Dear Fellow Members of SPR,

At the beginning of this new year, many of us are looking back with a level of exhaustion but also with gratitude. We had a successful Annual Meeting in Vancouver and it was great seeing friends and colleagues in person again. In the new year, we are looking to build on this momentum, advancing several new initiatives for bringing SPR members together, implementing new training opportunities, and increasing diversity and global representation of our membership. Let me give you a sneak peek into these initiatives.
Among many other things, the pandemic has taught us to better leverage the potential of virtual experiences—despite the Zoom fatigue we all know. SPR in the new year will start to ramp up our online presence and enable psychophysicologists to interact with us through new formats such as webinars, and an enhanced social media and outreach presence. We are excited about the potential of webinars for providing resources, training, and a virtual meeting space throughout the year. Webinars will also enable participation by members in time zones away from the meeting locations, and those with limited travel options. Topics are geared to provide much-needed training options in psychophysiological methods, as well as professional development, and other relevant topics. Be on the lookout for announcements in the months ahead!

We are putting together a stimulating program for the 2023 meeting in New Orleans (September 27–October 1, 2023 – New Orleans Marriott Hotel). The program will include established components that we know and love, but also new formats that encourage exchange, discussion, and collaboration among members. Three exciting invited speakers have agreed to participate, and we are planning to have several new pre-conference workshops as well as discussion panels on hot topics in psychophysiology. We will also continue the tradition of organizing a presidential symposium on diversity, equity, and inclusion.

Let me extend my gratitude to the many SPR members who work to advance SPR, our meeting, and the journal on a daily basis. If you are interested in joining these efforts and help to shape SPR, please reach out to me at akeileufl.edu. If you have suggestions or ideas for how we could serve you better in the future, we also would like to hear from you here.

In closing, I wish each of you a very happy, healthy and productive year in 2023, and I look forward to seeing you in New Orleans!

Best wishes,

Andreas Keil
SPR President
SAVE THE DATE!
2023 ANNUAL MEETING
IN NEW ORLEANS

The SPR 2023 Annual Meeting will be held in New Orleans, Louisiana, USA on September 27-October 1. The call for abstracts can be found here: https://sprweb.org/page/2023Abstracts

Important Deadlines to Remember:
• April 28, 2023 for posters
The in-person meeting allowed both Markus Ullsperger (President, 2022) and Bruce Bartholow (President, 2021) to deliver their presidential addresses:

- *Beyond Peaks and Troughs: Multiplexed Performance Monitoring Signals in the EEG* (Ullsperger)
- *Salience and Cognitive Control: Inter- and Intraindividual Differences and Implications for Social and Clinical Behavior* (Bartholow)

The 2022 conference in Vancouver, Canada was a success! The excellent scientific program along with a beautiful location (see pictures below) provided a great environment for building connections and community following our previous virtual conferences. Many attendees were able to meet in-person for the first time in two years!

**Highlights**

- The in-person meeting allowed both Markus Ullsperger (President, 2022) and Bruce Bartholow (President, 2021) to deliver their presidential addresses:
  - *Beyond Peaks and Troughs: Multiplexed Performance Monitoring Signals in the EEG* (Ullsperger)
  - *Salience and Cognitive Control: Inter- and Intraindividual Differences and Implications for Social and Clinical Behavior* (Bartholow)
2022 ANNUAL MEETING RECAP (CONTINUED)

- 2nd Annual President’s Symposium on Diversity, Representation, and Inclusion
- The Big Idea Sessions, Psychophysiology of Cognitive Control and Executive Functions & New Methods in Psychophysiology, showcased noteworthy topics and methodologies in psychophysiology.
- SPR’s “rising stars” presented their research in the Faces of the Future Flash Talks!
  - Kirsten Adam, *New Approaches for Tracking Working Memory Load with EEG*
  - Gerard Derosiere, *Hasty Sensorimotor Decisions Rely on An Overlap of Broad and Selective Changes In Motor Activity*
  - Anna Finley, *The Impacts of Loneliness on the Brain and Psychophysiology of Emotion*
  - Mario Hervault, *Movement Analysis Joins Psychophysiology to Investigate Cognitive Control*
  - Daniela M. Pfabigan, *From Pineapples to Dollar Signs and Smiling Faces: Why Stimulus Features Matter in Feedback Research*
  - Justin Riddle, *Leveraging Causal Tools in Cognitive Neuroscience for Personalized Psychiatry*
  - Audrey Siqi-Liu, *Context-Specific Flexibility Adjustments: Task-Sets Define Boundaries of Control Strategies*
  - Chunyue Teng, *Investigating the Effects of Control Signals in the Interactions Between Working Memory and Perception*
  - Chad C. Williams, *Prediction Errors Influence Cost–Benefit Computations During Reasoning*
Congratulations to all 2022 Award Winners!

- **Distinguished Contributions Award**
  - Cindy Yee-Bradbury

- **President’s Pick Psychophysiology Paper Award**

- **Early Career Award**
  - Emily S. Kappenman, *The Role of ERPs in Psychological Science: Past, Present, and Future*
  - Annmarie MacNamara, *The Significance of Blunted LPPs Across Psychiatric Health and Disease*
  - Jonathan Stange (2021), *Static and Dynamic Markers of Affect Regulation: Integrating Psychophysiological Indices Across Time and Contexts*
Trainee Poster Award Winners

- Yuhan Cheng - Positive Emotion Upregulation is Resistant to Concurrent Working Memory Load: An Event-Related Potential Study of Reappraisal and Savoring
- Rachel Ferry - The Error-Related Negativity and Startle Reflex to Predictable and Unpredictable Threat
- Roslyn Harold - Psychometric Properties of Telehealth EEG Assessment Among Families Affected by Angelman Syndrome
- Melinh Lai - Graded and Ungraded Expectations: Prediction Dynamics During Active Comprehension
- Elizabeth Mulligan - The Antenatal P300 And Late Positive Potential Prospectively Predict Increased Postnatal Depression and Anxiety
- Victor Pokorny - Impact of Reduced Dimensionality Independent Components Analysis on Event-Related Potential Data Quality
- Kierstin Riels - Bedfellows in Learning? The Relationship Between EEG Alpha Power and Pupil Diameter During Pavlovian Conditioning
- Darian Reyner - Sympathetic Nervous System Reactivity During Interpersonal Conflict Among Women in Partner Violent Relationships: The Role of Posttraumatic Stress Disorder
- Christopher Stolz - Trait Openness to Experience in Older Adults is Associated with Higher Memory Brain-Network Integrity and Successful Visual Memory Encoding
- Anna-Lena Tebbe - Neural Object Processing in Infants and Adults Is Influenced by The Perspective of Others
Psychophysiology received a record number of submissions in 2022 (712), the highest in the history of the journal! SPR Members, please continue to send your best work to Psychophysiology!

**Upcoming Special Issue**
Call for papers on: Registered Replication Reports of Psychophysiological Studies of Cognitive-Affective Interactions. Guest Editors: Peter E. Clayson and Tina B. Lonsdorf
This review focuses on research my colleagues and I have conducted on etiological pathways to depression. Much of this work has focused on the measurement of neural responses to appetitive cues, using two event-related brain potential (ERP) components, the Late Positive Potential (LPP) and the Reward Positivity (RewP). Reductions in each of these components have been associated with current symptoms of depression, and in some cases have been shown to differentiate anxious from depressive phenotypes. In this review, I will describe three broad and related approaches we have taken in our research to address a series of interdependent issues. The first attempts to understand different sources of variation in the LPP and RewP, and how these sources interact with one another. The second tries to identify whether variation in the processes measured by these ERP components might reflect a latent vulnerability to depression and its symptoms, that is evident prior to illness onset. And the third examines the possibility that the processes reflected in the LPP and RewP might play a mechanistic role in the development of depression.

“Investigating sustained attention in contextual threat using steady-state VEPs evoked by flickering video stimuli” Yannik Stegmann, Marta Andreatta, Paul Pauli, Andreas Keil & Matthias J. Wieser (Nov, 2022) 

Anxiety is characterized by anxious anticipation and heightened vigilance to uncertain threat. However, if threat is not reliably indicated by a specific cue, the context in which threat was previously experienced becomes its best predictor, leading to anxiety. A suitable means to induce anxiety experimentally is context
conditioning: In one context (CTX+), an unpredictable aversive stimulus (US) is repeatedly presented, in contrast to a second context (CTX−), in which no US is ever presented. In this EEG study, we investigated attentional mechanisms during acquisition and extinction learning in 38 participants, who underwent a context conditioning protocol. Flickering video stimuli (32 s clips depicting virtual offices representing CTX+/−) were used to evoke steady-state visual evoked potentials (ssVEPs) as an index of visuocortical engagement with the contexts. Analyses of the electrocortical responses suggest a successful induction of the ssVEP signal by video presentation in flicker mode. Furthermore, we found clear indices of context conditioning and extinction learning on a subjective level, while cortical processing of the CTX+ was unexpectedly reduced during video presentation. The differences between CTX+ and CTX− diminished during extinction learning. Together, these results indicate that the dynamic sensory input of the video presentation leads to disruptions in the ssVEP signal, which is greater for motivationally significant, threatening contexts.

“Neural deficits in anticipatory and consummatory reward processing are uniquely associated with current depressive symptoms during adolescence” – Brittney Thomspn, Nicholas J. Santopetro, Christopher J. Brush, Dan Foti & Greg Hajcak (Jan, 2023)

Deficits within the consummatory phase of reward processing are associated with increased depression symptoms and risk; however, few studies have also examined other aspects of reward processing in relation to depression. In the current study, a community sample of 121 adolescents (Mage = 13.1, Min = 11.14; Max = 15.12; 54% male) completed self-report questionnaires to assess depressive symptoms and the monetary incentive delay (MID) task while EEG was recorded. Results indicated that a reduced cue-P300 as well as a reduced reward positivity (RewP) and feedback negativity (FN) to gain and loss feedback, respectively, were associated with increased depressive symptoms; on the other hand, SPN and feedback P300 were unrelated to depressive symptoms. An exploratory multiple regression analysis revealed that a reduced money cue-P300, a reduced RewP, and a reduced (i.e., less negative) FN, all explained unique variance in depressive symptoms. The current study demonstrates that reduced cue-P300, RewP, and FN amplitudes may reflect distinct
deficits in reward processing among adolescents with increased depressive symptoms. Notably, this study is one of the first to leverage the MID task in adolescents in relation to depressive symptoms, allowing for a more in-depth view of the individual differences in reward processing among adolescents with increased depressive symptomatology.

“Group differences in agency modulate error monitoring” – Elizabeth Bauer & Annmarie MacNamara (Feb, 2020)
Mistakes can lead to aversive outcomes. Error monitoring may help prevent mistakes, but it might be maladaptive for individuals who lack control over aversive outcomes, as it consumes cognitive processing resources that could be allocated elsewhere. Here, we examined the effect of agency (i.e., control over punishment) on error monitoring using the error-related negativity (ERN), an event-related potential measure of error monitoring and error rate. Ninety unselected participants performed a flanker task in which they were shocked according to their own errors (controllable punishment, n = 47) or were shocked in accordance with another participant’s errors (uncontrollable punishment, n = 43). Participants without agency over punishment showed smaller ERNs and higher error rates compared with participants with agency. Furthermore, punishment only reduced error rates for participants with agency. Together, these results provide the first experimental evidence that agency modulates error monitoring and suggest an adaptive process in which error monitoring is increased/decreased depending on its utility.
ADVOCACY: SCIENCE NEEDS YOUR VOICE!

Women in Science and Education (WISE) is working on a few initiatives this year. First, they are planning a lunch panel for the 2023 meeting in New Orleans. Second, they are partnering with the PR committee to increase our social media presence. Contact WISE Committee Chairs Drs. Lauren Bylsma (BylsmaL@pitt.edu) and Karen Quigley (K.Quigley@northeastern.edu) if you have ideas or are interested in getting involved! Third, the WISE committee is starting a social media campaign to increase the visibility and representation of women and gender minorities in STEM. We want to feature women and gender minorities who are involved in psychophysiological research by sharing their stories and experiences.

To get involved in the campaign, please fill out the form.

Also, stay tuned for an announcement this summer about SPR Care Grants that will be available again for the Fall 2023 meeting.

3RD ANNUAL PRESIDENT’S SYMPOSIUM ON DIVERSITY, EQUITY AND REPRESENTATION

This year the Diversity and Outreach Committee is seeking submissions from researchers interested in contributing to a panel discussion on the topic of Diversity Science. Speakers can prepare a short presentation that should facilitate discussion. Topics can include the scientific importance of diverse representation in psychophysiological research, how to operationalize diversity from a global perspective, systems for incentivizing and tracking progress, and challenges and obstacles to these goals. If you would like to contribute to this discussion please submit a short proposal abstract indicating the area of discussion you would like to facilitate.
Research Training Grant Opportunity

Are you a graduate student or postdoc interested in receiving mentored training in psychophysiological techniques outside of your home institution? Consider applying to the SPR Research Training Grant! These awards may facilitate in-person training through a visit to the sponsor’s laboratory, as well as remote training through virtual meetings with the sponsors. Awards are intended to support the direct costs of training with the proposed sponsors. Awardees are expected to attend the SPR Annual Meeting to formally accept the award at the Business Luncheon. Awardees are also strongly encouraged to present their research findings at the SPR Annual Meeting the following year. Up to $500 of the award funds may be allocated to support attendance at the SPR Annual Meeting.

The deadline for the 2023 awards will be announced soon. Applicants may propose a budget of up to $5,000 USD. Smaller budgeted applications are encouraged and would allow for more applications to be funded. For more information, check out the Research Training Grant webpage, as well as slides presented at the SPR 2022 Training Luncheon.

Interested in the Research Training Grant but not sure where to start to look for a sponsor? Check out the SPR International Lab Exchange Forum! Would your lab be interested in sponsoring a Research Training Grant awardee or collaborate with an SPR student? Add your lab to the list by sending us an e-mail with your lab’s information and we will create a subpage for you!

The 2022 SPR Research Training Grant awardees are:

- Jenna Johnson, University of Newcastle, Australia
  ○ Primary Mentor: Frini Karayanidis
  ○ Training Sponsor: Monica Fabiani
- Anna-Lena Tebbe, Max Planck Institute for Human Cognitive and Brain Sciences, Germany
  ○ Primary Mentor: Charlotte Grosse Wiesmann
  ○ Training Sponsor: Robert Hepach
- Nicholas Ware, University of Newcastle, Australia
  ○ Primary Mentor: Frini Karayanidis
  ○ Training Sponsor: Gabriele Gratton