You will notice that the timing of events for this year’s Annual Meeting is a bit different than the typical conference schedule. We have made a concerted effort to make the meeting as accessible as possible for all attendees around the globe. With this in mind, each day of the Annual Meeting has been split between an ‘early’ session (morning in North America, afternoon in Europe) and a ‘late’ session (evening in North America, morning in Asia/Australia), with a break mid-day. This way, more attendees will hopefully be able to access the conference events.

Of course, no one time works well for everyone, so this schedule is asking for some compromises from all. Thank you for your understanding, and we are looking forward to an outstanding SPR Annual Meeting!

Dan Foti
2021 Program Chair

Pre-conference Workshops

Sunday, October 10, 2021

11:00 a.m.-3:00 p.m. EDT; 3:00 p.m.-7:00 p.m. UTC

Pre-conference Workshop 1: Mini ERP Bootcamp
Organizers/Presenters: Steven Luck, PhD
University of California, Davis

Event-related potentials (ERPs) are one of the most commonly used noninvasive measures of human brain activity. This workshop will provide a practical introduction to using ERPs to answer questions about sensory, cognitive, affective, and motor processes in basic science and clinical research. The goal of the workshop is to provide you with a sufficiently detailed overview so that you can fully understand and evaluate published ERP studies and start on the road to conducting your own ERP studies. It is designed for beginning and intermediate ERP researchers—at any career stage—who would like to obtain a firm grasp of the fundamentals of ERP research.

Outline of Workshop:
A. What are ERPs and How are They Generated?
B. Examples and Advantages of the ERP Technique
C. Common ERP Components
D. EEG Data Acquisition
E. Artifact Rejection and Correction
F. Design and Interpretation of ERP Experiments
G. Standard ERP Processing and Analysis Steps

Tuesday, October 12, 2021

9:00 a.m.-1:00 p.m. EDT; 1:00 p.m.-5:00 p.m. UTC

Pre-conference Workshop 2: Ambulatory Psychophysiological Methods: Devices, Measures and Data Considerations
Organizers/Presenters: Jolie Wormwood, PhD¹, Karen Quigley, PhD², Prof. Dr. Eco de Geus³, Sarah Ostadabbas⁴, and Katie Hoemann⁵
¹University of New Hampshire, ²Northeastern University, ³Vrije Universiteit Amsterdam, ⁴Katholieke Universiteit Leuven

This workshop will provide an overview of the design and data processing considerations particular to collecting peripheral psychophysiological measures in ambulatory settings, including skin conductance, cardiac and hemodynamic measures (e.g., heart rate, heart rate variability, pre-ejection period, cardiac output), and respiration. It is intended for students and faculty who are relatively new to ambulatory monitoring, but interested in incorporating these methods into their research. The first half-day will feature 45-minute lectures from subject matter experts followed by individual Q&A sessions. Lectures will focus on research design and data collection considerations specific to ambulatory psychophysiological studies, including an in-depth discussion of device selection and an introduction to data processing considerations (e.g., time synchronization, artifact detection/rejection, data loss). The second half-day will feature detailed discussions of two example studies involving ambulatory monitoring: one involving testing and validation of ambulatory devices, and one involving physiologically-triggered experience sampling using a wired ambulatory device. The workshop will conclude on the second day with a moderated panel discussion featuring all presenters, followed by individual salon-style breakout groups where participants will be able to meet with presenters to ask more specific research questions one-on-one. Participants are encouraged to bring their own ambulatory study design and analysis questions to be discussed during the panel discussion and break-out groups. The goal is for participants to leave the workshop with the knowledge and resources to design and implement a study utilizing ambulatory recordings of peripheral physiological data.

Schedule:
Day 1: Design and Data Collection (3.5 hrs total)
A. Research Design (Dr. Katie Hoemann)
B. Device Selection (Dr. Karen Quigley)
C. Overview of Data Processing (Dr. Sarah Ostadabbas)
Day 2: Illustrative Studies and Panel Discussion (3.5-4 hrs total)
A. Validating New Technology (Dr. Eco de Geus)
B. Physiologically-triggered Experience Sampling (Dr. Jolie Wormwood)
C. Moderated Panel Discussion (all presenters)
D. Salon-style Breakout Rooms (all presenters, separately)

11:00 a.m.-3:00 p.m. EDT; 3:00 p.m.-7:00 p.m. UTC
Pre-conference Workshop 2: Mini ERP Bootcamp (continued)

Pre-conference Workshop

Wednesday, October 13, 2021

9:00 a.m.-1:00 p.m. EDT; 1:00 p.m.-5:00 p.m. UTC
Pre-conference Workshop 2: Ambulatory Psychophysiological Methods: Devices, Measures and Data Considerations (continued)

11:00 a.m.-3:00 p.m. EDT; 3:00 p.m.-7:00 p.m. UTC
Pre-conference Workshop 1: Mini ERP Bootcamp (continued)

11:00 a.m.-3:00 p.m. EDT; 3:00 p.m.-7:00 p.m. UTC
Pre-conference Workshop 3: Multilevel Modeling for Psychophysiologists
Organizer/Presenter: Elizabeth Page-Gould, PhD
University of Toronto

Multilevel modeling (MLM) is a statistical analysis used to analyze datasets where cases are not independent (e.g., repeated measures), as is commonly the format in which psychophysiological data is recorded. Moreover, MLM is a flexible analysis that can be learned once and readily adapted to most psychophysiological designs. Especially for psychophysiologists who are used to working with Within-Subjects ANOVA, MLM offers an improved method for harnessing the statistical power of within-subjects designs and can easily incorporate continuous predictors. This workshop will provide a practical introduction to MLM for psychophysiologists, including advanced topics like growth curves, non-Gaussian data, cross-classified models, mediation, moderation, and the calculation of effect sizes. We will also discuss visualization, how to work through convergence issues, and a brief nod to alternatives to MLM in different data contexts. Workshop materials will include example data and syntax for SPSS, R, and SAS. The goal is for you to leave the workshop with the conceptual and pragmatic knowledge you need to immediately begin analyzing psychophysiological data with MLM.

Outline of Workshop:
A. Introduction
B. Background Concepts
C. MLM Theory
D. Conducting an MLM Analysis Step-by-step
E. Reporting MLM Results
F. Advanced Applications
   a. Effect Size and Power with MLM
   b. Moderation in MLM
   c. Multilevel Mediation
   d. N-level Models
   e. Nested Growth Curves
f. Generalized MLM Models

Main Meeting - Day 1

Thursday, October 14, 2021

8:30 a.m.-10:00 a.m. EDT; 12:30 p.m.-2:00 p.m. UTC
Big Ideas Session: Physical & Mental Health

Can Inhibitory Control Training Reduce Weight and Caloric Intake? A Randomized Controlled Event-related Potential Study
Kaylie Carbine1, James LeCheminant2, Scott Baldwin2, Chad Jensen2, C. Brock Kirwan2, and Michael Larson2
1California State University Dominguez Hills, 2Brigham Young University

Using Brain Event-related Potentials to Differentiate Distinct Symptom Facets of Alcohol Use Disorder
Keanan Joyner1, Ashley Watts2, and Christopher Patrick1
1Florida State University, Tallahassee, 2University of Missouri, Columbia

Fatigue is Associated with Diminished Cardiovascular Response to Anticipatory Stress in Patients with Coronary Artery Disease
Julija Gecaite-Stonciene1, Brian Hughes1, Julius Burkauskas1, Adomas Bunevicius1, Nijole Kazukauskiene1, Lissane van Houtum1, Julija Brozaitiene1, Julius Neverauskas1, and Narseta Mickuviene1
1Lithuanian University of Health Sciences, 2National University of Ireland, Leiden University

A Three-week Executive Control Training Enhances Interference Control and Reduces ERN Amplitudes in Patients with OCD
Rosa Grützmann1, Norbert Kathmann1, and Stephan Heinzel2
1Humboldt University Berlin, 2Freie Universität Berlin

Prolonged Positive Emotional Responses Measured with Facial EMG: A Measure of Resilience
Stacey Schaefer, Lauren Gresham, Sterling Johnson, and Richard Davidson
University of Wisconsin, Madison

Symposium 1.1
Facial Expressions: From Low-level Physical Parameter to Social Actions
Session Chair: Florian Bublatzky
Central Institute of Mental Health

Parameter-specific Face and Voice Morphing: Perspectives for Investigating Emotional and Social Perception and Interaction
Stefan Schweinberger, Celina von Eff, Jürgen Kaufmann, Andrea Kowalik, Christine Nussbaum, Ayaka Tsuchiya, and Verena Skuk
Friedrich Schiller University

Understanding Dynamic Facial Expression Communication Across Cultures Using Data-driven Methods
Rachael Jack, University of Glasgow
Processing of Fear-gaze Combinations Under Threat-of-scream Procedure
Morgan Beaurenaut1, Gaia Ozeray1, Emilie Meaux1, Guillaume Dezecache2, and Julie Grèzes1
1PSL Research University, 2Université Clermont Auvergne

Vicarious Learning and Reversal of Threat and Safety Associations: The Role of Gender and Facial Expressions
Florian Bublatzky1, Andreas Olsson2, Tana Spethmann1, Maike Haag1, and Sabine Schellhaas1
1Central Institute of Mental Health, 2Karolinska Institute

Action Decisions to Social Threat
Julie Grèzes and Rocco Mennella
PSL University

8:30 a.m.-10:00 a.m. EDT; 12:30 p.m.-2:00 p.m. UTC
Symposium 1.2
To Generalize or Not to Generalize: An Overview on Subclinical, Pathological and Protective Mechanisms Involved in Generalization Processes
Session Chair: Marta Andreatta
Erasmus University Rotterdam and University of Wuerzburg

Neural Reinstatement Promotes Context-independent Extinction Generalization
Joseph Dunsmoor, Augustin Hennings, Mason McClay, and Jarrod Lewis-Peacock
University of Texas, Austin

Trait Anxiety Hampers the Differentiation Between Threat and Safety Context
Matthias Wieser1,2, Yannik Stegmann2, Marta Andreatta1,2, Paul Pauli2
1Erasmus University Rotterdam, 2University of Wuerzburg

Anxiety Sensitivity as Mediator for Generalization of Conditioned Anxiety
Marta Andreatta1,2, Dorothea Neeuder2, Hannah Genheimer2, Matthias Wieser1, and Paul Pauli2
1Erasmus University Rotterdam, 2University of Wuerzburg

Overgeneralization of Conditioned Fear in PTSD can be Reduced with Sufficient Learning Trials
Shmuel Lissek, Abbey Hammel, and Nathaniel Helwig
University of Minnesota, Twin Cities

10:00 a.m.-11:30 a.m. EDT; 2:00 p.m.-3:30 p.m. UTC
President's Symposium on Diversity, Equity, and Representation
Sponsored by the WISE and the Diversity and Outreach Committee
Session Chair: Lisa Gatze-Kopp
Pennsylvania State University

Recognition Proficiency, Implicit Racial Bias, and Early Face-sensitive ERP Responses
Gizele Anzures and Melissa Mildort
Florida Atlantic University

Examining the Effects of (Mixed) Race on Pain Perception, Evaluation, and Treatment Using the P300 in a Modified Oddball Task
Catherine J. Norris1, Elena Do1, Elise M. Cummings1, and Peter Mende-Siedlecki2
1Swarthmore College, 2University of Delaware

Do Trait Psychological Characteristics Moderate Sympathetic Arousal to Racial Discrimination Exposure in a Natural Setting?
Elizabeth Jelsma, Bridget Goosby, and Jacob Cheadle
University of Texas, Austin

Angry in America: Psychophysiological Responses to Unfair Treatment
Julian Thayer, Luca Carnevali, Andrea Sgoifo, and DeWayne Williams
University of California, Irvine

11:30 a.m.-1:00 p.m. EDT; 3:30 p.m.-5:00 p.m. UTC
Symposium 2.3
David Shapiro: His Life, Legacy, and Influence on Psychophysiology
Session Chair: Julian F. Thayer
University of California, Irvine

A Review of Heart Rate Variability Biofeedback Studies
Paul Lehrer
Robert Wood Johnson Medical School, Rutgers University

Pioneering the Combination of Ambulatory Physiology with Ecological Momentary Assessment: From Paper and Pencil to Electronic Diaries
Cristina Ottaviani
Sapienza University of Rome

Ethnic Differences in Blood Pressure: The Role of Vascular Factors
Julian F. Thayer
University of California, Irvine

11:30 a.m.-1:00 p.m. EDT; 3:30 p.m.-5:00 p.m. UTC
Symposium 2.1
Studying Dynamic Emotion Processing Disruptions in Psychiatric Disorder: A Research Framework that Improves Translation to Clinical Impact
Christopher T. Sege1 and Evan J. White2
1Medical University of South Carolina, 2Laureate Institute for Brain Research

Discussant: Lisa M. McTeague
Medical University of South Carolina

Picture Viewing as a Template for a Dynamic Systems Approach to Investigating Disrupted Emotional Processing
Evan White1, Christopher Sege2, and DeMond Grant3
1Laureate Institute for Brain Research, 2Medical University of South Carolina, 3Oklahoma State University

Coping in the Clinic: Effects of Clinically Elevated Anxiety on the Dynamic Mechanisms of Avoidance and Escape Preparation
Christopher Sege, James Lopez, Holly Fleischmann, and Lisa McTeague
Medical University of South Carolina
Individual Differences in Error Monitoring After Conditioned Contextual Threat
Danielle Taylor¹, Jacob Kraft², Kristen Frosio³, Danielle Deros², Kaitlyn Nagel², and DeMond Grant²

Electrophysiological Measures of Reward Sensitivity in Gambling and Non-gambling Contexts
Emilio Valadez¹ and Robert Simons²
¹University of Maryland, College Park, ²University of Delaware

11:30 a.m.-1:00 p.m. EDT; 3:30 p.m.-5:00 p.m. UTC
Symposium 2.2

Bursts of the Brain: Rethinking the Structure and Function of Beta and Gamma Oscillations
Session Chair: David Cole
Teaching Tree

Discussant: David Cole
Teaching Tree

Dynamic Modulation of Subthalamic Beta Bursts and Motor Performance
Flavie Torrecillos
University of Oxford

Differential Inputs to Deep and Superficial Lamina Drive Beta Bursts in Human Motor Cortex
James Bonaluto
Le Centre National de la Recherche Scientifique

The Effects of Proactive and Reactive Inhibitory Control on Sensorimotor and Fronto-central Beta-bursts in Healthy Humans
Jan Wessel
University of Iowa

The Network Determinants of Gamma Burst Frequency and Duration
André Longtin and Arthur Powanwe
University of Ottawa

4:00 p.m.-5:00 p.m. EDT; 8:00 p.m.-9:00 p.m. UTC
Invited Address

A Neurocomputational Account of Social Bias: How it Forms, Affects Decisions, and Spreads
David Amodio, PhD
Professor of Psychology and Neural Science, New York University Professor of Social Psychology, University of Amsterdam

5:00 p.m.-6:30 p.m. EDT; 9:00 p.m.-10:30 p.m. UTC
Big Ideas Session: Psychophysiology Across the Lifespan

Childhood Family Stress and Women's Health: Respiratory Sinus Arrhythmia Stress Reactivity as Risk and Resilience Factors
Li Shen Chone, Anna Yeo, and Betty Lin
University of Albany, State University of New York

Cerebrovascular Reactivity in Aging: Measures of Timing and Amplitude Predict Brain and Cognitive Health
Benjamin Zimmerman, Kathy Low, Grace Clements, Daniel Bowie, Hannah Jones, Samantha Rubenstein, Gabriele Gratton, and Monica Fabiani
University of Illinois, Urbana-Champaign

Transient Dynamics of Resting-state MEG Networks in Cognitive Ageing
Roni Tibon, Kamen Tsvetanov, Darren Price, David Nesbitt, and Richard Henson
University of Cambridge

Age-related Reductions in Neural Selectivity: Evidence from EEG
Rachelle Pichot, Daniel Henreckson, Morgan Foley, and Joshua Koen
University of Notre Dame

Aperiodic EEG Power Spectrum Predicts ADHD Risk in Infancy and Adolescence
Sarah Karalunas¹, Brendan Ostlund², McKenzie Figuracion³, Hanna Gustafsson¹, Dan Foti¹, Joel Nigg³, and Elinor Sullivan¹
¹Purdue University, ²Pennsylvania State University, ³Oregon Health & Sciences University

5:00 p.m.-6:30 p.m. EDT; 9:00 p.m.-10:30 p.m. UTC
Symposium 3.1

Anxiety, Working Memory, and Attentional Control: The Neural and Biological Mechanisms Instantiating This Complex Interaction
Session Chairs: Richard Ward and Christine Larson
University of Wisconsin, Milwaukee

The Effects of Anxiety on Working Memory and Unnecessary Storage of Distracters
Richard Ward¹, Salahadin Lotfi¹, Daniel Stout²,³, Han-Joo Lee¹, and Christine Larson¹
¹University of Wisconsin, Milwaukee, ²University of California, San Diego, ³VA San Diego Healthcare System

Maintaining Negative Information in Working Memory Modulates Frontoparietal Activity During Aversive Anticipation
Daniel Stout¹,², Jessica Bomyea¹,², Victoria Risbrough¹,², and Alan Simmons¹,²
¹University of California, San Diego, ²VA San Diego Healthcare System

The Right DLPFC Plays a Mechanistic Role in the Interaction Between Anxiety and Cognition
Nicholas Balderston¹, Monique Ernst², and Christian Grillon²
¹University of Pennsylvania, ²National Institutes of Health

Associations Between Worry and Verbal Working Memory are Dependent on Estradiol
Nazanin Derakhshan and Bethany Chapman
Michigan State University

Error-related Negativity and its Relationship with Anxiety in Brance Cancer: Implication for Targeting Attentional Control
Nazanin Derakhshan¹, Bethany Chapman¹, Jessica Swainston¹, Courtney Louis², and Jason Moser²
¹Birkbeck University of London, ²Michigan State University
Suicidal Thoughts, Behaviors, and Their Relationship to Neural Functions
Session Chairs: Greg Hajcak and Thomas Joiner
Florida State University

Discussant: Greg Hajcak
Florida State University

Neurophysiological Response to Reward and Suicidality in Adolescents
Samantha Pegg and Autumn Kujawa
Vanderbilt University

Are There Neural Differences Between Those with Suicidal Thoughts and Behaviors and Non-suicidal Controls? An Examination of the REWP, LPP, ERN, and P300 in Depression
Austin Gallyer, Nicholas Santopetro, Marielle Gomez, Julia Klawohn, Thomas Joiner, and Greg Hajcak
1Florida State University, 2Humboldt-Universität zu Berlin

Reward Sensitivity Abnormalities in Suicidal Thoughts and Behaviors: The Importance of Reinforcement Valence
Brian Albanese and Norman Schmidt
1Auburn University, 2Florida State University

Multimodal Neuroimaging of Suicidal Thoughts and Behaviors in a U.S. Population-based Sample of School-aged Children
Pablo Vidal-Ribas, Delfina Janiri, Gaelle Doucet, Narun Pompatanananukul, Dylan Nielson, Sophia Frangou, and Argyris Stringaris
1National Institutes of Health, 2Sapienza University of Rome, 3Boys Town National Research Hospital, 4University of Otago, 5National Institute of Mental Health, 6The John A. McCauley Foundation, 7Icahn School of Medicine at Mount Sinai, 8University of British Columbia

6:30 p.m.-8:00 p.m. EDT; 10:30 p.m.-12:00 a.m. UTC
Journal of Psychophysiology Workshop
Submitting Registered Reports to Psychophysiology

6:30 p.m.-8:00 p.m. EDT; 10:30 p.m.-12:00 a.m. UTC
Symposium 4.1
Functional Correlates of the Stimulus-preceding Negativity (SPN)
Session Chairs: Steven Hackley and Ya Zheng
1University of Missouri, Columbia, 2Dalian Medical University

Stimulus Modality and Contents Differently Affect SPN Cortical Distributions and Components
Yasunori Kotani, Yoshimi Ohgami, Nobukiko Yushida, Akira Kunimatsu, Shigeru Kiryu, and Yusuke Inoie
1Tokyo Institute of Technology, 2University of Tokyo, 3International University of Health and Welfare, 4Kitasato University

Decomposing the Effort Paradox During Reward Anticipation
Ya Zheng and Mang Zhang
Dalian Medical University

SPN and Predictive Coding During Reinforcement Learning
Steven Hackley, Sabrina Bhangal, Shreyas Sharma, Xi Ren, and Fernando Valle-Inclán
1University of Missouri, Columbia, 2University of La Coruna

6:30 p.m.-8:00 p.m. EDT; 10:30 p.m.-12:00 a.m. UTC
Symposium 4.2
Precursors and Outcomes of Interpersonal Biological Interdependence
Session Chairs: Ashley Kuelz and Emily Butler
University of Arizona

Interpersonal Dynamics of Parasympathetic Function: Connections to Empathy and Closeness
Ashley Kuelz and Emily Butler
University of Arizona

8:00 p.m.-9:30 p.m. EDT; 12:00 a.m.-1:30 a.m. UTC
Poster Session 1
Presidental Symposium: Understanding Psychophysiological Processes within a Developmental Science Framework
Session Chair: Kristin A. Buss
The Pennsylvania State University

Discussant: Adele Diamond
University of British Columbia

Towards a Social Neuroscience of Human Attachment
Pascal Vrtička
University of Essex, Colchester (UK)

Psychophysiological Tools for Understanding Developmental Change in Children and Adults
Rebecca J. Brooker
Texas A&M University

Development, ERPs, and RDoC: Identifying Pathways to Psychopathology
Isaac T. Petersen, Alexis Hosch, and Eliot Hazeltine
University of Iowa

Psychophysiological Emotion Regulation and Digital Technology Use in Anxious Adolescents
Sarah Myruski1, Jennifer DeRutte2,3, Amy K. Roy4,5, Tracy A. Dennis-Tiwary2,3
1The Pennsylvania State University, 2Hunter College, CUNY, 3The Graduate Center, CUNY, 4Fordham University, 5NYU Langone School of Medicine

Physiological Influence in Doctor-patient Interactions
Marta Vigier1,2, Kathrine Thorson3, Elisabeth Andritsch1, Clemens Farkas1, Andreas Schwerdtfeger1,4
1Medical University of Graz, 2University of Graz, 3Barnard College of Columbia University, 4BioTechMed Graz

How the Heart Helps to Deal with Unfamiliar Others – Resting Heart Rate Variability’s Benefits for Distanced Social Interactions
Heidi Mauersberger1, Till Kastendieck1, Anna Czarna2, and Ursula Hess1
1Humboldt-Universität zu Berlin, 2Jagiellonian University, Kraków

Can I See Your Open Face? Openface 2.0 as an Alternative to Electromyography for Studying Facial Mimicry of Mask-Covered Faces During the COVID-19 Pandemic
Till Kastendieck, Stephan Zillmer, and Ursula Hess
Humboldt-Universität zu Berlin

Everybody Gets a Second Chance, the Circumstance to Get Rejected? The Influence of a Second Offer in the Ultimatum Game on Decision Making and EEG Feedback Responses
Johannes Rodrigues1, Martin Weiß2, Patrick Müssel1, and Johannes Hewig1
1Julius-Maximilians Universität Würzburg, 2Universitätsklinikum Würzburg, 3Freie Universität Berlin

Effects of Nature Exposure on EEG Indices of Cognitive Control
Sara LoTemplio1, Ty McKinney1, Amy McDonnell1, Emily Scott1, Spencer Castro2, Kevin Greenberg1, David McNay1, Brennan Payne1, Matt Euler1, and David Strayer1
1University of Utah, Salt Lake City, 2University of California, Merced

Symposium 5.1
State Affect Influences in Event-related Potential Research: Considerations for Understanding Internalizing and Externalizing Psychopathology
Session Chair: Brian Albanese
Auburn University

Discussant: Anna Weinberg
McGill University

Cognitive Control Under Stress in PTSD: Cross-sectional and Prospective Evidence from the P3 in Two Clinical Samples
Brian Albanese1, Hailey Fox1, and Norman Schmidt2
1Auburn University, 2Florida State University

Difficulties in Regulating Emotion: The Effect on Intraindividual Change in the Late Positive Potential
Sierra Flynt1, Annmarie Huet1, Caroline Gooch1, Nicholas Allan1, Norman Schmidt2
1Ohio University, 2Florida State University

Acute Stress Modulation of the Cannabis Cue-elicited Late Positive Potential: Towards a Novel Biomarker of Cannabis Use Disorder Severity and Chronicity
Richard Macatee, Kaveh Afshar, and Meghan Carr
Auburn University

Affective Context, Prior Experience and Agency: Effects on Cognitive Reappraisal and Error Monitoring
Annmarie MacNamara, Michael Imburgio, and Elizabeth Bauer
Texas A&M University

Symposium 5.2
Beyond Grand Averaging: Using Single-trials ERPs to Study Within-person Variation in Neurocognitive Processes
Session Chairs: Hannah Volpert-Esmond1 and Bruce D. Bartholow2
1University of Texas, El Paso and 2University of Missouri, Columbia

Discussant: Elizabeth Page-Gould, University of Toronto

Race and Gender Categorization of Faces: The Benefit of Examining Within-person Variation
Hannah Volpert-Esmond1 and Bruce Bartholow2
1University of Texas, El Paso and 2University of Missouri, Columbia

A Trial-level Analysis of Anxiety, Depression, and Negative Performance-related ERPs
Margaret Tobias and Tiffany Ito
University of Colorado, Boulder
An Examination of Single-trial Late Positive Potentials to Socially-relevant Images in Probands with Psychosis, Their Siblings, and Controls: A Multilevel Modeling Approach
Peter Clayson¹, Jonathan Wynn², Michael Green², and William Horan³
¹University of South Florida, ²VA Greater Los Angeles Healthcare System, ³VeraSci

Using Reinforcement Prediction Errors to Filter the Information Content From Single Trial EEG
James Cavanagh
University of New Mexico

Neural Correlates of Error Monitoring as Markers of Risk, Mechanisms, and Trajectories of Mental Disorders
Session Chairs: Anja Riesel¹ and Julia Klawohn²
¹University Hamburg, ²Humboldt-Universität zu Berlin
Discussant: Michael J. Larson
Brigham Young University

Error-related Negativity and Polygenetic Risk for OCD
Julia Klawohn¹, Anja Riesel¹, and Norbert Kathmann¹
¹University Hamburg, ²Humboldt-Universität zu Berlin

From Risk to Illness: Mapping Pathways to Anxiety by Examining Associations Between Life Stress and the Error-related Negativity
Anna Weinberg, Iulia Banica, and Aislinn Sandre
McGill University

The Predictive Validity of the Error-related Negativity for COVID-19 Related Risk, Stress, and Symptoms
Anja Riesel¹, Kai Härpfer, Norbert Kathmann, and Julia Klawohn
¹University Hamburg, ²Humboldt-Universität zu Berlin

Neural Indicators of Performance Monitoring in Depression: The Error-related Negativity and Reward Positivity as Targets and Predictors of Response to Aerobic Exercise
C.J. Brush¹, Greg Hajcak¹, and Brandon Alderman²
¹Florida State University, ²Rutgers University

The Brain in Control: Investigation of Individual Differences in Cognitive Control
Session Chairs: Gabriele Gratton and Monica Fabiani
University of Illinois, Urbana-Champaign

Inhibitory Control Deficits in Healthy Aging and Lesion Patients as Identified by Bayesian Modeling and Beta-bursts
Jan Wessel, Yoojeong Choo, Dora Matzke, Mark Bowren, and Daniel Tranel
University of Iowa

Cognitive Control and Neurodevelopment in Psychotic Disorders
Cameron Carter, Jason Smucny, Joyce Guo, Tyler Lesh, Tara Niendam
University of California, Davis

Jointly Modeling Brain and Behavior to Derive Neurally-informed Measures of Proactive Cognitive Control
Frini Karayanidis¹, Fayeem Bin Aziz¹, Guy Hawkins¹, Montana McKewen¹, and Mark Steyvers²
¹University of Newcastle, ²University of California, Irvine
Not Only Theta: Complementary Roles of Theta and Alpha Oscillations in Cognitive Control
Gabriele Gratton, Grace Clements, Daniel Bowie, Kathy Low, and Monica Fabiani
University of Illinois, Urbana-Champaign

8:00 p.m.-9:30 p.m. EDT; 12:00 a.m.-1:30 a.m. UTC
Big Ideas Session: Interpersonal Psychophysiology

A Friendly Touch Supports, a Cold Touch Frightens: Social Support During Instructed Fear of Shock
Stephen Benning1 and Stephany Molina2
1University of Nevada, Las Vegas, 2Bridgewater State Hospital

Sweating the Big Stuff: Arousal and Stress as Functions of Self-uncertainty and Identification
Joshua Brown1, Zachary Hohman1, Elizabeth Niedbala2, and Alec Stinnett1
1Texas Tech University, 2U.S. Army Aeromedical Research Laboratory

Magnitude and Length, But Not Pattern, of Physiological Linkage Predict Communication of Emotion Via Touch
Heather Kissel, Mikaley Bolden, Prisha Thapar, Alyssa Tsui, and Bruce Friedman
Virginia Tech

Interceptive Awareness Moderates the Influence of Affect in Social Perception
Jolie Wormwood
University of New Hampshire

Effects of Neural Synchrony on Reactions to Intergroup Threat: Preliminary Evidence
Bettina J. Casad1, Jillian E. Franks1, Zachary W. Petzel1, Melinda M. Kittleman1, Christina E. Garasky1, and Taylor R. Jancetic1
1Texas A&M University, 2University of Georgia

9:30 p.m. EDT; 1:30 a.m. UTC
Student Social

Main Meeting - Day 3 and Post-conference Workshop

Saturday, October 16, 2021

8:30 a.m.-10:00 a.m. EDT; 12:30 p.m.-2:00 p.m. UTC
Symposium 8.1
Turning Threat into Safety: A Variety of Emotional Manipulations and Their Underlying Neuronal Mechanisms
Session Chairs: Barbara Schmidt1 and Matthias F.J. Sperl1
1University of Jena, 2University of Marburg

Pharmacological Modulation of Threat and Safety: Noradrenaline Potentiates Conditioned Fear Bradycardia and N170/LPP ERP Amplitudes
Matthias Sperl1,2, Christian Panitz1, Nadine Skoluda1, Urs Nater1, Diego Pizzagalli1, Christiane Hermann2, and Erik Müller1
1University of Marburg, 2University of Gießen, 3Harvard Medical School, 4University of Vienna

Threat Controllability, Picture Processing and Error Salience
Elizabeth Bauer1, Gina Thomas2, and Annmarie MacNamara1
1Texas A&M University, 2University of Georgia

Hypnotic Suggestions of Safety in the Lab and in the Intensive Care Unit
Barbara Schmidt
University of Jena

Lateral Prefrontal Goal Representations Causally Influence Behavioral Avoidance: A TMS/fMRI Study
Regina Lapate1, Marisa Heckner2, Audrey Phan3, Mark D’Esposito1
1University of California, 2Research Center Juülich, 3University of Berkeley

8:30 a.m.-10:00 a.m. EDT; 12:30 p.m.-2:00 p.m. UTC
Symposium 8.2
Open and Reproducible Science in Psychophysiological Research – Challenges and Emerging Solutions
Session Chair: Tina Lonsdorf
University Medical Center Hamburg-Eppendorf

A Data-processing Multiverse Analysis of Event-related Potentials (ERPs): Implications for ERP Reliability, Data Quality, and Experimental Effects
Peter Clayson1, Scott Baldwin1, Harold Rocha1, and Michael Larson2
1University of South Florida, 2Brigham Young University

Distraction Under Competition: A Multi-laboratory Multiverse Study of Limited Capacity
Andreas Keil1, Moran Eidelman1, Lior Kitzmann2, Matthias Müller3, Nava Levit-Binnun3, Dean Sabatinelli3, Maev Boyan3, and Kierstin Riels1
1University of Florida, 2Sagol Center for Brain and Mind Interdisciplinary Center, 3University of Leizpzig, 4University of Georgia

Navigating the Multiverse of Skin Conductance Response Quantification Approaches
Manuel Kuhn1,2, Rachel Sjouwerman1, Anna Gerlicher3,4, Sabrina Illius1, Maren Klingelhöfer-Jens1, Angelos Krypotos5,6, and Tina Lonsdorf1
1University Medical Center Hamburg-Eppendorf, 2McLean Hospital/Harvard Medical School, 3Johannes Gutenberg University Medical Center, 4University of Amsterdam, 5Utrecht University, 6KULeuven

Opening Pandora’s Box: An Inventory of Open Data in Psychophysiology
Tina Lonsdorf
University Medical Center Hamburg-Eppendorf

Is There an Open Access Advantage for Studies of Human Neurophysiology? Impact of Open Access on Citations and Altmetrics
Michael Larson1, Peter Clayson2, and Scott Baldwin1
1Brigham Young University, 2University of South Florida

10:00 a.m.-11:00 a.m. EDT; 2:00 p.m.-3:00 p.m. UTC
Invited Address
Speech Processing with (and without) Neural Oscillations
Anne-Lisa Giraud, PhD
Professor, Department of Neuroscience, University of Geneva
Multilevel modeling (MLM) is a statistical analysis used to analyze datasets where cases are not independent (e.g., repeated measures), as is commonly the format in which psychophysiological data is recorded. Moreover, MLM is a flexible analysis that can be learned once and readily adapted to most psychophysiological designs. Especially for psychophysiologists who are used to working with Within-Subjects ANOVA, MLM offers an improved method for harnessing the statistical power of within-subjects designs and can easily incorporate continuous predictors.

This workshop will provide a practical introduction to MLM for psychophysiologists, including advanced topics like growth curves, non-Gaussian data, cross-classified models, mediation, moderation, and the calculation of effect sizes. We will also discuss visualization, how to work through convergence issues, and a brief nod to alternatives to MLM in different data contexts. Workshop materials will include example data and syntax for SPSS, R, and SAS. The goal is for you to leave the workshop with the conceptual and pragmatic knowledge you need to immediately begin analyzing psychophysiological data with MLM.

Outline of the Workshop:
A. Introduction
B. Background Concepts
C. MLM Theory
D. Conducting an MLM Analysis Step-By-Step
E. Reporting MLM Results
F. Advanced Applications
   1. Effect Size and Power with MLM
   2. Moderation in MLM
   3. Multilevel Mediation
   4. N-level Models
   5. Nested Growth Curves
   6. Generalized MLM Models
   7. Poisson MLM
   8. Logistic MLM
   9. Bootstrapping MLM Models
  10. Cross-classified Models
G. Conclusion and Recommendations