlimited half priced Workshop registrations for the upcoming Plexon Workshop. Ask your sales engineer or email workshop@plexon.com with any questions.

INVITATIONS FOR VISA APPLICATIONS

Invitations for Visa Applications to attend the Plexon Workshop are available upon request. Email workshop@plexon.com for assistance.

SAVE THE DATE – CHINA WORKSHOP

The China Regional Neurophysiology Workshop sponsored by Hong Kong Plexon has confirmed its dates as July 18-20, 2016 in Beijing. Contact daniel@plexon.com.hk for more information.

PLEXON HAS HIRED AND STILL WANTS MORE!

We are seeking outstanding, neuroscience-loving candidates for the following roles:

- Sales Engineer for Electrophysiology
- Support Engineer/Scientist for Neuroscience
- Senior Windows Software Engineer

If you are interested, send your resume to jobs@plexon.com.

OFFICE CLOSURES

Plexon lists all anticipated office closures for the year on the website. Go to the Plexon website to reference the 2016 schedule for both the world headquarters and the European office.

RESEARCH SPOTLIGHT

Let us know about your 2015 publication citing Plexon and our equipment and we will send you a thank you award with a mug and a T-shirt! Send notices, address and T-shirt size to publications@plexon.com.

All articles listed are alphabetical based on first author within two categories: articles published online in electronic-only journals or ahead of print, and articles published in full print.

Recent articles published online in electronic-only journals or ahead of print:

- Best, Matthew D., Aaron J. Suminski, Kazutaka Takahashi, Kevin A. Brown, and Nicholas G. Hatsopoulos. "Spatio-Temporal Patterning in Primary Motor Cortex at Movement Onset." *Cerebral Cortex* (2016): bhv327.
- Bigelow, James, Chi-Wing Ng, and Amy Poremba. "Local field potential correlates of auditory working memory in primate dorsal temporal pole." *Brain Research* (2015).
- Faits, Michelle C., Chunmeng Zhang, Florentina Soto, and Daniel Kerschensteiner. "Dendritic mitochondria reach stable positions during circuit development." *eLife* (2016): e11583.
- Gutnisky, Diego A., Charles B. Beaman, Sergio E. Lew, and Valentin Dragoi. "Spontaneous Fluctuations in Visual Cortical Responses Influence Population Coding Accuracy." *Cerebral Cortex* (2016): bhv312.
- Huang, Pei-Yu, Yang-Hsin Shih, Yi-jhan Tseng, Tsui-Ling Ko, Yu-Show Fu, and Yung-Yang Lin. "Xenograft of Human Umbilical Mesenchymal Stem Cells from Wharton's Jelly as a Potential Therapy for Rat Pilocarpine-Induced Epilepsy." *Brain, Behavior, and Immunity* (2015).
- Rangel, Lara M., Jon W. Rueckemann, Pamela D. Riviere, Katherine R. Keefe, Blake S. Porter, Ian S. Heimbuch, Carl H. Budlong, and Howard Eichenbaum. "Rhythmic coordination of hippocampal neurons during associative memory processing." *eLife* 5 (2016): e09849.
- Smith, A. S., SK Williams Avram, A. Cymerblit-Sabba, J. Song, and W. S. Young. "Targeted activation of the hippocampal CA2 area strongly enhances social memory." *Molecular Psychiatry* (2016).
- Smith, Kyle S., and Ann M. Graybiel. "Habit Formation Coincides with Shifts in Reinforcement Representations in the Sensorimotor Striatum." *Journal of Neurophysiology* (2016): jn-00925.
- Tamte, Martin, Ivani Brys, Ulrike Richter, Nedjeljka Ivica, Pär Halje, and Per Petersson. "Systems level neurophysiological state characteristics for drug evaluation in an animal model of levodopa-induced dyskinesia." *Journal of Neurophysiology* (2016): jn-00868.

- Whitmire, Clarissa J., Christian Waiblinger, Cornelius Schwarz, and Garrett B. Stanley. "Information Coding through Adaptive Gating of Synchronized Thalamic Bursting." *Cell Reports* (2016).

Recent articles published in full print:

- Berglund, Ken, Kara Clissold, Haofang E. Li, Lei Wen, Sung Young Park, Jan Gleixner, Marguerita E. Klein et al. "Luminopsins integrate opto-and chemogenetics by using physical and biological light sources for opsin activation." *Proceedings of the National Academy of Sciences* 113, no. 3 (2016): E358-E367.
- Hearing, Matthew C., Jakub Jedynak, Stephanie R. Ebner, Anna Ingebretson, Anders J. Asp, Rachel A. Fischer, Clare Schmidt, Erin B. Larson, and Mark John Thomas. "Reversal of morphine-induced cell-type-specific synaptic plasticity in the nucleus accumbens shell blocks reinstatement." *Proceedings of the National Academy of Sciences* 113, no. 3 (2016): 757-762.
- Huff, Mary L., Eric B. Emmons, Nandakumar S. Narayanan, and Ryan T. LaLumiere. "Basolateral amygdala projections to ventral hippocampus modulate the consolidation of footshock, but not contextual, learning in rats." *Learning & Memory* 23, no. 2 (2016): 51-60.

- Saddoris, Michael P., Xuefei Wang, Jonathan A. Sugam, and Regina M. Carelli. "Cocaine Self-Administration Experience Induces Pathological Phasic Accumbens Dopamine Signals and Abnormal Incentive Behaviors in Drug-Abstinent Rats." *The Journal of Neuroscience* 36, no. 1 (2016): 235-250.
- Wang, Hao, Wen-Jian Liu, Guo-Ming Shen, Meng-Ting Zhang, Shun Huang, and Ying He. "Neural mechanism of gastric motility regulation by electroacupuncture at RN12 and BL21: A paraventricular hypothalamic nucleus-dorsal vagal complex-vagus nerve-gastric channel pathway." *World J Gastroenterol* 21, no. 48 (2015): 13480-13489.
- Wimmer, Klaus, Marc Ramon, Tatiana Pasternak, and Albert Compte. "Transitions between Multiband Oscillatory Patterns Characterize Memory-Guided Perceptual Decisions in Prefrontal Circuits." *The Journal of Neuroscience* 36, no. 2 (2016): 489-505.
- Zhou, Huihui, Robert John Schafer, and Robert Desimone. "Pulvinar-Cortex Interactions in Vision and Attention." *Neuron* 89, no. 1 (2016): 209-220.