Biofeedback and Applied Psychophysiology:
ROOTED IN THE PAST, EMPOWERING THE FUTURE

MARCH 13-16, 2019
DENVER MARRIOTT TECH CENTER
DENVER, COLORADO
Come see what’s new (and what’s really, really old) at our booth!

VISIT BOOTH 1 & 2 to check out our collection of cool vintage biofeedback equipment, as well as the latest neurofeedback and biofeedback hardware, accessories and supplies.
• Quantify stress and teach resilience with this all-in-one package.

• Simply attach the wireless sensor to a finger to rapidly start assessments and Biofeedback therapy.

• Includes fully interpreted stress test results for both clinician and client.

• Pre-programmed relaxation exercises to enhance your clients’ success.

• Clinically-oriented design that translates arousal, temperature, respiration and HRV into self-explanatory displays and games.

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Welcome

Association for Applied Psychophysiology & Biofeedback (AAPB), the pioneering professional society devoted to education and research in this field, welcomes you to its 50th Annual Scientific Meeting.

The goal of this conference is to bring clinicians, physicians, researchers and professionals involved with biofeedback and applied psychophysiology together to exchange information, ideas, scientific data and to share experiences. Biofeedback is a process that enables an individual to learn how to change physiological activity for the purposes of improving health and performance. Precise instruments measure physiological activity such as brainwaves, heart function, breathing, muscle activity and skin temperature. These instruments rapidly and accurately “feed back” information to the user. The presentation of this information — often in conjunction with changes in thinking, emotions and behavior — supports desired physiological changes. Over time, these changes can endure without continued use of an instrument. Hot topics in biofeedback encompass HRV, Neurofeedback, Optimal Performance.

Our dynamic schedule of presenters and subject matter categorization was designed with YOU — applied psychophysiology and biofeedback professionals — in mind. At the meeting, you will:

- **Learn** effective practices, practical ideas, and innovative solutions in sessions covering hot topics, basic science, clinical Interventions, interpersonal communications and optimal performance
- **Connect** with vendor partners who offer a wealth of information on new products, services and solutions for your needs
- **Engage** with professionals who share common interests
• 8 Keynote Sessions featuring WORLD renowned scientists and practitioners:

President’s Lecturer: Michael Larson, PhD, Brigham Young University, will present a keynote titled “How Can We Improve the Rigor and Replicability of Applied Psychophysiology?”

Mark Schwartz, PhD, Emeritus, Mayo Clinic, will present a keynote titled “Our Roots, Our People, and Our Journey: Why, Where, Who, What, When”

Barry Sterman, PhD, Professor Emeritus, Neurobiology & Bio-behavioral Psychology, UCLA will deliver a Lunch and Learn keynote titled “Turning Down the Noise: The SMR Story”

Yury Kropotov, PhD, USSR State Prize Winner, Doctor Honoris Causa of Academy of Gdansk, will present a keynote titled “Extracting Functional Neuromarkers from Spontaneous and Evoked EEG for Constructing Protocols of Neuromodulation”

Raouf (Ron) Gharbo, DO, Eastern Virginia Medical School, Dept. of Physical Medicine & Rehabilitation, will present a keynote titled “The Unifying Shift Towards Parasympathetic Health”

2019 Distinguished Scientist Lecturer: Fredric Shaffer, PhD, BCB-HRV, Truman University, will present his keynote titled “It Takes a Village to Increase HRV: A Celebration of My Colleagues’ Inspiring Ideas”

Seth Conger, BCN-T, Chief Operating Officer, Carolina Healthspan Institute, will present a Lunch and Learn keynote titled “Build Your Dream Business - Strategies & Systems to Ensure Sustainable Growth, Employee Excellence and Clinical Results”

Erik Peper, PhD, Institute for Holistic Health Studies, San Francisco State University, will present his keynote titled “Past, Present, and Future: The Hope and Possibilities for Feedback-Lessons Learned”

• Over 25 Pre-conference Workshops on Wednesday, March 13 and Thursday, March 14

• 40 Breakout Sessions that include a variety of panels, symposia and lectures

• Poster Abstract Viewing featuring the latest research will be exhibited onsite

• Exhibit Hall and Networking Receptions to allow you to meet and collaborate with those who share an interest in biofeedback

• MAXIMUM 37.5 total program APA CE credits allows you to get the lion’s share of required credits for licensures and certifications
CONFERENCE TRACKS and LEVELS

The meeting sessions are categorized into the following TRACKS, to allow you to select those sessions that are most relevant to you.

Basic Science (All Levels): Applied Psychophysiology and Biofeedback are objective and evidence-based fields. They are grounded in an understanding of several related disciplines; neurophysiology, neuroanatomy, cognitive psychology, neuropsychology, cardiovascular physiology, respiratory physiology, public health and others. AAPB supports and encourages research that contributes to the development and growth of applied psychophysiology and biofeedback and the program committee is seeking quality research from any discipline linked to biofeedback or applied psychophysiology. These sessions focus on underlying mechanisms and may be experimental, descriptive or literature reviews.

Clinical Interventions and Optimal Performance: Sessions in this track target licensed clinicians working with patients as well as performance trainers and educators working with clients. These sessions provide evidence for successful biofeedback training options. The presentations typically involve patients wanting specific therapeutic treatments and interventions to address clinically diagnosed problems or healthy clients wanting to improve overall functioning, seeking techniques and approaches to enhance optimal performance.

Hot Topics: Presentations featured in this track are focused on new ideas, technological advances, challenges and new applications of psychophysiological science. These sessions will provide a venue for more speculative thinking as well as information on developments from other disciplines that could impact the way we conduct biofeedback. The emerging area of portable, miniaturized, wearable or implantable sensors is one example of a Hot Topic.

All session LEVELS are categorized as Introductory, Intermediate, Advanced and All. Complete information, including session descriptions, learning objectives, presenter bios, associated risks, practice GAP correction analysis and more are available online at www.aapb.org, in full compliance with APA and AMA continuing education requirements.
The Association for Applied Psychophysiology and Biofeedback (AAPB) was founded in 1969 as the Biofeedback Research Society. The goals of the association are to promote a new understanding of biofeedback and advance the methods used in this practice. AAPB is a non-profit organization as defined in Section 501(c)(6) of the Internal Revenue Service Code.

**Mission**
AAPB promotes and represents the science and practice of self-regulation to enhance health and performance.

**Vision**
To integrate self-regulation into everyday life.

**Strategic Goals**
- Public Awareness
- Standardization
- Membership Growth
- Innovation

Contact us at: info@aapb.org or 800.477.8892.

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**CONTINUING EDUCATION**

**Psychologists:** AAPB is approved by the American Psychological Association (APA) to offer continuing education for psychologists. AAPB maintains responsibility for this program and its content. The AAPB 50th Annual Scientific Meeting offers a MAXIMUM of **37.5 credits**.

**BCIA Recertification:** Hour-for-hour attendance in breakout sessions and workshops may be used to fulfill the continuing education requirement for recertification with the certificate of attendance.

**Physicians Accreditation Statement:** In support of improving patient care, this activity has been planned and implemented by Amedco LLC and the Association for Applied Psychophysiology & Biofeedback. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

**Credit Designation Statement** - Amedco designates this live activity for a maximum of 38 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Distinguished Scientist Award

Congratulations to:
Fredric Shaffer, PhD, BCB-HRV
Professor of Psychology, Truman State University

The AAPB Distinguished Scientist Award is presented annually “in recognition of an outstanding career and scientific contribution to the field of applied psychophysiology and biofeedback.” This award recognizes a scientist who has advanced Biofeedback through a significant body of research conducted, as judged by publications, awards and peer reviews, and has made a major impact upon the field of study, both nationally and/or internationally. Nominees must hold a doctoral degree in a psychology, biomedical science, medicine, or other health-related field. Recipients are selected based on the following evaluation criteria:

- Scientific importance of research discoveries
- Mentorship of students, postdoctoral fellows, and new faculty
- Continued impact on the field

The Distinguished Scientist Award winner will present at the 2019 Annual Scientific Meeting on Saturday, March 16 at 9:30 am - 10:30 am. Be sure to support Dr. Shaffer in this monumental achievement by attending his special presentation:

It Take a Village to Increase Village to Increase HRV: A Celebration of My Colleague’s Inspiring Ideas

A Sincere Thank You to Our 2019 Sponsors

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ABOUT OUR RECIPIENT:
Fredric Shaffer, PhD, BCB-HRV is a biological psychologist and professor of Psychology at Truman State University, where he has taught since 1975 and has served as Director of Truman’s Center for Applied Psychophysiology since 1977. In 2008, he received the Walker and Doris Allen Fellowship for Faculty Excellence. In 2013, he received the Truman State University Outstanding Research Mentor of the Year award. Dr. Shaffer was the principal co-editor of Evidence-Based Practice in Biofeedback and Neurofeedback (3rd ed.) and authored 12 of its chapters. He was a co-editor with Donald Moss of Foundations of Heart Rate Variability Biofeedback: A Book of Readings. Dr. Shaffer is a BCIA Senior Fellow in Biofeedback. Dr. Shaffer is the Past-Chair of the Biofeedback Certification International Alliance (BCIA), director of its Biofeedback and HRV Biofeedback Task Forces, and member of its Neurofeedback Task Force, and Treasurer for the Association for Applied Psychophysiology and Biofeedback (AAPB).

Dr. Shaffer joins this distinguished the following group of individuals. Past awardees include:
1995 - Neal Miller, PhD
1996 - Niels Birbaumer, PhD
1997 - John Basmajian, MD
1998 - Edward Taub, PhD
1999 - Johann Stoyva, PhD and Tom Budzynski, PhD
2000 - Angele McGrady, PhD
2001 - Bernard T. Engel, PhD
2002 - Frank Andrasik, PhD
2003 - Edward Blanchard, PhD
2004 - M. Barry Sterman, PhD
2005 - Paul Lehrer, PhD
2006 - Joel Lubar, PhD
2007 - Susan Middaugh, PhD
2008 - Richard Gevirtz, PhD
2009 - John Arena, PhD
2010 - Alan Glaros, PhD
2011 - Steven Wolf, PhD, PTA, PT
2012 - Julian F. Thayer, PhD
2013 - Erik Peper, PhD
2014 - Steven Baskin, PhD
2015 - Estate Sokhadze, PhD
2016 - Michael Thompson, MD; Lynda Thompson, PhD
2017 - Ute Strehl, PhD
2018 - Evgeny Vaschillo, PhD

Lifetime Achievement Award
Frank Andrasik, PhD
Richard Gevirtz, PhD
Paul Lehrer, PhD
Mark S. Schwartz, PhD

Lifetime Service Award
Presented by AAPB, Biofeedback Certification International Alliance (BCIA) and International Society for Neurofeedback and Research (ISNR): Judy Crawford, BCIA Executive Director
Our “First Class” of AAPB Honorary Fellows:
The AAPB Fellowship Program is one of earned recognition for AAPB members who are making significant and sustained contributions to the science and practice of applied psychophysiology and biofeedback. The AAPB Board of Directors, in conjunction with the AAPB Professional Practices Committee, may nominate any person who is recognized for lifetime significant contributions to AAPB and/or the field of biofeedback for the title of **Honorary Fellow of AAPB**. This is a lifetime honorary designation for use within the AAPB community or interprofessional correspondence only, subject to continuing AAPB membership and compliance with the AAPB Ethical Standards.

The AAPB Board has awarded the following individuals as “Honorary Fellows of AAPB”:

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<th>Name</th>
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<td>Frank Andrasik, PhD</td>
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**Exhibit Hall and Registration Hours:**

**Exhibit Hours**

- **Thursday, March 14, 2019**
  - Exhibitor Set-up 8:00am – 12:00pm
  - Exhibit Hall Open 2:00pm – 7:45pm (optional)
  - Opening Reception in Exhibit Hall 7:45pm– 9:30pm

- **Friday, March 15, 2019**
  - Exhibit Hall Open 7:00am – 7:45 pm
  - Poster/President’s Reception in Exhibit Hall 7:45pm– 9:30pm

- **Saturday, March 16, 2019**
  - Exhibit Hall Open 7:00am – 1:00pm
  - Exhibitor Teardown 1:00pm – 4:00pm

**Registration Hours**

- **Tuesday, March 12**
  - 5:00pm to 7:00pm

- **Wednesday, March 13**
  - 7:00am to 7:00pm

- **Thursday, March 14**
  - 7:00am to 7:00pm

- **Friday, March 15**
  - 7:00am to 7:00pm

- **Saturday, March 16**
  - 7:00am to 6:30pm
This meeting would not be possible without the dedication, passion and ongoing efforts of the following individuals:

Francine Butler, PhD
Committee Co-Chair
Empressa Consulting

Jack (JP) Ginsberg, PhD
Committee Co-Chair
Clinical Psychologist/Neuropsychologist
WJB Dorn VA Medical Center

Heather Frostman, MA, LPCC
Psychotherapist
Heart of Broomfield Counseling, LLC

Urszula Klich, PhD
Clinical Psychologist
My Mindful Way of Life, LLC

Doil Montgomery, PhD
Psychologist

Hal Myers, PhD
Chairman of the Board, COI
Thought Technology Ltd.

Jay Gunkelman, QEEGT
Chief Scientific Officer
Brain Science International

Heather Poupore-King, PhD
Clinical Assistant Professor
Stanford University

Genomary Krigbaum, MA, PsyD, BCB, LP
Consultant-Psychologist

Christine Sanchez, PhD, CC-AASP
Mental Performance Specialist
Quarterline

James Seberger, MD, PhD
Physician
Cognitive Performance & Health

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2019 BCIA Francine Butler Scholarship Recipients

This award pays all customary BCIA certification fees and is given to an outstanding student who has completed their didactic education at a regionally accredited academic institution and who shows great promise to our field.

Moe Fahti and Kristina Johnson, recommended by Dr. Richard Gevirtz of California School of Professional Psychology

Tamazur Karim, recommended by Dr. Carol Austad of Central Connecticut State University

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Be sure to visit the exhibitors in Evergreen Ballroom A-C
A wealth of knowledge awaits....
DAILY PROGRAM:

Tuesday, March 12

Registration Open
Evergreen Foyer
5:00pm - 7:00pm

Wednesday, March 13

Registration Open
Evergreen Foyer
7:00am - 7:00pm

Pre-Conference Workshop Attendee ONLY
Continental Breakfast
Conifer/Peak Foyers
7:00am - 8:00am

Pre-Conference Workshops (Admission to pre-conference workshops are by ticket only. Tickets may be purchased at the registration counter)

FULL DAY WORKSHOPS

Beginning at 8:00am — all full-day sessions will be concluded by 5pm or 5:30pm

Time: 8:00am-5:30pm
Room: Blanca Peak
WS01: BCIA Heart Rate Variability Biofeedback Certificate of Completion Workshop - Part 1**
Presenters: Fredric Shaffer, PhD, BCB; Donald Moss, PhD, BCB, BCN
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
Target Audience: Biofeedback/neurofeedback practitioners, psychologists, clinical counselors, clinical social workers, marriage and family therapists, nurses, physicians, and other healthcare professionals and academicians interested in utilizing heart rate variability (HRV) biofeedback in their practice or research.
CE credits: 7.5
** This full-day workshop fulfills 7.5 hours of BCIA’s Certificate of Completion in Heart Rate Variability (HRV) Biofeedback didactic blueprint and provides a practical introduction to this exciting modality.
WS02: The Use of Neurostimulation and QEEG in Clinical Practice: Part 1
Presenter: Nicholas Dogris, PhD, QEEG-D, BCN
Level: Intermediate
Track: Basic Science (All Levels)
Focus: Clinical
Target Audience: Anyone interested in Neuromodulation techniques in clinical practice.
CE credits: 7

WS04: Optimal Performance: Single Channel to QEEG, Beginners to Olympic, Office to Home Practice
Presenters: Vietta Wilson, PhD; Lindsay Thornton, PhD
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
Target Audience: Those who have some experience in biofeedback/neurofeedback and sport psychology.
CE credits: 7

WS05: General Introduction to Biofeedback Peripherals Workshop
Presenter: Frank de Gregorio, DEC
Level: Introductory
Track: Basic Science (All Levels)
Focus: Clinical and Research
Target Audience: This course is intended for licensed health professionals.
CE credits: 7

WS06: Foundations of Breathing - Teaching Functional Breathing through Posture, Movement, Vocalization and More
Presenter: Brad Lichtenstein, ND, BCB-HRV
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
Target Audience: Anyone interested in learning more about functional breathing and how to teach it to others without equipment.
CE credits: 7
WS07: QEEG-based Assessments and Interventions – Research and Clinical Outcomes

Presenters: Thomas Collura, PhD, MSMHC, QEEG-D, BCN, NCC, LPCC; Jeff Reich, BCN, QEEG-D; Lucas J. Koberda, MD, PhD; Corey Deacon, MSc, DNM, CFMP, BCN, FAARFM candidate, BCAMP, BCHHP, RTN

Level: Intermediate

Focus: Clinical and Research

Target Audience: Practitioners interested in broadening their practices to include neurofeedback using live z-scores, sLORETA, and pulsed electromagnetic stimulation as therapeutic approaches.

CE credits: 7

WS08: Concussions in Hockey: A 3-year Study of Patterns of Injury to Junior and Midget Players

Presenter: Stuart Donaldson, PhD

Level: Intermediate

Focus: Clinical and Research

CE credits: 7

WS09: Adding Neurotherapy to Your Practice BASIC NEUROTHERAPY, CLINICALQ and BRAINDRIVING

Presenter: Paul Swingle, PhD

Level: Introductory

Focus: Clinical

Target Audience: Licensed health care providers

CE credits: 7

WS10: Stimulation Technologies – Audio-visual Entrainment, Cranio-electro Stimulation and Transcranial DC Stimulation – Physiology and Clinical Outcomes

Presenter: Dave Seiver, CET

Level: Intermediate

Focus: Research
Target Audience: This course is particularly suited for those who have been practicing with a clinical population for some time and realize the need for some more innovative tools in their tool chest. This applies to nurses, MDs, hypnotherapists, biofeedback and neurofeedback practitioners.  
CE credits: 7

12:00 pm-1:00 pm  
Lunch Break – ON YOUR OWN

HALF-DAY WORKSHOPS (EVENING)

Time: 5:30 pm to 9:30 pm  
Room: Crestone Peak  
WS11: Healing Heartbreak: Can Neurofeedback Increase Romantic Resiliency?  
Presenter: Penjjean Gracefire, LMHC, BCN, qEEG-D  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical and Research  
Target Audience: Clinicians interested in the neurobiology of romantic attachment, and who are looking for strategies to support clients or patients struggling with unrequited attachments or prolonged grieving.  
CE credits: 4

Time: 5:30 pm to 9:30 pm  
Room: Blanca Peak  
WS12: Integrating Biofeedback & Psychophysiology Training into Sport Psychology Consulting  
Presenter: Wes Sime, PhD, MPH  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical  
Target Audience: Clinicians and educators who are interested in working with Olympic and Professional athletes using sport psychology principles along with applied psychophysiology and biofeedback. Those who are interested in performance enhancing with elite athletes and other performers required psychomotor balance and coordination plus high levels of concentration.  
CE credits: 4
WS13: Establishing a Strong Foundation for Health
Presenters: Cyndi Hope, ND, BCB; Elaine Louis McHugh; Ginger Sweetan; Georgi Stoychev;
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
Target Audience: Session is open to all looking to explore lifestyle interventions for optimal health.
CE credits: 4

WS14: From Case Studies to Hands-On: A Practical Approach to Trauma and PTSD
Presenters: Santiago Brand, BA, ESP, BCN, BCB; Linda Walker, MHR, LPC, BCN, BCB
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
Target Audience: Beginning to intermediate practitioners who are interested in working with, or have encountered clients with trauma can benefit from this workshop.
CE credits: 4

Time: 6pm-8pm
AAPB Board Meeting (By Invitation Only)
Longs Peak

Thursday, March 14

Registration Open
Evergreen Foyer
7:00am - 7:00pm

Pre-Conference Workshop Attendee ONLY Continental Breakfast
Conifer/Peak Foyers
7:00am - 8:00am

Exhibitor Move-In
Evergreen Ballroom A-C
9:00am - 12pm
FULL DAY WORKSHOPS

WS15: Heart Rate Variability Biofeedback (HRVB): How To Do It, Why it Works, and For What - Part 2**

Presenters: Paul Lehrer, PhD; Richard Gevirtz, PhD
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
Target Audience: Biofeedback/neurofeedback practitioners, psychologists, clinical counselors, clinical social workers, marriage and family therapists, nurses, physicians, and other healthcare professionals and academicians interested in utilizing heart rate variability (HRV) biofeedback in their practice or research.
CE credits: 7.5
** This full-day workshop fulfills 7.5 hours of BCIA's Certificate of Completion in Heart Rate Variability (HRV) Biofeedback didactic blueprint and provides a practical introduction to this exciting modality.

WS17: Using Biofeedback, Neurofeedback and Mindfulness to Treat Developmental Trauma

Presenters: Ainat Rogel, PhD, MSW, BCN, LICSW; Diana Martinez, MD, PhD, BCN; Bessel van der Kolk, MD; Inna Khazan, PhD, BCB
Level: Intermediate
Track: Hot Topics
Focus: Clinical and Research
Target Audience: This is a presentation to professionals who treat and interact with clients. The impact of developmental trauma is wide ranged, and throughout life. Understanding, awareness of, and learning different approaches to treat it, has shown to positively impact the outcome of the treatment.
CE credits: 7
WS18: The Use of Neurostimulation and QEEG in Clinical Practice: Part 2  
Presenter: Nicholas Dogris, PhD, BCN, QEEG-D  
Level: Intermediate  
Track: Basic Science  
Focus: Clinical  
Target Audience: Anyone interested in Neuromodulation techniques in clinical practice.  
CE credits: 7

HALF - DAY WORKSHOPS (AM)

Time: 8:00am-12:00pm  
Room: Maroon Peak  
Presenter: Yury Kropotov, PhD  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical and Research  
Target Audience: Clinical neuroscientists, psychologists  
CE credits: 4

Time: 8:00am-12:00pm  
Room: Blanca  
WS20: PAY ATTENTION! How to Improve Functioning, from ADHD to Athletes  
Presenters: Lynda Thompson, PhD; Michael Thompson, MD  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical and Research  
Target Audience: Professionals practicing using neurofeedback in clinical practice with clients who have attention difficulties  
CE credits: 4

Time: 8:00am-12:00pm  
Room: Iris Room  
WS21: QEEG Guided Assessment and Neurofeedback for Children, Adolescents & Adults with ADD and Autistic Spectrum Disorder
Presenter: Michael Linden, PhD  
Level: Introductory  
Track: Basic Science  
Focus: Clinical and Research  
Target Audience: Psychologists/neuropsychologists, physicians, therapists, physicians/neurologists, nurses, biofeedback/neurofeedback clinicians, students, researchers.  
CE credits: 4

Time: 8:00am-12:00pm  
Room: Larkspur Room  
WS22: Using Electrophysiology to Enhance Treatment Outcomes  
Presenters: Ronald Swatzyna, PhD, LMSW, BCB, BCN; Emma Barr, BA  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical and Research  
Target Audience: Biofeedback and neurofeedback clinicians. Those who use qEEG technology  
CE credits: 4

Time: 8:00am-12:00pm  
Room: Bluebell Room  
WS23: Practical Interventions to Improve Health and Well Being in Adult Learners  
Presenters: Angele McGrady, PhD; Erik Peper, PhD  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical and Research  
Target Audience: Psychologists, educators, Counselors, Physicians  
CE credits: 4

Time: 8:00am-12:00pm  
Room: Lupine Room  
WS24: BCIA Biofeedback Certification Exam Review  
Presenters: Fredric Shaffer, PhD, BCB-HRV; Donald Moss, PhD; Inna Khazan, PhD; Judy Crawford  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical  
Target Audience: Professionals who want to add biofeedback to their practice, preparing for the BCIA Biofeedback certification exam, or who want a comprehensive review of their knowledge.  
CE credits: 4

12:00 pm-1:00 pm  
Lunch Break – ON YOUR OWN
HALF-DAY WORKSHOPS (AFTERNOON)

Time: 1:00pm to 5:00pm  
Room: Maroon Peak  
**WS25: BCIA Neurofeedback Certification Exam Review**  
*Presenters:* Lynda Thompson, PhD; Michael Thompson, MD  
*Level:* Intermediate  
*Track:* Clinical Interventions and Optimal Performance  
*Focus:* Clinical and Research  
*Target Audience:* Professionals who are interested in becoming certified in the field of neurofeedback  
*CE credits:* 4

Time: 1:00pm to 5:00pm  
Room: Blanca  
**WS26: Connectivity Assessment and Training in Developmental Trauma**  
*Presenters:* Robert Coben, PhD; Anne Stevens, PhD  
*Level:* Intermediate  
*Track:* Clinical Interventions and Optimal Performance  
*Focus:* Clinical  
*Target Audience:* Physicians, research scientists, clinical HRV biofeedback specialists, and students.  
*CE credits:* 4

Time: 1:00pm to 5:00pm  
Room: Iris Room  
**WS27: The Ethics of Making a Successful Evidence Based Biofeedback Practice**  
*Presenters:* Angelika Sadar, MA, BCN; Diana Martinez, MD, PhD, BCN  
*Level:* Introductory  
*Track:* Clinical Interventions and Optimal Performance  
*Focus:* Clinical  
*Target Audience:* Both early career biofeedback practitioners and those who are seasoned clinicians, who wish to enhance their practice, will benefit.  
*CE credits:* 4

Time: 1:00pm to 5:00pm  
Room: Larkspur Room  
**WS28: Applying Continuous Wearable HRV Biofeedback In and Out of the Office for the Treatment and Management of Hypertension, Depression and Anxiety**  
*Presenter:* Yair Lurie, MS, RHIA, CHIMPS  
*Level:* Intermediate  
*Track:* Hot Topics  
*Focus:* Clinical and Research  
*Target Audience:* Anyone interested to better understand heart rate variability and its application for the treatment
and management of hypertension and depression. Special consideration will be made to educating on how to conduct continuous heart rate variability biofeedback out of the clinic.

**CE credits:** 4

**WS29: Development of LORETA Neurofeedback and Surface Neurofeedback Protocols for Clinical Interventions**

**Presenter:** Joel Lubar, PhD, QEEG Diplomate, BCN

**Senior Fellow**

**Level:** Intermediate

**Track:** Clinical Interventions and Optimal Performance

**Focus:** Clinical

**Target Audience:** Healthcare providers, clinicians, including but not limited to psychologists, social workers, physicians, and others who would like to employ the latest neurofeedback approaches especially LORETA neurofeedback which can target both cortical and subcortical generators of the surface EEG for the treatment of many clinical entities including ADHD, traumatic brain injury, addiction disorders, depressive disorders, anxiety, pain syndromes and many others.

**CE credits:** 4

**WS30: Breathing is More Than HRV Training to the Rescue to Reduce Pain, IBS, Acid Reflux, Anxiety and Dysmenorrhea, Epilepsy**

**Presenter:** Erik Peper, PhD, BCB

**Level:** Intermediate

**Track:** Clinical Interventions and Optimal Performance

**Focus:** Clinical

**Target Audience:** Biofeedback practitioners clinician educators

**CE credits:** 4

**WS31: Advances in Linking Symptoms to Brain Networks and Neurofeedback Protocol Design**

**Presenter:** Robert W. Thatcher, PhD

**Level:** Introductory

**Track:** Basic Science (All Levels)

**Focus:** Clinical and Research

**Target Audience:** Clinicians, Researchers and students

**CE credits:** 4

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Saturday
Exhibits Open
Evergreen Ballroom A-C
2pm-6:30pm
During the Annual Meeting, be sure to visit the Expo Hall for the latest information on the equipment, products and services you need to practice biofeedback more effectively and efficiently. Don’t miss this opportunity to speak one-on-one with representatives from those organizations that support the field and AAPB.

KEYNOTE PRESENTATION
Time: 6:30pm-7:45pm
Room: Evergreen D-F
KEY1: How Can We Improve the Rigor and Replicability of Applied Psychophysiology?
Presenter: Michael Larson, PhD, Professor of Psychology and the Neuroscience Center, Brigham Young University
Level: Introductory/Intermediate
Track: Basic Science
CE Credits: 1

Scientific results, including those from psychology, neuroscience, and across areas of psychophysiology and biofeedback, are facing considerable scrutiny due to a high number of false positive findings and meager replication rates. There are a number of factors contributing to poor replication; yet, incentives for improved research remain behind the need for enhancement. Applied psychophysiology and biofeedback research are not immune to questions regarding rigor and replication. I provide evidence for the difficulties currently experienced in scientific research, including applied psychophysiology. I then provide a series of examples and opportunities for improvement, including increasing sample sizes through collaboration, decreasing researcher flexibility, increasing measurement precision, strengthening reporting standards, and shifting incentive structures. I end with a discussion of registered reports and pre-registration and how these can be used to strengthen applied psychophysiology research. The learning objectives for this talk are designed to help you: (1) identify the key features of the current replication difficulties and how these difficulties are seen in applied psychophysiology; (2) explain ways for improving the rigor and replication of psychophysiology research; (3) compare pre-registration and registered reports as ways to reduce researcher flexibility and “p-hacking” in order to improve applied psychophysiology research credibility.

About Dr. Larson:
Michael Larson is a Professor of Psychology and the Neuroscience Center at Brigham Young University and Editor-in-Chief of the
International Journal of Psychophysiology. His research focuses on cognitive control component processes and cognitive control dysfunction. A large focus of his research and editorial duties focuses on improving the rigor and replication of psychophysiology research, including guest editing a special issue of the International Journal of Psychophysiology on this topic and implementing registered reports as a method of publication in the International Journal of Psychophysiology. Dr. Larson has published over 100 peer-reviewed papers and book chapters and trained many PhD and thesis students. Clinically, Dr. Larson runs a neuropsychology service and training clinic that focuses on the after-effects of traumatic brain injury and neurologic and psychiatric illness.

Time: 7:45 pm to 9:30 pm
Welcome Reception in Exhibit Hall – Sponsored by Thought Technology

We are glad you are in Denver with us for our 50th Anniversary! Join us for networking, hors d’oeuvres, cash bar and networking in the Exhibit Hall

Friday, March 15

Time: 6am-7am
Room: Fitness Center
YOGA/Meditation

Time: 7am-8am
Room: Evergreen A-C
Continental Breakfast in Expo Hall

Time: 7am-7pm
Room: Evergreen A-C
Exhibits Open

Time: 7am-7pm
Room: Evergreen Foyer
Registration

Time: 7am - 8am
Room: Pikes Peak
Springer Breakfast Meeting - Editorial Board (BY INVITATION ONLY)

CONCURRENT and GENERAL SESSIONS

Time: 8am-9am
Room: Crestone Peak
EXHIBITOR DEMO: Cambridge Brain Sciences
CE credits: 0
Time: 8am-9am  
Room: Larkspur  
**ORAL1**  
**Presenters:** Fredric Shaffer, PhD, BCB-HRV; Zachary Meehan, BS Psychology; Hannah Urban, BS Psychology; Nicholas Gravett, BS Biology and Psychology;  
**Level:** All Levels  
**Track:** Clinical Interventions and Optimal Performance; Basic Science  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 8am-9am  
Room: Longs Peak  
**BOS01: Using The qEEG To Help Coaches Enhance Player Performance**  
**Presenter:** Stuart Donaldson, PhD  
**Level:** Intermediate  
**Track:** Clinical Interventions and Optimal Performance  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 8am-9am  
Room: Humboldt Peak  
**BOS02: Heart Rate Variability Biofeedback for Pain, Stress, Fatigue, and Depression among Veterans**  
**Presenter:** Jim Burch, PhD  
**Level:** Intermediate  
**Track:** Clinical Interventions and Optimal Performance  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 8am-9am  
Room: Maroon Peak  
**BOS03: MultiCultural Diversity Supports Healing Justice**  
**Presenter:** Richard Harvey, PhD  
**Level:** Introductory  
**Track:** Clinical Interventions and Optimal Performance  
**Focus:** Clinical  
**CE credits:** 1

Time: 9:15am-10:30am  
Room: Evergreen D-F  
**KEY02: Our Roots, Our People, and Our Journey:**  
**Why, Where, Who, What, When**  
**Presenter:** Mark Schwartz, PhD  
**Level:** Introductory  
**Track:** Hot Topics  
**Target Audience:** All  
**CE Credits:** 1

*This presentation will discuss many, diverse, influential, and interactional components of the origins of the Biofeedback*
Research Society, the Biofeedback Society of America, and then the Association for Applied Psychophysiology and Biofeedback. I will include how the BSA created the BCIA (originally Biofeedback Certification Institute of America and now Biofeedback Certification International Alliance), its history and its importance. Included will be discussion of many truly pioneering people, early events, and many of the people that followed in the early and middle years of the organization. We will observe recognitions and remembrances to those departed major contributors to our field and organization, and recognitions and thanks for those who are still with us.

The presentation will include the importance of learning about history, some of the controversies, challenges and problems faced by this organization, some of the frustrations and disappointments, some of the myths and facts, as well as some of the solutions and achievements.

Part of the presentation will reflect the presenter’s personal views and experiences. Remembering and learning about the history of this field, the professional organization, the issues and challenges, and perspectives, and notable people are needed for competent students, practitioners, educators, and historians to know and understand to be considered erudite.

Some history of the presence of diversity will be noted and the presentation will note the importance of formally recognizing and supporting continuing and expanding on multiple types of diversity.

About Dr. Schwartz
Dr. Schwartz joined the Mayo Clinic in 1967 after receiving his doctorate at the University of Texas – Austin and a Post-doctoral internship at the UCLA Neuropsychiatric Institute. He was on the Mayo Clinic Rochester staff from 1967 to 1988 and then at Mayo Clinic Florida through 2004 when he retired. He introduced Behavior Therapies at Mayo Clinic in 1970 providing clinical services throughout 37 years at the Mayo Clinic. He introduced biofeedback at Mayo Clinic in 1974. Starting in 1981, Dr. Schwartz chaired the Biofeedback Certification Institute of America (BCIA) and was on the Board from 1981-1986. He also served as President of BSA in 1987-1988. Dr. Schwartz is a Senior Fellow of the BCIA. He is a Licensed Clinical Psychologist in Florida and in private practice. He is a member of the Association of Applied Psychophysiology and Biofeedback and the Biofeedback Society of Florida.

Time: 10:30am to 11am
Room: Evergreen A-C
Coffee Break

Time: 11am-12:30pm
Room: Crestone Peak
EXHIBITOR DEMO: Thought Technology
CE credits: 0
Friday

Time: 11am-12:30pm
Room: Humboldt Peak
BOS04: The Future of Biofeedback Education and Research in Academia
Presenters: Carmen V. Russoniello, PhD, LRT/CTRS, LPC, BCB, BCN; Matthew Fish, PhD, LRT/CTRS, BCB; Christina M. Brown-Bochicchio, PhD(c), MS, CTRS; Tami Fragedakis, PhD, LRT/CTRS, LPC, BCB; Judy Crawford; Alexis Maxwell, BS; Aaron Craven, BS, LRT/CTRS; John Locke, BS, LRT/CTRS; Bai Barry, BS
Level: Intermediate
Track: Hot Topics
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Blanca Peak
BOS05: Children’s Section Symposium - The Future of Biofeedback for Children
Presenters: Richard Gevirtz, PhD; Mara Towne, DPT; Lynda Thompson, PhD; Michael Thompson, MD; Jeffrey Bolek, PhD; Ethan Benore, PhD, BCB, ABPP
Level: Introductory
Track: Hot Topics
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Primrose Room
BOS06: Optimizing Health and Performance with Mindfulness, Compassion and Biofeedback
Presenter: Inna Khazan, PhD, BCB
Level: Introductory
Track: Hot Topics
Focus: Clinical
CE credits: 1.5

Time: 11am-12:30pm
Room: Maroon Peak
BOS07: 5 Slides in 5 Minutes: Psychophysiology in Sport Across 5 Decades
Presenters: Lindsay Thornton, EdD; Vietta Sue Wilson, PhD; Ben Strack, PhD; Leah Lagos Wallach, PsyD, BCN
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinicial
CE credits: 1.5

Time: 11am-12:30pm
Room: Conifer 1
BOS08: Effectiveness and Longitudinal Study of Light/Electromagnetic Neuro-stimulation
Presenters: Victoria L. Ibric, MD, PhD; Michele L. Owes, BS, BSN
Level: Intermediate
Track: Hot Topics
Focus: Clinical and Research
I started a sequence of scientific studies in 1962 which will be reviewed here. Each new step was informed by the questions raised from the previous step. Fortunately, my search for answers was significantly aided by the application of operant conditioning, first conceived of as a tool for identifying any EEG patterns associated with trained behavioral inhibition. We labeled the pattern found as the Sensorimotor Rhythm, or SMR, which has become part of the alphabet soup of EEG jargon. By bringing neurofeedback trained behavior under laboratory control it was also possible to study the behavioral and neurophysiological significance of this EEG pattern, which turned out to be primarily related to the status of the motor system, presumably tracing the balance between relevant excitatory and inhibitory cortical inputs, and facilitating sensory, motor, and cognitive processing. We have currently developed a new software program with Thought Technology Inc. to exploit this knowledge. This new program has allowed us to conceive of a new perspective for the future of neurofeedback. When we helped to start the “Biofeedback Research Society” in 1996 the work that Joe Kamiya, Tom Mulholland, Barbara Brown, and I were doing was called EEG Biofeedback and was based on operant conditioning. Others were also taking the same approach with muscle control, temperature regulation,
blood pressure control, and a few other biological variables. In reality we were all pioneers at the time and had to learn as we went. Our current model of “the forest” has provided a digestible method for obtaining difficult to conceive details concerning system status and interactions in general and during the application of neurofeedback in particular. While the “trees” will ultimately be clarified, this approach finally makes clear to me what I am actually trying to do! Accordingly, I have decided to stick with operant conditioning. This is the tool that allowed me to blend my interest in both behavioral science and neurophysiology. And I am delighted to still be at it!

Time: 2pm-2:30pm
Room: Primrose
BCIACERT: BCIA Certification 101
Presenters: Judy Crawford, Executive Director, Biofeedback Certification International Alliance (BCIA)
Target Audience: If you have ever wondered about becoming a BCIA certified practitioner in Biofeedback, Neurofeedback, HRV Biofeedback or Pelvic Muscle Dysfunction Biofeedback, this informal discussion will lead you through the process and requirements and answer any questions you may have.
CE Credits: 0

Time: 2:00pm-3:30pm
Room: Crestone Peak
BOS09: Improving Lives with Applied Psychophysiology: From Epilepsy to Post-Concussion Syndrome
Presenters: Lynda Thompson, PhD; Michael Thompson, MD
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
CE credits: 1.5

Time: 2pm-3:30pm
Room: Maroon Peak
BOS10: Presidential Symposium on the Clinical Efficacy of Biofeedback and Neurofeedback
Presenter: Fredric Shaffer, PhD, BCB-HRV
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
CE credits: 1.5

Time: 2pm-3:30pm
Room: Longs Peak
BOS11: Does Neurofeedback Work in ADHD? Results of the Double-Blind Placebo-Controlled ICAN Trial and the Role of Sleep and the Circadian Clock in ADHD as a Mediator of Treatments
Presenters: Martijn Arns, PhD, BCN, QEEGD; Roger deBeus, PhD
Level: Intermediate
Track: Hot Topics
Focus: Research
CE credits: 1.5
Time: 2pm-3:30pm
Room: Blanca Peak
BOS12: Addressing Opioid Addiction Using Advanced Neuromodulation Techniques
Presenter: Nicholas Dogris, PhD, QEEG-D, BCN
Level: Intermediate
Track: Hot Topics
Focus: Clinical and Research
CE credits: 1.5

Time: 2pm-3:30pm
Room: Humboldt Peak
ORAL2
Presenters: Olga Jafarovava; George Fuller von Bozzay, PhD; Linda P. Bolin, PhD, RN, ANP, FAHA; Carolyn Horne, PhD, MSN, RN; Brian L. Imber, PhD(c), MA, MBA, LMHCA, BCN, BCB; Taylor Williams, BNB, BCB, CMT
Level: All Levels
Track: Clinical Interventions and Optimal Performance; Basic Science; Hot Topics
Focus: Clinical and Research
CE credits: 1.5

Time: 2:35pm-3:05 pm
Room: Primrose
BCIARECERT: BCIA Recertification 101
Presenter: Judy Crawford, Executive Director, Biofeedback Certification International Alliance
Target Audience: Those considering recertification will be led through an informal discussion on the process and requirements.
CE Credits: 0

Time: 3:30pm-4pm
Room: Evergreen A-C
Coffee Break

Time: 4pm-5pm
Room: Crestone Peak
EXHIBITOR DEMONSTRATION: BrainMaster
CE Credits: 0

Time: 4pm-5pm
Room: Larkspur Room
ORAL3
Presenters: Brodrick Brown, MA; Wei Liu, PhD; Frank Perry, EdD; Joshua Alexander Mercadel, BS
Level: All Levels
Track: Clinical Interventions and Optimal Performance; Basic Science; Hot Topics
Focus: Clinical and Research
CE credits: 1
Time: 4pm-5pm  
Room: Longs Peak  
**BOS13: Sex Differences and EEG Norms**  
**Presenter:** Seung Wan  
**CE credits:** 0

Time: 4pm-5pm  
Room: Blanca Peak  
**BOS14: Neal Miller’s Biofeedback Odyssey:**  
Can Autonomic Response Systems Be Trained by Operant Conditioning?  
**Presenter:** Edward Taub, PhD  
**Level:** Introductory  
**Track:** Basic Science  
**Focus:** Research  
**CE credits:** 1

Time: 4pm-5pm  
Room: Maroon Peak  
**BOS15: Sleep, Circadian Rhythms and Fatigue in Cancer**  
**Presenter:** Sonia Ancoli-Israel, PhD  
**Level:** Introductory  
**Track:** Hot Topics  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 4pm-5pm  
Room: Conifer 1  
**BOS16: Hypermirroring- a novel empathy spectrum disorder or giftedness?**  
**Presenter:** Theresia Stoeckl-Drax, MD  
**Level:** Introductory  
**Track:** Hot Topics  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 4 pm - 7 pm  
Room: Primrose  
**BCIAEX: BCIA Certification Exam**  
This 3-hour time slot is reserved for all pre-approved candidates wishing to sit for their certification exams in biofeedback, neurofeedback, HRV biofeedback or pelvic muscle dysfunction. Please be sure that you have filed your application, had it approved, and have submitted your exam registration form at least 2 weeks prior to the exam. Please contact info@bcia.org for more information or to check on your status.

**KEYNOTE PRESENTATION:**  
**Time:** 5:05pm-6:05 pm  
**Room:** Evergreen D-F  
**KEY04: Extracting Functional Neuromarkers from**
Spontaneous and Evoked EEG for Constructing Protocols of Neuromodulation

Presenters: Yury Kropotov, DO, USSR State Prize Winner, Doctor Honoris Causa of Academy of Gdansk

Level: Intermediate

Track: Basic Science

Focus: Clinical and Research

Target Audience: Psychologists, neuroscientists, clinicians

CE Credits: 1

The session presents HBI (Human Brain Index) neurotechnology which include advanced methods of analysis of quantitative spontaneous EEG and event-related potentials. The diagnostic/monitoring part of the neurotechnology describes: 1) methods of extracting functional neuromarkers from spontaneous multi-channel EEG, event-related de/synchronization, and event-related potentials (ERP) by means of blind source separation approaches, 2) methods for constructing normative and patient databases, 3) methods for comparing the extracted individual parameters with the normative data, and 4) methods of pre-post treatment comparison. The neuroscience data demonstrating high test-retest reliability of the functional neuromarkers, high level of specificity and sensitivity for defining dysfunctions in ADHD, schizophrenia, OCD, autism, depression, and dementia are presented.

The neuromodulation part of the paper describes methods of neuromodulation used to activate or inhibit the cortical areas associated with the extracted hidden components. The neuromodulation methods include: 1) different types of neurofeedback (discrete and continuous infra-low frequency neurofeedback, conventional EEG frequency biofeedback), 2) conventional and high definition tDCS, 3) conventional and deep TMS, 4) deep brain stimulation. A special focus of the paper is on applications of the diagnostic neurotechnology for prescribing protocols of neuromodulation.

About Prof. Kropotov

Prof. Kropotov Juri (Yury) D. is the world leader in neurophysiology and healthy and diseased human brain, the author of 244 papers including 13 books published in Russian, German, Polish and English. In 1985 he was awarded the USSR State Prize for his studies on impulse activity of neurons in patients with implanted electrodes. On the basis of his research he developed the theory of action programming and models of realistic neuronal networks. On the basis of the theory he developed methodology of assessing functional neuromarkers of the human brain and built up an international database of event-related potentials. The methodology is described in Kropotov J.D. “Quantitative EEG, event-related potentials and neurotherapy” published by Academic Press, Elsevier, 2009 (Award of Association of Applied physiology and biofeedback). During the last 15 years he discovered functional neuromarkers of ADHD, OCD.

**KEYNOTE PRESENTATION:**

**Time:** 6:15pm-7:30 pm  
**Room:** Evergreen D-F  
**KEY05: The Unifying Shift Towards Parasympathetic Health**  
**Presenters:** Raouf (Ron) Gharbo, DO, Eastern Virginia Medical School. Dept. of Physical Medicine & Rehabilitation  
**Level:** Introductory  
**Track:** Hot Topics  
**Focus:** Clinical and Research  
**Target Audience:** All  
**CE Credits:** 1

Heart rate variability (HRV) is the established, best all-cause mortality biomarker of physical health and the best measure of the parasympathetic nervous system (PNS). HRV parameters are rapidly emerging as a strong reliable predictive measure of emotional resilience. The purpose of the presentation is to embrace the unifying themes of HRV and propose moving beyond population health behavioral modification programs to avoid unhealthy behaviors and shift towards PNS health and healthy decision making with reasonable caution. By clarifying PNS health, the audience will be better prepared to apply emerging consumer-based and medical wearable platforms. The 1908 Yerkes-Dodson human performance curve can be applied to chronic pain management and ANS health (Gharbo 2013). Proposed concepts including, Left Foot Braking the ANS (Gharbo & Ginsberg 2016), Reproducible Placebo Analgesia with Empowerment (Gharbo 2017), and Intentional Recovery (Gharbo 2018) will be presented. More specifically, several elements how to measure and rehabilitate the ANS, including exercise, sleep and HRV-biofeedback will be presented. Unifying themes may lead to a cohesive healthcare model fostering more hope and free-will healthy decision-making in society.

**About Dr. Gharbo**  
Since completing PM&R specialty training at The Ohio State University Medical Center, Dr. Gharbo maintains an active neurorehabilitation, chronic pain and electrophysiology practice, while also acting as a Clinical Associate Faculty at Eastern Virginia Medical School. He is currently a clinical investigator on multiple HRV biofeedback trials for the treatment of chronic pain in veterans,
nursing burnout and fatigue in cancer patients.

Dr. Gharbo seeks to define ANS Rehabilitation for polytrauma, athletics and sustainable high performance and to develop pragmatic evidence-based solutions for the Opioid Crisis and healthcare burnout using research-grade HRV wearable devices. Dr. Gharbo has helped guide culture shift two collegiate athletic programs and a college wind ensemble with the later published in August 2017, in the prestigious VRME publication. In June 2017, his Novel Method for Reproducible Placebo Analgesia with Empowerment highlighted at the International Conference on Opioids.

Time: 7:30pm-9:30pm
Room: Evergreen A-C
Presidential & Poster Reception
Join us for a networking reception and take advantage of the informal interactive process between an author and a host of viewers allows for meaning dialogue about the SCIENCE!

Time: 9:00pm-12:00am
Room: See Invitation in Registration Packet/or Check with AAPB Staff at the registration counter
STUDENT PARTY – Invitation Only – All students welcome!

Saturday, March 16

Time: 6am-7am
Room: Fitness Center
YOGA/Meditation

Time: 7am-8am
Room: Evergreen A-C
Continental Breakfast in Expo Hall

Time: 7am-1:00pm
Room: Evergreen A-C
Exhibits Open

Time: 7am-6:30pm
Room: Evergreen Foyer
Registration

Time: 8am-9am
Room: Larkspur Room
ORAL4
Presenters: Paul Lehrer, PhD; Angele McGrady, PhD; Julie Brennan, PhD; Amy Riese, MD; Margaret Dupee, PhD, BCB, CPO; James Winstead, MPA, APA-C, RN
Level: All Levels
Track: Clinical Interventions and Optimal Performance; Hot Topics
Focus: Clinical and Research
CE credits: 1
Time: 8am-9am  
Room: Blanca Peak  
BOS17: Building Resilience through Compassion Practices  
Presenters: Urszula Klich, PhD  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical and Research  
CE credits: 1

Time: 8am-9am  
Room: Humboldt Peak  
Presenter: Wes Sime, PhD, MPH  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical  
CE credits: 1

Time: 8am-9am  
Room: Longs Peak  
BOS19: Performance Anxiety Interventions for Classical Musicians  
Presenters: Tara Austin, MS; Patrick Steffen, PhD  
Level: Introductory  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical  
CE credits: 1

Time: 8am-9am  
Room: Crestone Peak  
BOS20: Agonism and antagonism among the shoulder muscles: an SEMG approach  
Presenter: Gabriel E. Sella, MD, BSc, MSc, MPH, PhD(c); Lori Russell-Chapin, PhD, LCPC, ACS, CCMHC; Ted Chapin, PhD, BCB  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical and Research  
CE credits: 1

Time: 8am-9am  
Room: Maroon Peak  
BOS21: Practical Protocols  
Presenter: Jinny Jay LaRock, RN, BCB, Sr. Fellow  
Level: Introductory  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical  
CE credits: 1

Time: 8am-9am  
Room: Conifer Ballroom  
BOS22: Wearables and the Quantified Self
Presenter: Richard Harvey, PhD
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
CE credits: 1

KEYNOTE PRESENTATION
Distinguished Scientist Lecture
Time: 9:30am-10:30am
Room: Evergreen D-F

KEY06: Distinguished Scientist Lecture: It Takes a Village to Increase HRV: A Celebration of My Colleagues' Inspiring Ideas
Presenter: Fredric Shaffer, PhD, BCB-HRV, Professor of Psychology, Truman State University
Track: Clinical Interventions and Optimal Performance
Target Audience: Clinicians, educators, and optimal performance professionals concerned with optimal performance, resilience, stress, and autonomic dysregulation, and who are interested in heart rate variability for training and/or measurement.
CE Credits: 1

The AAPB Distinguished Scientist Award is presented annually “in recognition of an outstanding career and scientific contribution to the field of applied psychophysiology and biofeedback.” This award recognizes a scientist who has advanced Biofeedback through a significant body of research conducted, as judged by publications, awards and peer reviews, and has made a major impact upon the field of study, both nationally and/or internationally. Nominees must hold a doctoral degree in a psychology, biomedical science, medicine, or other health-related field. Recipients are selected based on the following evaluation criteria: scientific importance of research discoveries; mentorship of students, postdoctoral fellows, and new faculty; continued impact on the field.

Dr. Shaffer will celebrate the seminal contributions of our amazing colleagues to the emerging science of heart rate variability (HRV). He will trace HRV biofeedback's development, highlight revolutionary ideas that can transform our understanding of health, disease, and healthcare delivery, and describe concrete applications of our “village’s” discoveries.

About Dr. Shaffer:
Fredric Shaffer, PhD, BCB-HRV is a biological psychologist and professor of Psychology at Truman State University, where he has taught since 1975 and has served as Director of Truman’s Center for Applied Psychophysiology since 1977. In 2008, he received the Walker and Doris Allen Fellowship for Faculty Excellence. In 2013, he received
Dr. Shaffer was the principal co-editor of Evidence-Based Practice in Biofeedback and Neurofeedback (3rd ed.) and authored 12 of its chapters. He was a co-editor with Donald Moss of Foundations of Heart Rate Variability Biofeedback: A Book of Readings. Dr. Shaffer is a BCIA Senior Diplomate in Biofeedback. Dr. Shaffer is the Past-Chair of the Biofeedback Certification International Alliance (BCIA), director of its Biofeedback and HRV Biofeedback Task Forces, and member of its Neurofeedback Task Force, and Treasurer for the Association for Applied Psychophysiology and Biofeedback (AAPB).

Time: 10:30 am-11:00am
Room: Evergreen A-C
Networking Break / EXHIBITOR DRAWING
Must be present to win!!

Time: 11am-12:30pm
Room: Larkspur Room
BOS23: Brain-Computer Interface Technology for Rehabilitation and Brain Assessment
Presenter: Christoph Guger
Level: Advanced
Track: Hot Topics
Focus: Clinical
CE credits: 1.5

Time: 11am-12:30pm
Room: Conifer Ballroom
BOS24: Heart Rate Variability and Parasympathetic Health: The Importance of Sleep
Presenters: James Burch, PhD; Phyllis Stein, PhD; Ron Gharbo, DO
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Humboldt Peak
BOS25: History of Coherence-based Neurofeedback
Presenters: Robert Cohen, PhD; Anne Stevens, PhD
Level: Intermediate
Track: Basic Science
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Longs Peak
BOS26: New Advances in Electrical NeuroImaging to Evaluate EEG Sources, Brain Networks and Neurofeedback Protocols
Presenter: Robert W. Thatcher, PhD
Level: Introductory
Track: Basic Science
Focus: Clinical
CE credits: 1.5

Time: 11am-12:30pm
Room: Blanca Peak
BOS27: The Efficacy of Video Games Versus Antidepressants in Reducing Somatic Complaints
Presenters: Carmen Russoniello, PhD, LRT/CTRS, LPC, BCB, BCN; Christina Brown-Bochicchio, MS; Aaron Craven, BS; John Locke, BS; Audrey Norris; Alexis Maxwell, BS; Angela Sutherland, MPH; Capt. Thomas Johnson, MD, USN; Suzanne Martin, PsyD, MPH, ABPP; Brianna Biel, BA
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Maroon Peak
BOS28: Update on CPT Coding and Insurance Reimbursement
Presenter: Mark Trullinger, Msc, BCN
Level: Intermediate
Track: Hot Topics
Focus: Clinical and Research
CE credits: 1.5

Time: 11am-12:30pm
Room: Crestone Peak
BOS40: Improving Patient Outcomes: Translating Bio/Neurofeedback, Photomodulation and VR from Office to Home
Presenter: Robert H. Reiner, PhD, BCN, BCB (BCIA); Scott Lloyd, PhD, BCB, BCN; Heather Davidson
Level: Intermediate
Track: Clinical Interventions and Optimal Performance
Focus: Clinical and Research
CE credits: 1.5

Time: 12:30pm-2:00pm
Room: On Your Own
Lunch Break

SPECIAL SESSION/Lunch & Learn
Time: 12:45pm - 1:45pm
Room: Evergreen D-F
KEY07: Build Your Dream Business - Strategies & Systems
The safety card on any airplane instructs that in the case of disaster, you are to put your oxygen mask on first before assisting others. The same should be true for your business, however we commonly prioritize our patient's concerns and needs over the strength and sustainability of our own businesses. We rarely take time to work ON the business because we are so busy working IN the business, and week after week, month after month we find ourselves too BUSY to plan for the future, as if we would know what to do even if the time was available… Would life be better if you could work less hours, reward your employees better, drive the value of your business up by 2-3x, have a sustainable growth (or exit) plan and end up with better patient outcomes? Even one of those could be life changing, but all are reachable within a fairly short period of time, if you set up the right system. There are specific business principles and strategies which apply to any field and any size business, including Neurofeedback Clinics. These principles, along with specific Neurofeedback marketing and financial strategies can help transform your business into a sustainable machine that allows you to fulfill your dreams, while providing an excellent experience and the highest level of care to your patients. In 2014 I embarked on a journey to understand the theory and practice of Neurofeedback and I’ve spent thousands of hours, becoming BCIA technician certified, integrating Neurofeedback and Biofeedback into a successful Functional Medicine practice, and developing the business models needed to expand any clinic. You do not need an MBA to run a successful business, but you do need a strategy and you need to understand how to apply it. To provide the best experience and achieve the greatest results with your patients, you first must build and maintain a sustainable business. Most of us do the opposite, relying on our clinical care experience, resources and technology to help patients while leaving the business as an afterthought. If you build it, they will come…right? Unfortunately, not. Luckily, it is never too late to develop the business strategies and systems to grow a successful, sustainable practice. A new amplifier, software update or protocol will not be the catalyst to sustainable growth of your business and greater personal and professional fulfillment…this course may be.
Elmer and Alyce Green Homage Lunch
In this luncheon presentation, we will describe the lives and work of Elmer and Alyce Green, founding members of AAPB, (then Biofeedback Research Society). Emphasis will be on their early work with clinical biofeedback and the importance they placed on voluntary control of physiological processes as a learned behavior. Lunch will be provided.

BOS29: Panel Discussion: Efficacy and Current status of Neurofeedback
Presenters: Jay Gunkelman, QEEGD; Cynthia Kerson, PhD; Donald Moss, PhD; Mark Smith; JP Ginsberg, PhD
Level: Intermediate
Track: Basic Science
Focus: Clinical and Research
CE credits: 1.5

BOS30: Stress and the Brain
Presenter: Jan Newman, BS, MD, MA, FACS, ABIHM
Level: Introductory
Track: Basic Science
Focus: Clinical and Research
CE credits: 1.5

BOS31: BCIA Professional Ethics and Practice Standards
Presenter: Donald Moss, PhD
Level: Advanced
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
CE credits: 1.5

BOS32: Practical Strategies for Teaching Your Clients to Breathe
Presenters: Inna Khazan, PhD, BCB; Fredric Shaffer, PhD, BCB-HRV
Level: Introductory
Track: Clinical Interventions and Optimal Performance
Focus: Clinical
CE credits: 1.5
Time: 2pm-3:30pm  
Room: Crestone Peak  
**BOS33: BRAIN HEALTH: Principles and Practices for Biofeedback and Neurofeedback Practitioners**  
**Presenters:** Peter James Seberger, MD; Barbara S. Peavey, PhD, MS PsyPharm, BCB  
**Level:** Introductory  
**Track:** Basic Science  
**Focus:** Clinical and Research  
**CE credits:** 1.5

Time: 2pm-3:30pm  
Room: Maroon Peak  
**ORAL5**  
**Presenters:** Sommer Christie, PhD; Nicole McGuffin; Paul Fillmore; Christoph Guger  
**Level:** Intermediate  
**Track:** Clinical Interventions and Optimal Performance; Basic Science; Hot Topics  
**CE credits:** 1

Time: 3:30pm-4pm  
Room: Evergreen Foyer  
**Coffee Break**

Time: 4:05 pm -5:05pm  
Room: Larkspur Room  
**BOS34: ReConnect – A Wellness Program Worth Remembering**  
**Presenter:** Seth Conger, BCN-t  
**Level:** Intermediate  
**Track:** Clinical Interventions and Optimal Performance  
**Focus:** Clinical and Research  
**CE credits:** 1

Time: 4:05 pm -5:05pm  
Room: Crestone Peak  
**BOS35: Biofeedback – Treatment for Constipation.**  
**Presenter:** Satish SC Rao, MD, PhD, FRCP  
**Level:** Intermediate  
**Track:** Hot Topics  
**Focus:** Clinical  
**CE credits:** 1

Time: 4:05 pm -5:05pm  
Room: Humboldt Peak  
**BOS36: Obtaining the Biopsychosocial Pain Treatment “Buy in”**  
**Presenter:** Katie Flieshman, PhD  
**Level:** Introductory  
**Track:** Clinical Interventions and Optimal Performance  
**Focus:** Clinical and Research  
**CE credits:** 1
Time: 4:05 pm - 5:05 pm  
Room: Longs Peak  
BOS37: Excessive or Uncomplimentary Screen Use, the EEG, and Successful Therapeutic Interventions  
Presenter: Mari Swingle, PhD  
Level: Intermediate  
Track: Hot Topics  
Focus: Clinical  
CE credits: 1

Time: 4:05 pm - 5:05 pm  
Room: Blanca Peak  
BOS38: Social, Spiritual, Psychological, and Physiological Predictors of Well-being of Military Veterans: A Pilot Study of a Viable, Holistic, and Predictive Model of Well-being  
Presenter: Manuel Halter, PhD, JD, BCN  
Level: Intermediate  
Track: Clinical Interventions and Optimal Performance  
Focus: Clinical  
CE credits: 1

Time: 4:05 pm - 5:05 pm  
Room: Maroon Peak  
BOS39: Tuning the Traumatized Brain, Mind, and Heart: LORETA Z-Score Neurofeedback and HRV Biofeedback for Chronic PTSD  
Presenter: Ashlie Bell, PhD, LCSW, BCN  
Level: Introductory  
Track: Clinical Interventions and Optimal Performance  
Focus: Research  
CE credits: 1

KEYNOTE Presentation  
Time: 5:15-6:30pm  
Room: Evergreen D-F  
KEY08: Past, Present, and Future: The Hope and Possibilities for Feedback-Lessons Learned  
Presenters: Erik Peper, PhD, BCB, Institute for Holistic Health Studies, San Francisco State University  
Level: Intermediate  
Track: Hot Topics  
Target Audience: All biofeedback practitioners  
CE Credits: 1

Feedback is essential for learning and provides hope that change is possible. Reflecting on my biofeedback and self-regulation experience since 1967, initially as a student and researcher under the guidance of my mentor Dr. Thomas Mulholland, the presentation offers some of the lessons I have learned and extracted that may provide useful concepts—albeit sometimes forgotten and overlooked—concepts that may enhance health and provide new
opportunities. Some of these factors include the recognition that 1) old wisdoms are recycled and rediscovered and given new names, 2) how we use ourselves (our function) affects our structure and structure limits function, 3) bio/neurofeedback provide hope a process that enhances successful outcome, 4) group data may mask important individual successes, 5) failure provides more learning opportunities than success, 6) self-experience is essential, 7) many approaches can complement and need to be integrated to optimize success, 8) study outliers (remarkable people) to suggest new option for success, 9) respect your own experience, 10) awareness and training with bio/neurofeedback needs to be part of our education system, 11) breathing is the mind body bridge, and 12) the limits our possibilities (experience) are the limits of our beliefs.

Discussed and illustrated is how some of these lessons were learned and provide expanded opportunities health and well-being and future growth of this exciting field.

ABOUT DR. PEPER:
Erik Peper, PhD, BCB, is an international authority on biofeedback and Professor of Holistic Health Studies / Department of Health Education at San Francisco State University. He is President of the Biofeedback Federation of Europe and past President of the Association for Applied Psychophysiology and Biofeedback (AAPB). He has received numerous awards such as 2013 Biofeedback Distinguished Scientist Award in recognition of outstanding career & scientific contributions from the Association for Applied Psychophysiology. He has a biofeedback practice in Berkeley, CA at BiofeedbackHealth (www.biofeedbackhealth.org). He is an author of numerous scientific articles and books such as Make Health Happen, Fighting Cancer-A Nontoxic Approach to Treatment, and Biofeedback Mastery. He publishes the blog, the peper perspective-ideas on illness, health and well-being (www.peperperspective.com). He is a recognized expert on holistic health, stress management and workplace health. His research interests focus on self-healing strategies to optimize health, illness prevention, the effects of respiration and posture, and self-mastery with biofeedback.

Time: 6:30-8:30pm
Closing Anniversary Reception
Room: Rocky Mountain Event Center
Join us for a final celebration where music, memories, and fun will be shared. Desserts and cash bar will be served. Dinner is not served.

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POSTERS:

101. 10-Week Mindfulness + HRV Biofeedback Group Reduces Physical Pain & Catastrophization 
Presented by: Alyssa Walker, BS; Sarah-Nicole Bostan, MA; Richard Gevirtz, PhD

102. The Meaning of Resilience to Psychological Trauma 
Presented by: Ana Abu-Rus, MA; Constance Dalenberg, PhD

103. Group biofeedback for patients with heterogeneous chronic pain conditions 
Presented by: Anu Kotay, PhD; Chris Gilbert, PhD 
*CITATION POSTER*

104. Assessment of Resonance Frequency for Heart Rate Variability Biofeedback: A Cursory Evaluation of Accuracy & Reliability 
Presented by: Samuel J. Kohlenberg, MA, LPC, ACS, BCB-HRV

105. Effect of Short Term Heart Rate Variability Biofeedback in Post-Stroke Population 
Presented by: Bijoyaa Mohapatra, PhD; Karin Cantu, BS

106. Introducing a scalable, smartphone-based, therapist-assisted treatment program for depression and anxiety that incorporates heart rate variability biofeedback 
Presented by: Marcos Economides, PhD; Kristian Ranta, MSc; Inna Khazan, PhD; Anu Raevuori, PhD

107. Integrating Stress Inoculation Training And Heart Rate Variability For Highly Stressed Scuba Divers: A Pilot Study 
Presented by: Brian Imber, PhD(c)

109. Does Perfectionism Predict Higher Physiological Stress? 
Presented by: Brodrick T. Brown; Sheilagh T. Fox; Patrick Steffen, PhD; Louise Wheeler, PhD

110. You Are What You Eat: Nutrition’s Impact on Mood 
Presented by: Cyndi Hope, ND, BCB; Georgi Stoychev, BS; Melissa Manda, BA; Emily Takeuchi-Miller, BA; Elaine McHugh, BA; Svetlana Volosbin, BS; Mahboubeh Hashemi, ND; Darlene Lee, ND

111. Microbiota in Mental Health 
Presented by: Cyndi Hope, ND, BCB

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112. Striking a balance: Intra-team learning and psychophysiological rhythms in an interactive balancing task  
Presented by: Edson Filho, PhD; Priscila Cardozo, PhD; Jean Rettig, PhD; Suzete Chiviacowsky, PhD

113. Comparing Muscle Activity and Spine Shape in Various Sitting Positions  
Presented by: Erik Peper, PhD, BCB; Björn Krüger, PhD; Esther Gokhale, Lac

115. Taming the monkey mind may depend upon which strategy: Comparing mindfulness and toning  
Presented by: Erik Peper, PhD, BCB; Richard Harvey, PhD; Madhu Anziani; Aiko Yasbino, PhD; Weston Pollock

116. Treatment length as a factor affecting outcomes of neurofeedback training in children with autism  
Presented by: Estate M Sokhadze, PhD, BCN; Manuel F Casanova; Desmond Kelly, MD; Allan Tasman, MD

118. The impact of mobile HRV training on depression in military personnel with posttraumatic stress disorder  
Presented by: John Locke, B.S. LRT/CTRS; Carmen Russoniello, Ph.D, LRT; LPC, BCB, BCN

120. Heart Rate Variability Biofeedback among Veterans: Pilot Intervention for Sleep Disturbance  
Presented by: Joshua Alexander Mercadel, BS; Jim Burch, PhD; Jim Winstead, BS MSPA; Torrance Nevels, PhD

121. The Effect of Thermal Biofeedback on Migraine, Disability, and Quality of Life in an Underserved Pediatric Neurology Population  
Presented by: Karen McKeary, DNP, CPNP, PMHS, BCB; Daniel Alicia, MSc; Jessica Xu, MSc; Catherine Sobieski, MS; Nicole Asante, MS; Camille Murr; MS; Sankeerth Jinna, MS, Shreya Patel, MS; Robert Fryer, MD, PhD

123. Gender Differences in Heart Rate Variability After a Breathing Intervention  
Presented by: Lauren Bethune Scroggs, MS, NCC, CCMHC, LCAS-A, LPC-A; Amelia D. Saul, MS, LRT/CTRS; Carolyn Horne, PhD, RN; Linda P. Bolin, PhD, RN, ANP, FAHA

124. Clinical data of neurophysiological and attentional differences between case groupings of intrauterine drug exposure and attention deficit/hyperactivity disorder  
Presented by: Lauren Kelley, BA; Whitney Strunk, BA; Rex Cannon, PhD, BCN; Stephanie Carroll, PhD

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125. Healing Headaches Mindfully: Trial and Error
Presented by: Lauren Mason, BA; Erik Peper, PhD; Wendy Hernandez, BA

126. Reducing acid reflux with diaphragmatic breathing-
Presented by: Lisa Wolski; Jasmine Torres; Erik Peper, PhD, BCB; Richard Harvey, PhD; Lauren Mason

127. A Comprehensive Literature Review of the Neurophysiology of Giftedness
Presented by: Madeline Stein, MAc, NLC

129. Respiratory Biofeedback Efficacy in Individuals with Traumatic Brain Injury
Presented by: Marielle L. Darwin, BS, MS, PhD; Victor Zelek, PhD

130. Parasympathetic Activity Associated with Cognitive Inhibition
Presented by: Mark J. Stern, Ph.D., BCB, BCN; Alexander O. Hauson, PhD; Meenakshi S. Patne; Brianna D. Barlet, MA; Nicholas P. Stelmach, MA; Kelly McCarthy, MA; Richard Gevirtz, PhD

131. Spontaneous Skin Conductance RESPONSES As Predictors Of Dignostic Blood Pressure In A Healthy Group Of Normotensive And Hypertensive Subjects
Presented by: Martti T. Tuomisto, Ph.D., BCBA-D

132. The Efficacy of Biofeedback alongside Psychotherapy
Presented by: Meredith Pescatello, BS; Patrick Steffen, PhD; Barbara Morrell, PhD; Tyler Pedersen, PhD

133. Are all stressors created equally? Re-Examining Validity of Serial 7s & Associated Psychological Processes
Presented by: Sarah-Nicole Bostan, MA; Natasha Nemanim, BA; Richard Gevirtz, PhD, BCB
*CITATION POSTER*

134. Evaluating the Effect of a Contact Free Biofeedback and Mindfulness Application
Presented by: Shiraz Levkovich, PsyD; Maayan Yizraeli Davidovich, MSc; Avia Oren, BSc; Victoria Strokatov, BSc; Zvika Shinar, PhD

135. A comparison of HRV biofeedback and controlled slow breathing in healthy subjects
Presented by: Silvia Blahunkova, Mgr., PhD student; Petra Solarikova, PhD; Igor Brezina, PhD; Daniela Turonova, PhD; Jakub Rajciani, PhD

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- Discuss new psychophysiology and biofeedback methods to evoke human potential and achieve results in a clinical setting.
- Determine psychophysiology and biofeedback techniques to improve patients’ quality of life.

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We look forward to reviewing your submission, and will contact you if your topic has been chosen!
AAPB Section Meetings

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Thursday, March 14, 5:30pm-6:30pm
“Things that Go Bump in the Night: Sleep monitoring, the connection to psychophys training and interventions for performance excellence”
Lindsay Thornton, PhD
What happens after your clients leave your office can enhance or undermine psychophysiology training. Sleep is necessary for learning and growth, yet it is often left unexplored with clients. A simple “what is your conscious recollection of your non conscious state over the last week” won’t suffice. Subjective estimations of sleep quality and duration are inflated. Consistent, quality sleep is an important part of high level performance in any domain. Practitioners trained in psychophysiology are well positioned for understanding objective sleep metrics, either through sleep staging via EEG, or examining HRV derivatives of sleep measures. Psychophysiology training can be enhanced with periodic sleep monitoring and setting appropriate recovery goals, and psychophysiology interventions have the potential to enhance sleep/minimize obstacles associated with sleep. In this meeting, Lindsay Thornton will share lessons learned from sleep monitoring and interventions in elite athletes during her career with the United States Olympic Committee.

AAPB Children’s Section Symposium,
Friday, March 15, 11:00am-12:30pm
“The Future of Biofeedback for Children”
Richard Gevirtz, PhD, Mara Towne, DPT, Lynda Thompson, PhD, Michael Thompson, MD, Jeffrey Bolek, PhD, Ethan Benore, PhD, BCB, ABPP
The Children’s Section of AAPB seeks to educate clinicians and the public about the benefit of biofeedback in children, as well as support innovative research to enhance the field and definitive research that validates treatment protocols. This session will review the current state of knowledge for several modalities, giving a case example to demonstrate the application of biofeedback in children.

International Stress Management Association-US (ISMA)
Friday, March 15, 2019, 12:45pm-1:45pm
“Current Research and Future Directions”
Richard Gevirtz, PhD, Patrick Steffen, PhD
This will be the ISMA meeting with Dr Patrick Steffen, Dr Richard Gevirtz and Dr. Jan Newman. Dr Gevirtz will speak on Reconceptualizing Stress Physiology from the Central Autonomic Nervous System Perspective, Dr Steffen will speak on How to adjust a dysregulated stress response. Dr. Newman will speak on Meditation: Methods, Goals and Complications which the remainder of this synopsis will address.
Meditation has been practiced in numerous cultures for thousands of years. Recently meditation has become popular as a stress reduction technique. There are numerous meditation techniques which have been employed. This session will discuss various meditation techniques and their goals as well as the ultimate goal of meditation which has been called enlightenment or kaivalya the culmination of wisdom and compassion. It will also discuss the potential for adverse reactions that meditators may encounter and ways to deal with those events.
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