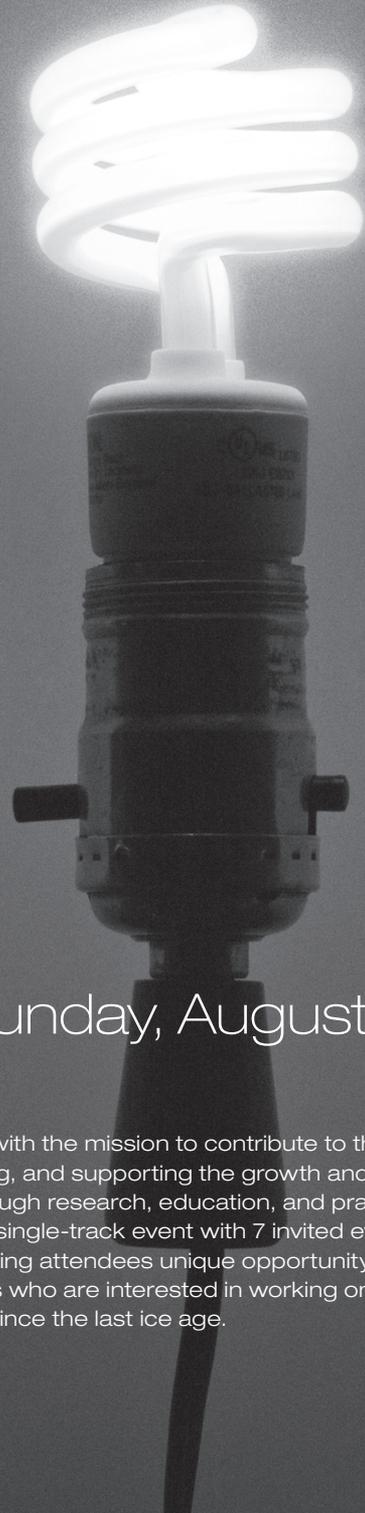




# Behavior Change for a Sustainable World

August 3–5, 2012  
The Ohio State University

Conference Program



Friday, August 3 – Sunday, August 5

ABAI is a nonprofit membership organization with the mission to contribute to the well-being of society by developing, enhancing, and supporting the growth and vitality of the science of behavior analysis through research, education, and practice. Behavior Change for a Sustainable World is a single-track event with 7 invited events, a poster session, and 12 breakout session, giving attendees unique opportunity to interact with people with diverse backgrounds who are interested in working on one of the greatest challenges to face civilization since the last ice age.

## Schedule Overview

Please visit the Great Hall on the First Floor to register and pick up your conference badge, schedule, and map. The locations of the sessions are marked on the map on the back of the schedule.

### Friday, August 3, 2012

Registration and Continuing Education	12:00 pm–6:00 pm
Optional Tours	12:30 pm–5:30 pm
Welcome Events	6:00 pm–6:10 pm
Opening Keynote Address	6:10 pm–7:00 pm
Opening Reception	7:00 pm–8:30 pm

### Saturday, August 4, 2012

Registration and Continuing Education	7:30 am–5:00 pm
Sessions	8:30 am–12:00 pm
Lunch	12:00 pm–1:30 pm
Sessions	1:30 pm–5:10 pm
Poster Session	5:15 pm–7:00 pm

### Sunday, August 5, 2012

Registration and Continuing Education	8:00 am–2:00 pm
Breakout Sessions	9:00 am–12:00 pm
Summary Comments and Poster Awards	12:15 pm–12:30 pm
Closing Keynote Address	12:30 pm–1:30 pm

### Program Content

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### Video Recording Policy

Please be aware that ABAI prohibits audio and video recording of conference events by any person or entity other than ABAI.

# 2012 Behavior Change for a Sustainable World Conference

Welcome to the 2012 ABAI Behavior Change for a Sustainable World Conference program! The program includes 7 invited speakers, 13 breakout sessions, 50 posters, and various opportunities for off-site tours. This conference features prominent figures in behavior analysis, environmental organizations, business, and government. The invited addresses, research and project posters, and brainstorming sessions will give conference attendees a unique opportunity to interact with people of diverse backgrounds interested in working on one of the greatest challenges to face civilization since the last ice age.

## Tours of Sustainability Research Programs

Conference attendees can choose from a number of tours of sustainability research and development programs including the Byrd Polar Research Center, Center for Automotive Research, the Zero Waste Project at Ohio Stadium, and Blue Rock Station.

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# About the ABAI

## **Purpose**

ABAI is a nonprofit membership organization with the mission to contribute to the well-being of society by developing, enhancing, and supporting the growth and vitality of the science of behavior analysis through research, education, and practice. ABAI encompasses contemporary scientific and social issues, theoretical advances, and the dissemination of professional and public information.

Advancing behavioral science and its application has become an international effort, as witnessed by the countries represented by our members.

ABAI provides a forum for 35 special interest groups, maintains a mutually beneficial relationship with 81 affiliated chapters located across the US and from around the world, and organizes an annual convention in addition to other conferences and events. ABAI publishes three scholarly journals, distributes a triannual newsletter, provides continuing education credits, and accredits behavior analysis undergraduate and graduate training programs.

## **Background**

ABAI was founded in May, 1974 at the University of Chicago. The first annual convention was held the following year. Past presidents of the Association are Nathan H. Azrin, Donald M. Baer, Sidney W. Bijou, Marc N. Branch, A. Charles Catania, Thomas S. Critchfield, Barbara C. Etzel, Judith E. Favell, Patrick C. Friman, Richard M. Foxx, Sigrid S. Glenn, Israel Goldiamond, Gina Green, Don F. Hake, Linda J. Hayes, William L. Heward, Philip N. Himeline, Brian A. Iwata, James M. Johnston, Kennon A. Lattal, Ogden R. Lindsley, Richard W. Malott, M. Jackson Marr, Frances K. McSweeney, Jack Michael, Raymond G. Miltenberger, John C. (Jay) Moore, Edward K. Morris, Henry S. Pennypacker, Michael Perone, Carol Pilgrim, Ellen P. Reese, Masaya Sato, Beth Sulzer-Azaroff, Janet S. Twyman, and Julie S. Vargas.

## **Membership**

ABAI has more than 6,300 members from nearly 50 countries. Membership information and applications are available at [www.abainternational.org](http://www.abainternational.org).

## **ABAI Diversity Policy**

The Association for Behavior Analysis International seeks to be an organization comprised of people of different ages, races, nationalities, ethnic groups, sexual orientations, genders, classes, religions, abilities, and educational levels. ABAI opposes unfair discrimination.

## **ABAI Executive Council**

### **President (2011–2014)**

Kurt Salzinger, Ph.D. (Hofstra University)

### **Past President (2010–2013)**

Richard W. Malott, Ph.D. (Western Michigan University)

### **President-Elect (2012–2015)**

Michael Perone, Ph.D. (West Virginia University)

### **Applied Representative (2012–2015)**

SungWoo Kahng, Ph.D. (Kennedy Krieger Institute)

### **Experimental Representative (2011–2014)**

Raymond C. Pitts, Ph.D. (University of North Carolina Wilmington)

### **International Representative (2011–2014)**

Maria Martha Hübner, Ph.D. (University of São Paulo)

### **At-Large Representative (2010–2013)**

Gregory J. Madden, Ph.D. (Utah State University)

### **At-Large Representative (2012–2015)**

Travis Thompson, Ph.D. (University of Minnesota)

### **Past Student Representative (2010–2013)**

Antonio Harrison, MS (The Chicago School of Professional Psychology, Los Angeles)

### **Student Representative (2011–2014)**

Megan Aclan, MS (The Chicago School of Professional Psychology, Los Angeles)

### **Student Representative-Elect (2012–2015)**

Zachary Morford, MS (University of Nevada, Reno)

### **Chief Executive Officer/Secretary-Treasurer**

Maria E. Malott, Ph.D. (Association for Behavior Analysis International)

# Program Schedule

## Friday, August 3, 2012

- 12:30 pm–5:30 pm Optional tours of sustainability and research programs
- 6:00 pm–6:10 pm *Welcome to the Conference*  
William L. Heward (The Ohio State University)
- Welcome to The Ohio State University*  
Ronald M. Segal (Office of Energy & Environment)
- 6:10 pm–7:00 pm *The Greatest Challenge of Global Climate Change*  
Lonnie G. Thompson (The Ohio State University)
- 7:00 pm–8:30 pm *Reception Hosted by the Office of Energy & Environment, The Ohio State University*

## Saturday, August 4, 2012

- 8:30 am–9:30 am *Behavior Change for a Sustainable World*  
William L. Heward (The Ohio State University)
- 9:30 am–10:30 am *Helping People Go Green With Applied Behavior Analysis*  
E. Scott Geller (Virginia Polytechnic Institute and State University)
- 10:30 am–11:00 am Break
- 11:00 am–12:00 pm *Show Me the Money (It's Green, You Know)* Darnell Lattal (Aubrey Daniels International)
- 12:00 pm–1:30 pm Lunch
- 1:30 pm–2:30 pm *Seeking Mainstream Acceptance of Behavioral Sustainability Solutions*  
Ronnie Detrich (The Wing Institute), Mark R. Dixon (Southern Illinois University), Shawn R. Charlton (University of Central Arkansas), and Michael A. Magoon (NORC at the University of Chicago)
- 2:30 pm–3:30 pm *The Web of Life: How Behavior Connects Humans, Animals, and Landscapes*  
Fred Provenza (Utah State University)
- 3:30 pm–4:00 pm Break
- 4:00 pm–5:00 pm *Building Bridges Across Disciplines to Support Sustainable Practices: The Role of Behavior Analysis*  
Jeanine Stratton (Furman University)

5:00 pm–5:10 pm *Brief Remarks From OSU's President*  
Gordon Gee (The Ohio State University)

5:15 pm–7:00 pm Poster Session

### **Sunday, August 5, 2012**

9:00 am–10:20 am Breakout Sessions

10:20 am–10:40 am Break

10:40 am–12:00 pm Breakout Sessions

12:15 pm–12:30 pm Summary Comments and Poster Awards

12:30 pm–1:30 pm *Resurrecting the Environmental Movement*  
Peter Kareiva (The Nature Conservancy)

## **Acknowledgements**

### **Conference Program Committee**

The 2012 Behavior Change for a Sustainable World Conference program would not be possible without the dedicated contributions of the Program Committee. We thank them for their time and efforts.

#### ***Program Committee Chair:***

William L. Heward (The Ohio State University)

#### ***Program Committee***

Mark P. Alavosius (University of Nevada, Reno)

Ramon Esteban Armendariz (Comunidad Los Horcones, Mexico)

Paul Chance (Cambridge Center for Behavioral Studies & Dissemination of Behavior Analysis Special Interest Group)

Julia H. Fiebig (ABAI Behavior Analysis for Sustainable Societies SIG)

Susan G. Friedman (Utah State University)

Amanda N. Kelly (Simmons College)

João Claudio Todorov (Universidade de Brasília, Brazil)

Satoru Shimamune (Hosei University, Japan)

Janet S. Twyman (University of Massachusetts Medical School, Shriver Center)

### **CE Coordination for BACB Certificants**

Richard W. Malott (Western Michigan University)

### **Program and Conference Management**

Maria E. Malott (Association for Behavior Analysis International)

# Registration and Continuing Education

## General Information

The Registration and Continuing Education desks are located in the Great Hall on the First Floor of the Ohio Union. Badges are required for entrance to all conference events.

Hours are as follows:

Fri., Aug. 3	12:00 pm–6:00 pm
Sat., Aug. 4	7:30 am–5:00 pm
Sun., Aug. 5	8:00 am–2:00 pm

## Continuing Education for Certified Behavior Analysts and Licensed Psychologists

ABAI is approved by the Behavior Analyst Certification Board (BACB) to offer type 2 continuing education (CE) to certified behavior analysts who have already passed their exam and have been issued a current and valid certification number. ABAI is also approved by the American Psychological Association (APA) to offer CE for psychologists. ABAI maintains responsibility for its CE program and its content. CEs cost \$10 per credit; payment can be made at the conference Registration Desk. To receive CE, attendees must:

- Pick up a CE packet (sign-in and sign-out sheets and evaluation form) from the CE desk

- Attend the entire event
- Sign in and out of the event with the ABAI staff members located near the door of the room. Staff members are unable to sign sheets for attendees entering over 5 minutes late or leaving more than 5 minutes early
- Complete and return the evaluation form provided to you by an ABAI staff member
- Pay the credit fee of \$10 per credit
- Provide a BACB certificant number (BACB CE only).

Continuing education certificates will be posted to attendees' portals upon receipt of payment. Participants are encouraged to complete the event evaluation survey that will be e-mailed to registrants immediately following the event.

Payment for CE may be made at the conference, through your ABAI portal account or later via fax or mail. You may submit payment via fax or mail to:

Association for Behavior  
Analysis International  
550 W. Centre Ave., Suite 1  
Portage MI 49024-5364  
Fax: (269) 492-9316

Please direct questions about CE to [mail@abainternational.org](mailto:mail@abainternational.org).

# About Poster Sessions

## Poster Session Schedule

Presenters may set up their posters in the Performance Hall on the First Floor of the Ohio Union from 12:00 pm to 1:00 pm on Friday.

Presenters must remove posters immediately following the session.

## Categories of Poster Content

Presenters were asked to categorize their session as experimental analysis, applied behavior analysis, service delivery, or theory.

*Experimental Analysis* deals with representative response (can include verbal behavior in humans), any species; theoretically driven, data-based activity carried out under auspices of research protocol; and anything with the ultimate function of disseminating artifacts (contingent on peer review) that contribute to generalizable knowledge about fundamental processes.

*Applied Behavior Analysis* deals with behavior selected on the basis of its social significance, human emphasis, intervention driven with cure orientation, data-based activity carried out under auspices of research protocol, development of new technology, and anything with the ultimate function of disseminating artifacts (contingent on peer review) that contribute to generalizable knowledge about how or why interventions, service delivery systems, or their components achieve desired goals. The function of any manipulation or analysis is to go beyond demonstrating that environmental manipulations will produce desired goals by identifying

how or why interventions, service delivery systems, or their components achieve those goals.

*Service Delivery* deals with behavior selected on the basis of its social significance, human emphasis, intervention driven with cure orientation, frequently but not necessarily supported through fee for service arrangements and staff positions, extension of existing technology to new settings or populations, and is not predominantly undertaken to disseminate an artifact that contributes to generalizable knowledge, even though it may include data-based decision making. Presentations in this category are predominantly a case histories, illustrations, descriptions, or demonstrations rather than analysis of how principles may be applied in interventions, service delivery systems, or their components to achieve desired goals. The function of any manipulation or analysis is to apply environmental manipulations to produce desired goals rather than to identify how or why interventions, service delivery systems, or their components achieve those goals.

*Theory* deals with abstract, conceptual, or integrative statements about organizations of facts, interpretations, or mathematical models and quantitative analyses. This area can also include historical and philosophical analyses or reviews.



Friday, August 3

Off-Site Tours

Welcome

Opening Keynote Address

Reception (Host: Office of Energy & Environment,  
The Ohio State University)

## # 1 Special Event

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12:30 pm–5:00 pm

Great Hall

### **Blue Rock Station Sustainable Living Farm**

Chair: Annie Warmke (Blue Rock Station)

**The Blue Rock Station Tour is filled to capacity.** ABAI Past President Richard Malott and Mexico's Comunidad Los Horcones member Esteban Armendariz will lead this tour of Annie and Jay Warmke's farm in the foothills of the Appalachian Mountains and learn first-hand how these pioneers promote sustainable living. The tour will include a look at livestock raising methods, water collection systems, and gardens and buildings (made of natural and re-used materials). The Warmke's passive solar home—called an Earthship—is the first of its kind East of the Mississippi River and has been featured on national TV programs including MTV's Teen Crib. Transportation and solar cookies with lemonade are included in the cost of the tour. Find out more about Blue Rock Station at <http://www.bluerockstation.com>.

**Tour Registrants** will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. The bus departs at 12:30 pm and returns at 5:00 pm.

Capacity: 20 (must reserve spot by August 1). Cost: \$15 (to be paid onsite)

## # 2 Special Event

---

1:00 pm–2:30 pm

Great Hall

### **Byrd Polar Research Center-Tour Group 1**

Chair: Ellen Mosley-Thompson (The Ohio State University)

The Byrd Polar Research Center (BPRC) is The Ohio State University's oldest research center. BPRC is internationally recognized as a premier polar and alpine research center, with an expanding focus on global climate and environmental issues. The mission of BPRC scientists is to conduct multi-disciplinary research, to enhance the educational opportunities for all students, and to provide public outreach and engagement opportunities. Details about our nine research groups, Polar Archival Program, and the U.S. Polar Rock Repository are available at <http://bprc.osu.edu>.

On this tour, Behavior Change for a Sustainable World Conference attendees will receive an overview of the Center, be introduced to the Center's ice core paleoclimatology and paleoceanography research programs, and visit the Polar Rock Repository.

**Conference attendees who plan to participate in the tour must add this event to their personal schedules** and will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. The bus departs at 1:00 pm from Ohio Union. The cost is free to conference attendees.

### # 3 Special Event

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1:30 pm–3:00 pm

Great Hall

#### **The Ohio State University Sustainability Tour-Tour Group 1**

Chair: Aparna Dial (The Ohio State University)

Come experience Ohio State's campus, and learn why Ohio State is a leader in sustainability. On this walking tour you will visit LEED Certified buildings, see trees older than the University itself, visit the historic Mirror Lake and Oval, walk through Ohio Stadium to see the zero waste effort, visit the beautiful Chadwick Arboretum and Learning Gardens, and explore the one-of-its-kind wetlands.

**Conference attendees who plan to participate in the tour must add this event to their personal schedules (below)** and will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. Approximate walking distance: 1.3 miles. The bus departs from Ohio Union at 1:30 pm and will return at 3:00 pm. The cost is free to conference attendees.

### # 4 Special Event

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3:00 pm–4:30 pm

Great Hall

#### **Byrd Polar Research Center-Tour Group 2**

Chair: Ellen Mosley-Thompson (The Ohio State University)

The Byrd Polar Research Center (BPRC) is The Ohio State University's oldest research center. BPRC is internationally recognized as a premier

polar and alpine research center, with an expanding focus on global climate and environmental issues. The mission of BPRC scientists is to conduct multi-disciplinary research, to enhance the educational opportunities for all students, and to provide public outreach and engagement opportunities. Details about our nine research groups, Polar Archival Program, and the U.S. Polar Rock Repository are available at <http://bprc.osu.edu/>.

On this tour, Behavior Change for a Sustainable World Conference attendees will receive an overview of the Center, be introduced to the Center's ice core paleoclimatology and paleoceanography research programs, and visit the Polar Rock Repository.

**Conference attendees who plan to participate in the tour must add this event to their personal schedules (below)** and will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. The bus departs at 3:00 pm from Ohio Union. The cost is free to conference attendees.

#### # 5 Special Event

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3:30 pm–5:00 pm

Great Hall

#### **Center for Automotive Research Tour**

Chair: Holly Henley (The Ohio State Center for Automotive Research)

The Ohio State Center for Automotive Research (OSU CAR) is an interdisciplinary research center in The Ohio State University College of Engineering. OSU CAR research focuses on: advanced electric propulsion and energy storage systems; advanced engines and alternative fuels for reduced fuel consumption and emissions; intelligent transportation and vehicular communication systems; autonomous vehicles; noise, vibrations, and dynamics; vehicle chassis systems; and vehicle and occupant safety.

OSU CAR also provides facilities and support for Motorsports/Student Projects. This program challenges students of all majors, backgrounds, skill levels, and degrees of experience to compete on one of six motorsports teams (Baja SAE, Buckeye Bullet, Buckeye Electric Motorcycle, EcoCAR, Formula Buckeyes SAE, and Supermileage SAE). Students apply research and classroom concepts, as well as learn hands-on skills for designing, fabricating, racing, managing, and marketing competition vehicles. This experience includes machining, engine testing, battery testing, computer

aided design, and many other engineering tools. To learn more about OSU CAR visit: <http://car.osu.edu/> and <http://car.osu.edu/motorsports>.

**Conference attendees who plan to participate in the tour must add this event to their personal schedules (below)** and will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. The bus departs from Ohio Union at 3:30 pm and returns at 5:00 pm. The cost is free to conference attendees.

**# 6 Special Event**

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3:30 pm–5:00 pm

Great Hall

**The Ohio State University Sustainability Tour-Tour Group 2**

Chair: Aparna Dial (The Ohio State University)

Come experience Ohio State's campus, and learn why Ohio State is a leader in sustainability. On this walking tour you will visit LEED Certified buildings, see trees older than the University itself, visit the historic Mirror Lake and Oval, walk through Ohio Stadium to see the zero waste effort, visit the beautiful Chadwick Arboretum and Learning Gardens, and explore the one-of-its-kind wetlands.

**Conference attendees who plan to participate in the tour must add this event to their personal schedules** and will meet in the Great Hall on the first floor of the Ohio Union, by the Information Center. Your transportation will be located at the 12th street turnaround off the Potter Courtyard. Approximate walking distance: 1.3 miles. The bus departs from Ohio Union at 3:30 pm and will return at 5:00 pm. The cost is free to conference attendees.

**# 7 Special Event**

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6:00 pm–6:10 pm

U.S. Bank Conference Theater

CSE

**Welcome to the Conference**

Chair: William L. Heward (The Ohio State University)

**Welcome to The Ohio State University** (Applied Research) RONALD M. SEGA (Office of Energy & Environment)

**Abstract:** Dr. Bill Heward will open the conference. Then, a warm welcome to The Ohio State University will be given by Ronald M. Segal, director, Office of Energy & Environment, and vice president and enterprise executive for energy and the environment, The Ohio State University.

## # 8 Invited Presenter

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6:10 pm–7:00 pm

U.S. Bank Conference Theater

CSE; Theory

### **Opening Keynote: The Greatest Challenge of Global Climate Change**

Chair: William L. Heward (The Ohio State University)



LONNIE G. THOMPSON (The Ohio State University)

Lonnie G. Thompson, Ph.D., is distinguished university professor in the School of Earth Sciences and senior research scientist at the Byrd Polar Research Center at The Ohio State University. One of the world's most renowned paleoclimatologists, Dr. Thompson has led 60 expeditions to remote ice caps atop the world's highest mountains. His findings have resulted in major advances in our understanding of climate change by demonstrating how tropical regions have undergone significant climate variability, countering the earlier view that higher latitudes dominate climate change. Thompson's research has been featured in hundreds of publications, including *National Geographic* and the *National Geographic Adventure* magazines, in the book *Thin Ice* by (Bowen, 2006), and is highlighted in Al Gore's documentary film on global warming, *An Inconvenient Truth*. His paper, "Climate Change: The Evidence and Our Options," was published in the special section on the human response to climate change published in the Fall 2010 issue of *The Behavior Analyst*. One of *Time* magazine's 2008 "Heroes of the Environment," Thompson was identified as one of six scientists and innovators whose work is key to addressing global climate change. An elected member of the National Academy of Sciences, Dr. Thompson's numerous honors and awards include the Tyler World Prize for Environmental Achievement (2005), the environmental sciences equivalent of a Nobel Prize, the Einstein Lecturer Award from the Chinese Academy of Sciences, and The National Medal of Science (2007), the highest honor the United States bestows on an American scientist.

**Abstract:** Climate change is no longer a future threat; it is here now. The widespread melting of high-elevation glaciers and ice caps, particularly in low to middle latitudes, provides some of the strongest evidence that large-scale, pervasive, and in some cases, rapid change in Earth's climate system is under way. Physical evidence from ice cores retrieved from shrinking glaciers confirm their continuous existence for hundreds of thousands of years, and that atmospheric conditions that dominate those regions today are radically different from those under which these ice fields originally grew and were sustained. A large and continuing increase in atmospheric greenhouse gas concentrations, the result of human activity, is the major cause of both global warming and climate change. Despite this, societies have taken little action to address this global-scale problem. Hence, the rate of global carbon-dioxide emissions continues to accelerate, bringing with it increasingly rapid changes in climate. The major challenge of climate change is not to prove that it is real, but to get people, especially those in government, religious, and environmental organizations around the world, to change their behavior. For global climate change, nature is the timekeeper and none of us can see the clock, but there is no question that time is running out.

#### # 9 Special Event

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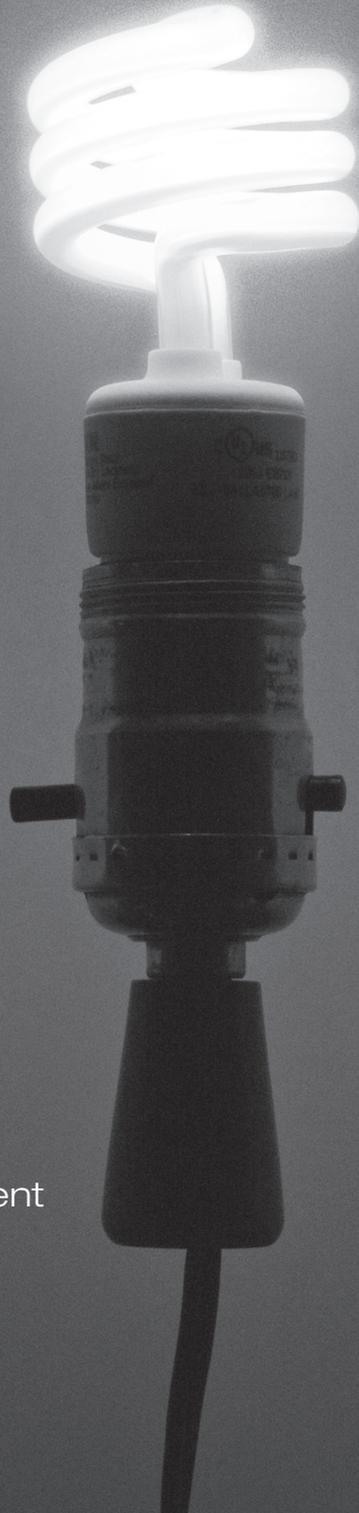
7:00 pm–8:30 pm

Performance Hall

#### **Reception-Hosted by Office of Energy & Environment, The Ohio State University**

Chair: William L. Heward (The Ohio State University)

The Office of Energy and Environment is pleased to sponsor this "Zero-Waste" event (all waste materials will be composted or recycled) to provide conference attendees an opportunity to become acquainted and network.



Saturday, August 4

Invited Presentations  
Remarks by the OSU President  
Poster Session

## # 10 Invited Presenter

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8:30 am–9:30 am

U.S. Bank Conference Theater

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: William L. Heward, Ph.D.

### **Behavior Change for a Sustainable World**

Chair: Richard W. Malott (Western Michigan University)



WILLIAM L. HEWARD (The Ohio State University)

William L. Heward, Ed.D., BCBA, is professor emeritus in the College of Education and Human Ecology at The Ohio State University (OSU) where he helped train special education teachers for 30 years. Dr. Heward was as a senior Fulbright scholar in Portugal, a visiting scholar at the National Institute of Education in Singapore, a visiting professor of psychology at Keio University in Tokyo and the University of Sao Paulo, Brazil, and has given lectures and workshops in 14 other countries. His publications include more than 100 journal articles and book chapters and nine books, including *Exceptional Children: An Introduction to Special Education, Tenth Edition* (2013), and *Applied Behavior Analysis, Second Edition* (2007, co-authored with his OSU colleagues John Cooper and Tim Heron), which have been translated into several foreign languages. Awards recognizing Dr. Heward's contributions to education and behavior analysis include the Fred S. Keller Behavioral Education Award from the American Psychological Association's Division 25, the Distinguished Psychology Department Alumnus Award from Western Michigan University, and the Ellen P. Reese Award for Communication of Behavioral Concepts from the Cambridge Center for Behavioral Studies. A fellow and past president of the Association for Behavior Analysis International, Dr. Heward's research interests include "low-tech" methods for increasing the effectiveness of group instruction and adaptations of curriculum and instruction that promote the generalization and maintenance of newly learned knowledge and skills.

**Abstract:** For decades, earth scientists have issued fact-filled warnings about our planet's declining health and its diminishing ability to sustain human activity. Human behavior is responsible for both of these problems and changing our behavior is the only solution. While behavior analysis has made important contributions to other spheres—improving education, helping people adopt healthier life styles, making highways and factories

safer, caring for people exhibiting challenging and life-threatening disorders—it has paid far too little attention to the impact of human behavior on the only home we have. But this is changing. I will identify and offer examples of why behavior analysts are uniquely poised to contribute to a broad range of interventions to promote the husbandry of our planet's resources, restore damaged ecosystems, and help prepare us to cope with the inevitable challenges to come.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Describe key characteristics of behavior analysis that distinguish it from traditional approaches to behavior change.
- Identify applications of behavior principles to promote environmentally friendly behavior.
- Describe opportunities for behavior analysts to help develop and evaluate programs that effectively promote sustainable practices.

**Educational Level:** Introductory

# 11 Invited Presenter

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9:30 am–10:30 am

U.S. Bank Conference Theater

CSE; Service Delivery

PSY/BACB CE Offered. CE Instructor: E. Scott Geller, Ph.D.

### **Helping People Go Green With Applied Behavior Analysis**

Chair: William L. Heward (The Ohio State University)



E. SCOTT GELLER (Virginia Polytechnic Institute and State University)

Scott Geller, Ph.D., is an alumni distinguished professor at Virginia Tech, Blacksburg, VA, and director of the Center for Applied Behavior Systems in the Department of Psychology. He is also senior partner of Safety Performance Solutions, a leading-edge training and consulting firm targeting occupational health, safety, and sustainability. In 2009, the American Psychological Foundation honored Dr. Geller with the Gold Medal Award for Lifetime Achievement in Psychology for the Public Interest. For a decade after the first Earth Day in 1970, Dr. Geller and his students conducted numerous field studies to

demonstrate the social validity of applying behavior analysis to increase environmentally friendly behavior (EFB) in organizations and throughout communities. This research was summarized in the book, *Preserving the Environment: New Strategies for Behavior Change* (Geller, Winett, & Everett, 1982, Pergamon Press). Unfortunately, few of the interventions revealed in this book to increase EFBs have been implemented. Dr. Geller's presentation will activate a reconsideration of how applied behavior analysis can contribute significantly to sustainability.

**Abstract:** In the 1970s, applied behavior analysts demonstrated a number of practical and effective ways to increase environmentally friendly behavior (EFB). Despite their success, these interventions have not been implemented on a large scale. Why not? Dr. E. Scott Geller will address this critical question by reviewing early applications of behavioral science aimed at increasing EFB and by sharing lessons learned from his 40 years of behavior-based intervention in organizations and communities. These lessons indicate hurdles to overcome to achieve large-scale impact on sustainability. The need for self-motivated "actively caring" will be addressed, as well as how a paradigm shift to humanistic behaviorism can increase actively caring for the environment throughout families, organizations, and communities worldwide.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Describe published application of behavior analysis to protect the environment, beginning in the 1970's.
- Explain the limitations of published applications of behavior analysis to protect the environment.
- Suggest ways to increase the large-scale impact of applications of behavior analysis to protect the environment.
- Explain how to determine if an individual feels empowered and self-motivated to apply an intervention for sustainability.
- List practical ways to address the dissemination challenge of applying behavior analysis for sustainability.

**Educational Level:** Intermediate

## # 12 Invited Presenter

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11:00 am–12:00 pm

U.S. Bank Conference Theater

CSE; Theory

PSY/BACB CE Offered. CE Instructor: Darnell Lattal, Ph.D.

### **Show Me The Money (It's Green, You Know)**

Chair: Mark P. Alavosius (University of Nevada, Reno)



DARNELL LATTAL (Aubrey Daniels International)

Darnell Lattal is president and chief executive officer of Aubrey Daniels International. She is a specialist in the design and implementation of behavioral-based business strategies to achieve core initiatives. She has worked in a variety of settings on organizational redesign and change management, executive coaching, achieving high performance, performance measurement and systems design, leadership and teamwork within and across organizational structures, succession planning, ethical decision-making, and creating a solid leadership legacy based on self-awareness and self-management. Dr. Lattal is particularly effective in coaching individuals from executives to line employees to make improvements in personal style and performance execution. She has special expertise in the psychology of learning, designing sustainable and rapid change.

**Abstract:** The closest thing we have to a law of behavior, as gravity is a law of physics, is that behavior is a function of its consequences. Many attempts to get the public to "go green" have not applied behavioral consequences in a way that is consistent with what behavior analysis, the science of behavior, knows about how to change behavior to the point that it becomes "the new norm." In other words, how to make it last and become a habit. Whether at the individual level or the corporate level, long-term commitment to environmental concerns requires a sophisticated application of effective consequences. In this session, Dr. Lattal will present a tool for analyzing the effectiveness of consequences in current green initiatives and a simple framework for recycling ineffective initiatives into successful ones.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Understand how the phrase, "Behavior is perfectly motivated" applies to sustaining a green planet.
- Describe why policy makers need to become skilled in functional analysis.
- Understand that what is said to build inclusion in designing large-scale methods of behavior change must be broadened to attract diverse and currently non-aligned groups as primary owners and beneficiaries.

**Educational Level:** Intermediate

### # 13 Invited Symposium

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1:30 pm–2:30 pm

U.S. Bank Conference Theater

CSE

PSY/BACB CE Offered. CE Instructor: Thomas S. Critchfield, Ph.D.

### **Seeking Mainstream Acceptance of Behavioral Sustainability Solutions**

Chair: Thomas S. Critchfield (Illinois State University)

### **Real Translation: Communicating to Non-experts About Advances in Behavior Analysis**



MARK R. DIXON (Southern Illinois University)

Dr. Mark R. Dixon, BCBA-D, is professor and coordinator of the Behavior Analysis and Therapy Program at Southern Illinois University. His interests include the study of complex operant behavior, gambling behavior, and organizational behavior. Mark has published 3 books and over 100 peer reviewed journal articles. He has served as associate editor for Journal of Applied Behavior Analysis and Journal of Organizational Behavior Management, the editor for the Analysis of Gambling Behavior, and a reviewer for over 20 non-behavioral journals. Dr. Dixon has generated over 1.5 million dollars in funding to infuse behavior analysis within local schools and treatment facilities, and create a behavioral therapy clinic for persons suffering from problem gambling or obesity. Mark's research and/or expert opinions have been featured in Newsweek, Time, The New York Times, National Public Radio, This American Life, a New York Times best seller, and regional affiliates of ABC, CBS, and PBS.

**Abstract:** Gaining wide acceptance for sustainability solutions will require translating behavioral research and concepts for consumption by nonbehavioral audiences. I will reflect on my experiences discussing my

research with mainstream popular media, and how this required me to stop preaching to the choir in order to get the rest of the world to listen.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Identify some of professional areas outside of behavior analysis that address the problem of persuading policy-makers and the public to embrace and act upon new technologies.
- Identify some impediments to the dissemination of new technologies and describe these in terms of behavioral processes.
- Sketch general strategies for exporting the fruits of behavior science to non-experts.

**Educational Level:** Introductory

### **Introducing Behavior Analysis to New and Timely Public Policy Research Domains**



MICHAEL A. MAGOON (NORC at the University of Chicago)

Dr. Magoon is a research scientist and the environment lead in the Security, Energy, and Environment department at NORC at the University of Chicago (NORC). NORC is an independent, non-profit social science research organization whose mission is to provide objective data and analysis to public policy decision makers and ultimately to affect evidence-based social change. He's also a behavior analyst whose graduate work included both basic human operant laboratory research and a variety of organizational behavior management (OBM) projects. On completion of his degree, he set out to bring behavior analysis to those who don't know much about it (and there are many!). In his first effort, he tried to bring OBM to a very large and well-established management consulting firm. In that environment he learned quite a bit about how other disciplines understand and respond to modern behavior analysis. In his current position, he's trying to develop relationships and build collaborations between behavior analysts and other scientists and practitioners from other disciplines to conduct research in the domains of security, energy, and environment. In this position, he's learning quite a bit about the barriers and challenges of doing this, both from within and outside of the field.

**Abstract:** My comments draw partly on experiences attempting to bring behavior analysts into potentially high-profile public-policy-related research projects, including in the domains of energy and environment. I will share some anecdotes regarding approaches that have resulted in better and worse results. Along the way, I will present some examples of the kinds of projects in which I'm trying to get behavior analysts involved; will share thoughts on why, from a behavioral perspective, this is difficult; and will present some ideas on how we can more systematically approach translation to new fields. Finally, I will appeal to all of you to get in touch with me about finding some multidisciplinary research opportunities in areas with broad social impact!

### **Behavioral Economics and the Tower of Babel**



SHAWN R. CHARLTON (University of Central Arkansas)

Shawn Charlton earned a doctorate in experimental psychology at the University of California at San Diego and is now associate professor of psychology at the university of central Arkansas. His research interests focus on contextual influences on decision making with a specific emphasis on social, temporal, and hormonal factors.

**Abstract:** Behavioral economics has a lot to contribute to the goal of encouraging long-term sustainability. Unfortunately, the contributions of behavioral economics are limited because this field is viewed differently by psychologists, economists, and behavior analysts. This presentation will discuss the benefits and pitfalls to adopting an inclusive view of behavior economics in addressing sustainability issues.

### **Science, Better Mousetraps, and the Science of Dissemination**



RONNIE DETRICH (Wing Institute)

Ronnie Detrich is a senior fellow of the Wing Institute. The Institute's mission is bringing evidence-based interventions and programs to K–12 education. Prior to joining the Wing Institute, Ronnie worked for over 30 years in a variety of human service settings and quickly learned that having data was rarely sufficient to bring about important changes; it is necessary as well to develop effective social influence skills. His current

work at the Wing Institute focuses on those variables that improve the quality of implementation of educational innovations.

**Abstract:** Across many disciplines there is a research to practice gap and the field of environmental science is no different. If we are to have an impact on the health of the planet, then it is necessary to develop methods to influence the large-scale adoption of different practices with respect to the environment. To date, efforts have been largely inadequate; however, there is an emerging science of dissemination of innovations that has great relevance for this topic. This discussion will focus on key principles from this emerging science that can increase the efficacy and efficiency of our efforts.

#### # 14 Invited Presenter

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2:30 pm–3:30 pm

U.S. Bank Conference Theater

CSE; Applied Research

PSY CE Offered. CE Instructor: Fred Provenza, Ph.D.

### **The Web of Life: How Behavior Connects Humans, Animals, and Landscapes**

Chair: Susan G. Friedman (Utah State University)



FRED PROVENZA (Utah State University)

Fred Provenza, Ph.D., is emeritus professor of Wildland Resources at Utah State University, and author or co-author of more than 250 publications in peer-reviewed journals and books. Dr. Provenza began his career working on a ranch near Salida, CO, while earning a bachelor's degree in wildlife biology from Colorado State University. He earned a master's degree and Ph.D. in range science while working as a technician and research assistant at Utah State University. He joined the faculty of Utah State University in 1982. For the past 35 years, Dr. Provenza's team of graduate students and colleagues from around the world have produced ground-breaking research that laid the foundations for what is now known as behavior-based management of landscapes. That work inspired researchers in disciplines as diverse as chemical and landscape ecology, ruminant and human nutrition, biopsychology, animal welfare, restoration ecology, wildlife damage management, pasture and rangeland science and management, and rural sociology and eco-development. It was their efforts that led to the formation in 2001 of BEHAVE.

**Abstract:** This talk will describe the work of BEHAVE, an international network of scientists and land managers from five continents. Behavioral Education for Human, Animal, Vegetation and Ecosystem Management (BEHAVE, [www.behave.net](http://www.behave.net)) integrates behavioral principles and processes with local knowledge to enhance ecological, economic, and social values of rural and urban communities. By providing understanding of the behavior of soil, plants, animals and humans in ever-changing environments, BEHAVE helps people apply new and more efficient practices that benefit all facets of the environment and the businesses that manage land. In the process, everyone involved is a student attempting to better understand behavior and to apply basic principles of behavior change to help one another appreciate our differences and build upon our collective strengths to sustain communities and landscapes in ways that integrate diverse ecological, economic, and social values and services.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Educational Level:** Intermediate

# 15 Invited Presenter

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4:00 pm–5:00 pm

U.S. Bank Conference Theater

CSE; Service Delivery

PSY/BACB CE Offered. CE Instructor: Jeanine Stratton, Ph.D.

### **Building Bridges Across Disciplines to Support Sustainable Practices: The Role of Behavior Analysis**

Chair: Janet S. Twyman (UMass Medical School/Shriver Center)



JEANINE STRATTON (Furman University)

Jeanine Stratton, Ph.D., BCBA-D, is an assistant professor in the Business and Accounting Department, adjunct professor in Earth and Environmental Sciences, and an affiliate research faculty member of the David E. Shi Center for Sustainability at Furman University. She is also an adjunct professor in the Psychology Department at Wofford College. She teaches courses in behavioral approaches to organizational performance, marketing, and human systems in sustainability. Her cross-disciplinary research interests include the application of behavioral principles to socially significant topics using a scientist-practitioner approach, including incentive systems, consumer behavior, market strategy, sustainability, and corporate

responsibility. Her work has been presented in a variety of fields including behavior analysis, sustainability, and university teaching. Her most recent publications have appeared in *Sustainability: Journal of Record* and the *Journal of Organizational Behavior Management*. Dr. Stratton is a member of the Sustainability Planning Council at Furman University, where she spearheaded the Aubrey Daniels' Performance Management Program, and is a founding member of the Campus Conservation Research Initiative. She serves on the editorial board for the *Journal of Organizational Behavior Management*, and is a guest reviewer for *Journal of Applied Behavior Analysis*. As a well-rounded behavior analyst, she has experience in program development and staff training in behavioral health services. In addition to her academic career, Stratton has consulted in a variety of businesses in retail, health care, banking, food, and not-for-profit service industries.

**Abstract:** People from all sorts of backgrounds--business and industry, government, biology, environmental science, community leaders, behavior analysis--share a common goal: a world made progressively healthier by humanity's collective actions. To achieve that goal we cannot go our own separate ways; we must collaborate. Our different backgrounds mean that we each can contribute important perspectives and expertise to a collaborative effort, but our different backgrounds also can create stumbling blocks. This presentation will highlight the benefits and challenges of multidisciplinary collaboration and offer suggestions on how to make it work. Dr. Stratton will provide examples of successful collaborations on sustainability projects and offer suggestions for future efforts.

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Understand the necessary multidisciplinary focus inherent to sustainability.
- Review key challenges of collaboration across disciplines, specifically with behavior analysis, and how to manage those challenges.
- Identify key areas for collaboration that behavior analysis can have impact.

**Educational Level:** Intermediate

## # 16 Special Event

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5:00 pm–5:10 pm

Performance Hall

CSE

### **Welcoming Remarks**

Chair: William L. Heward (The Ohio State University)

**Brief Remarks from OSU's President** (Applied Research) GORDON GEE  
(The Ohio State University)

**Abstract:** ABAI is pleased to welcome Gordon Gee, president of The Ohio State University.

## # 17 Poster Session

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5:15 pm–7:00 pm

Performance Hall

CSE

**1. Sustainability: Enhanced Waste Diversion Through the Application of Basic Behavioral Principles** (Applied Research) SCOTT COHN (Western State College of Colorado)

**Abstract:** The role that environmental education has had on recycling attitudes and beliefs is well documented; however, several studies have also revealed that newly acquired attitudes and beliefs do not necessarily translate into improved recycling behaviors. In practice, opportunity and convenience produce higher recycling rates than do changes in attitude and beliefs. By observing behavior and using a modified waste auditing procedure to measure actual waste and recycling rates, the current series of field studies evaluated and modified waste-diversion programs (e.g., recycling and composting) in a number of different locations. The locations evaluated included administration buildings, office buildings, performing and studio art centers, institutional food service facilities, and an athletic complex. The behaviorally oriented modifications made to waste-diversion programs reliably produced an 80–90% reduction in recyclable materials found in the trash. These “low-cost” modifications to waste diversion programs are easy to implement and can dramatically reduce landfill-bound waste while enhancing efforts to collect recyclable materials. Based on normal costs associated with waste removal, improvements in recycling programs (as opposed to other more costly environmental initiatives) can pay for themselves in a matter of months rather than years.

## **2. A Case Study of the BP Deepwater Horizons Oil Spill (Theory)** Amber Marie Candido, Daniel Reimer, and RAMONA HOUMANFAR (University of Nevada, Reno)

**Abstract:** This poster will provide a behavior analytic overview of organizational leadership of socially significant practices by drawing on cultural units such as metacontingency and macrocontingency. These concepts have been developed to provide an interdisciplinary account of phenomenon at high levels of complexity. The recent conceptualizations of metacontingency have offered a comprehensive set of analyses that highlight the importance of antecedent variables such as cultural milieu, leadership communication, and consumer practices in our analysis of cultural change. This approach is especially helpful when attempting to establish long-term solutions to large-scale problems. Malfunctions on the Deepwater Horizon oil rig provide a recent example of the dangers of the oil industry. Currently the United States Government is attempting to fix the problem by creating regulations to ensure these accidents are not repeated. However, they address the problem at the behavioral level when these problems would be better addressed at the cultural level, the level of the metacontingencies. The purpose of this poster is to demonstrate the utility of the concept of metacontingency in systematic analysis of complex phenomena such as unsafe practices in oil production.

## **4. Using Behavior Analysis to Organize Communities for Environmental Justice (Theory)** ELIZABETH MILLER (SEEM Collaborative)

**Abstract:** Environmental justice is defined by the United States Environmental Protection Agency as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." True environmental justice, then, requires the building of strong community networks to address environmental needs and concerns--networks often comprising stakeholders who have not previously been involved with environmental struggles. Building these networks meaningfully requires overcoming barriers built by racism, classism, disablism, and countering reinforcement histories that work to keep marginalized people disenfranchised. Applied behavior analysis offers a set of tools for community organizing that are rarely utilized as such. A community-level "inconvenience review," from habit reversal procedures (Azrin and Nunn 1973), can provide a shift in

motivation. Creating opportunities for small, attainable gains can utilize shaping to build a new history of reinforcement as community changers (Fawcett 1991). Mattaini (1995) suggests that having members essentially conduct a functional analysis by way of contingency diagramming can identify key elements for focus during organizing. Utilizing these concepts and others, this poster will propose a comprehensive behavior analytic model for community organizing.

### **5. Using Global "Go Green" Initiatives to Guide Future Practices Within the USA** (Theory) AMANDA N. KELLY and Shari Pirnia (SEEM Collaborative)

**Abstract:** An initial review of sustainability practices across the globe reveals a disproportionately small number of “go green” initiatives among first world countries. Many of the noteworthy sustainability efforts have come to life outside of the United States. With the US at the forefront of many other historical achievements, why are we not leading the charge with innovative, global endeavors? This question, as well as others, will be entertained through this investigation. This poster will review sustainability initiatives currently employed in various parts of the world and examine, from a behavior analytic perspective, the underlying factors that appear to influence sustainability practices within the United States. Furthermore, differences in conceptualization and implementation of these practices will be investigated in an attempt to identify tangible suggestions for encouraging sustainability initiatives in the US.

### **6. Walking the Crosswalk in Brasilia (Distrito Federal/Brazil): An Example of a Cultural Intervention** (Service Delivery) JOAO CLAUDIO TODOROV (Universidade de Brasília, Brazil) and Vivica Le Senechal Machado (Faculdades Integradas Pitagoras de Montes Claros)

**Abstract:** The study of social phenomena has increasingly awakened the interest and concern of behavior analysts. Since 1997, practically all drivers living in Brasilia (Distrito Federal/Brazil) respect crosswalks. This change in cultural practice happened because of a local campaign involving important social agencies, whose representations got together in the Permanent Forum for Peace on Traffic, organized by the University of Brasilia. The present study described the agency's actions that promoted a cultural intervention, resulting in the new cultural practice of yielding to pedestrians. Through the analysis of documents and realization of interviews this study sought to rebuild the history of this campaign, with the purpose of identifying, analyzing, and interpreting the interlocking behavioral

contingencies responsible for such cultural intervention. This social phenomenon was discussed under the macrocontingencies and metacontingencies concepts.

### **7. Backpacking for a Sustainable World: Teaching Environmental Stewardship in a University Physical Activity Course** (Service Delivery) SHERRY L. SCHWEIGHARDT (Temple University)

**Abstract:** Incorporating behavioral principles into the design of a college physical activity course is a novel way to teach students to care for the environment. Physical activities in green settings expose students to nature's rewards. Direct and immediate reinforcing consequences, such as breathing fresh air, seeing wildlife, and escaping the fast pace of cities, can maintain healthy physical activity and simultaneously improve the environment when participants learn explicit skills to protect and preserve it. This poster will describe techniques for facilitating outdoor exercise and teaching earth-stewardship skills in an introductory university course in backpacking and camping. Specific techniques for shaping and maintaining low-impact wilderness travel, survival skills, and physical fitness will be described, along with examples for on-campus and field settings. Data from students' tests, papers, and course evaluations provide evidence that skills for backpacking and earth stewardship can be taught, while follow-up interviews provide anecdotal evidence of sustained behavior change. The findings suggest that introducing college students to a challenging and fun physical activity in a natural setting is an effective way to teach earth stewardship skills; moreover, the methods outlined here can be implemented easily in a variety of programs for people outside the university setting.

### **8. Getting the Message Across: Reducing The Use of Styrofoam Containers** (Applied Research) CORY FURROW, E. Scott Geller, and Neville Galloway-Williams (Virginia Polytechnic Institute and State University)

**Abstract:** Evidence suggests Styrofoam containers are detrimental to the environment, from their production and transportation to their dispersion to landfills and biological niches. This poster will describe a field study comparing the impact of three different messages designed to reduce the use of Styrofoam containers in two dining halls located at Virginia Tech. No messages were present during baseline or following the intervention. In Phase II, both locations contained the injunctive message, "Make the right choice and ask for Styrofoam only if you're taking your meal to-go." For one location during Phase III, additional information (the descriptive message) was added

to the original message. The descriptive message included the number of observed reusable dishes selected in a one-week period. The second location's message during Phase III paired the descriptive norm with an impact message. The design of the impact message showed how the descriptive message made a positive impact on the environment. The findings suggest that combining the three kinds of statements produced the greatest decrease in the use of Styrofoam containers ( $t=2.101$ ,  $p=.057$ ). These findings also suggest that combining descriptive and injunctive norms (without an impact statement) is *not* sufficient to influence behavior ( $t=1.489$ ,  $p=.165$ ).

**9. Paper or Plastic: Which is Greener?** (Basic Research) SPENCER LI, Cory Furrow, Kelly Kim, and E. Scott Geller (Virginia Polytechnic Institute and State University)

**Abstract:** Disposable grocery bags (i.e., plastic and paper) are detrimental to the environment. However, it seems unclear which type of disposable bag is more ecologically friendly. In other words, which type of grocery bag is more socially valid from the customer's perspective? For a four-week period, we interviewed 701 customers leaving two large grocery stores in Southwest Virginia regarding their view of the ecological impact of paper and plastic bags. 67.1% believed paper to be more ecologically friendly. We asked participants to justify their response and a content analysis of these data is under way. In addition, participants explained their intentions for any additional uses for their grocery bag (e.g., trash can liners or cat litter collection/disposal; fireplace fuel). The surveys informed the development of a flyer designed to encourage grocery store customers to bring cloth reusable bags to the store for their groceries. The resultant flyer (distributed at one of the stores) contributed to the sale of over 300 cloth bags at this grocery store, and set the stage for a pledge-card commitment intervention that increased the use of reusable bags at the intervention store.

**10. Paper or Plastic: Getting People to Say, "Neither!"** (Applied Research) KELLY KIM, Cory Furrow, Spencer Li, and E. Scott Geller (Virginia Polytechnic Institute and State University)

**Abstract:** All stages in the life cycle of plastic and paper grocery bags are harmful to the environment. The raw materials for producing them cause ecological damage either through deforestation or the extraction of petroleum. Then, when plastic or paper bags are recycled, valuable resources are used in the process. Those that are not recycled cause additional problems. Thus, the ecological answer to a cashier's question,

“Paper or plastic?” is “Neither.” Instead, alternative methods should be used to transport groceries (e.g., reusable cloth bags). We are conducting a field study to evaluate the impact of on-the-spot prompting to reduce the use of disposable grocery bags and increase the use of ecofriendly alternatives at a large grocery store in southwest Virginia. When entering the store, customers received a flyer explaining the environmental impact of disposal bags. Upon exiting the store, participants are offered a hangtag for their rear-view mirror as a reminder to bring re-usable bags for their groceries. Behavioral observations of customers at two grocery stores (intervention and control) are ongoing and will continue until May, 2012. To date, the outcome data are encouraging. Over the first month of the “Say Neither” promotion, the store manager calculated a saving of 33,000 plastic and paper bags, and the purchase of over 300 reusable cloth bags.

**11. Using Behavior Analysis and Social Psychology to Affect Student Understanding of Sustainability Issues** (Basic Research) MARCIA J. ROSSI (Alabama State University)

**Abstract:** Improving student understanding of how behavioral principles can be applied to real-world problems can be challenging. Many students are not well informed about the need for sustainable practices or about global climate change, environmental destruction, etc. This poster will describe several assignments and/or class activities that have been used to help students in a social psychology class understand how human behavior in general, and their own behavior in particular, impacts global climate change. One activity involves introducing students to the concepts of short-term consequences and long-term consequences, and involves a discussion of how many social dilemmas result from individuals pursuing short-term gain without regard for long-term negative consequences. Another assignment requires students to write an essay in which they investigate their own ecological footprint, and then apply concepts from social psychology and behavior analysis to analyze how their behavior and others can be changed to improve sustainability.

**12. Chemistry Education for a Sustainable Future** (Service Delivery) AMOS ANDERSON (The Chicago School of Professional Psychology) and Kate Anderson (Beyond Benign)

**Abstract:** Work in sustainability is broad and encompasses all disciplines. Chemistry is one field that has been conspicuously absent from the sustainability initiatives on American university campuses. As our global

society shifts towards more sustainable materials and products in response to the global environmental problems we face today, why are educational institutions slow to respond to this shift in the field of chemistry? Chemistry practiced and applied with the green chemistry principles is inherently better chemistry overall. If we are not factoring in cost, safety and performance into the building blocks of all our materials and processes then we are not creating sustainable products and processes. Much effort has been made by some chemistry instructors to introduce green chemistry concepts into courses and labs. However, a widespread, systematic method for implementing green chemistry throughout educational institutions does not yet exist. This poster will consider how behavior analytical research can move higher learning institutions to move toward green chemistry.

**13. White Lights, Big City: Promoting Energy Efficiency One Building at a Time** (Service Delivery) JONATHAN W. KIMBALL and John Fitzgerald (JPF Architectural Products)

**Abstract:** Grant (2011) places tactics for reducing unsustainable behavior into 4 categories: consumption-based, culture-based, regulatory, and dissemination. JPF Architectural Products has bid on replacing lighting in approximately 50 buildings in the Chicago area with bulbs that use up to 75% less energy than those they replace. Companies that purchase the retrofit may not do so because they are environmentally conscientious: they are motivated by cost savings (consumption-based solution), and by additional tax benefits (regulatory solution). Their actions, nonetheless, lead to buildings that place a much smaller footprint on the commons. The poster (a dissemination project) includes representative graphic data showing cost savings over time and/or average expenditures before and after selected retrofit projects; these data can also be described in terms of the reduced carbon emissions they represent. Discussion will touch upon improved technology, effective policy, and the risk of companies spending “green dividends” on additional consumption.

**14. When Ignorance Is Bliss: How Clueless Contingencies Can Help Us Be Green More Often** (Service Delivery) WILLIAM L. HEWARD (The Ohio State University) and Jonathan W. Kimball (JPF Architectural Products)

**Abstract:** Clear, predictable “if-then” behavior-reward contingencies can increase green behavior (e.g., “If I ride the bus to work today, then I’ll get a token good for a free ride next week”). But maintenance of the behavior change across time and settings is less likely when the presence or absence

of the contingency is easily predicted. (“The game's off. No need to respond now.”) Indiscriminable contingencies (IC) offer one way to solve the maintenance problem. In a well-designed IC, a person cannot tell when or where performing the target behavior will produce a reward, so the best strategy is to “be good” all the time, everywhere. ICs have helped young children offer to share toys (Fowler & Baer, 1981), select healthy snacks (Baer, Williams, Osnes, & Stokes, 1984), and stay on task (Dunlap & Pilenis, 1988); helped students maintain improved levels of academic productivity (Freeland & Noell, 2002), and helped adult vocational trainees respond appropriately to feedback from co-workers and supervisors (Grossi, Kimball, & Heward, 1994). These studies and others suggest that making effective if-then contingencies across environmentally friendly behaviors (e.g., walking/biking, recycling, reusing) and environments (e.g., home, work, in the community) indiscriminable would increase the occurrence of green behavior. This poster will describe the critical elements of ICs, suggest guidelines for designing and implementing them, and provide examples of how communities and companies could use them to increase the effectiveness of sustainability programs.

**15. TerraKids: An Interactive Website Where Kids Learn to Save the Environment** (Service Delivery) JANET S. TWYMAN (University of Massachusetts Medical School Eunice Kennedy Shriver Center)

**Abstract:** Any sustained success in combating climate change will require the involvement of the world’s more than 2.2 billion children. “TerraKids” is the name of a website and web-based community (that is, for now, purely fictional) where 8- to 12-year-old kids learn about climate change and become catalysts for a greener Earth. Kids learn about the environment and the role they and their families can play in reducing global warming. While on the site kids can learn about their family’s carbon footprint and what can be done to help reduce it. TerraKids uses principles and procedures from behavior analysis to establish the child as a major agent for changing the green behaviors of other family members, and the virtual community built around the site encourages kids to team up with other “CarbonBusters” to help create and sustain a greener world.

**16. Waste Management at a Middle School: Goals of an Environmental Leadership Club** (Applied Research) BRIAN COOPER (Stanley Middle School)

**Abstract:** The Environmental Leadership Club, a small group of students at M.H. Stanley Middle School in Lafayette, California, meets weekly to further

develop a presence of environmental leadership on their campus of 1200 students. The Club's most ambitious goal is to enhance the school's existing waste management program and install compost bins. These efforts could result in hundreds of pounds of food waste being diverted from landfill each week. The discarded food could be used to generate methane gas that will help power a wastewater treatment plant. The project appears doable because of the students' willingness to ask questions, solve problems, and seek out opportunities and support from outside agencies. Members have visited another local middle school that is currently implementing a similar program. They have also networked with many public and private groups, including a non-profit organization that will help conduct a waste audit, the county's waste management department, and local community groups that are developing sustainable practices. Success depends on collaboration and communication both within the school and with networks outside of the school. Within the school community, it will take effort and care from students, teachers, administrators and the custodial staff. Students from the club will walk with the custodial staff during lunch as they perform their collection routines to see where trash is collected, where new waste stations may be created, and consider how to streamline the process so there is not additional work for the staff. Students are making a video that will outline the new lunch procedures and inspire participation; the video will be shown in all science classes. Student and parent volunteers will be needed to supervise the waste stations during each lunch break to ensure that all wastes are disposed of properly. The poster will include data from the school site's waste audit. This will show the amounts of recyclables, compostables, and landfill that have been placed or misplaced into the bins. Those data will be compared with the school's overall volume of trash to make projections on cost savings to the district and to estimate the amount of green waste that can be diverted from the local landfill.

**17. Plan It for the Planet: Building a Green Elementary Science Curriculum With Conservation Behavior as a Primary Measure** (Applied Research) JULIA H. FIEBIG, Joel Vidovic, and Rebecca A. Watson (San Ramon Valley Unified School District)

**Abstract:** In the song, "The Greatest Love of All," Michael Masser and Linda Creed wrote, "We believe that children are our future, that we must teach them well and let them lead the way." What do we know about methods for effectively getting our children to engage in behaviors that are directly

related to conserving resources? B. F. Skinner (1974) wrote that “knowledge which permits a person to describe contingencies is quite different from knowledge identified with the behavior shaped by the contingencies.” While California's state standards-based science curriculum explores topics on conserving resources, it is not clear to what extent this curriculum teaches knowing vs. doing and how it might directly relate to changing behavior. This poster will assess California state standards-based science curriculum that is intended to target student behavior change (e.g., reduction of plastic use) related to environmental issues through teaching practices and programming across the school environment and make suggestions for curriculum additions that may better target student behavior change. Recent developments of the dissemination of this curriculum and initiation of student projects in school and the surrounding community will also be addressed.

**18. Walkin’ On Sunshine: Sure Feels Good When a School District Models Environmental Stewardship** (Service Delivery) REBECCA A. WATSON, Heather E. Finn, and Julia H. Fiebig (San Ramon Valley Unified School District)

**Abstract:** In a world confronted with environmental disaster, teaching students about sustainability and the effects of their own behavior on the environment is critical. This poster will address the San Ramon Valley Unified School District’s promotion of human behavior as the most significant factor in energy conservation and energy savings. Information about the district’s efforts to model and teach environmental stewardship to students and the community as a whole will be provided. More specifically, this poster will focus on the impact of installing solar panels across multiple school sites. It will provide information about projected energy cost-savings, the creation of jobs, and how the project actually freed up significant funds for direct support of students and schools. Presentation of this initiative is intended as a model for other school districts also adopting the approach of “conservation as human behavior.” Information about green initiatives in other California school districts will also be discussed.

**19. Teaching Preschool Children to Recycle** (Applied Research) CHELSEA WILHITE and W. Larry Williams (University of Nevada, Reno)

**Abstract:** This poster describes a study comparing different ways of increasing recycling in preschool children. One tactic consisted of having children (in groups) view videos similar to public-service-announcements. One video provided correct information about recycling; another offered

instructions on how to recycle; a third showed children engaging in recycling behaviors; and a fourth showed children recycling and receiving positive feedback on their behaviors. The other tactic consisted of in situ training: an adult prompted children (on an individual basis) to recycle material and provided feedback on their behaviors (e.g., approving correct behaviors or prompting corrections of incorrect behaviors). All children were exposed to each video condition and to the in situ condition. While certain videos were effective with some children, the in situ approach got the best results overall. Additional research may determine whether simultaneous combination of in situ training and videos will yield better results.

## **20. Kids Take the Green Bus to a Sustainable World** (Service Delivery)

CHRISTINE S. DUNKEL and Sarah M. Dunkel-Jackson (Great Lakes Energy Service)

**Abstract:** Great Lakes Energy Service Inc. (GLES) is a nonprofit organization that provides education across the Great Lakes region about the importance of renewable energy and the conservation of resources. Energy professionals, educators, and behavior analysts joined forces to find ways of getting people to embrace a greener lifestyle. One GLES project is the Green Bus, a traveling classroom with interactive activities that help students learn about energy and its conservation. The poster will describe how the Green Bus and other programs operate so that other communities might imitate it and help educate a generation that supports sustainable practices.

## **21. Time Delay and Social Discounting of Environmental Concerns** (Basic Research) BRENT KAPLAN and Derek D. Reed (University of Kansas)

**Abstract:** Despite the increased focus on environmental concerns in today's culture, there remains relatively little research focusing on temporal and social factors influencing decisions regarding them. We asked 165 undergraduates in an introductory level psychology course to answer questions related to a vignette pertaining to an environmental issue. Participants rated, on a visual analogue scale, how concerned they were about a specific issue and how much time they would allot to solving the issue. The vignettes differed in the delay of the effects of the environmental issue, as well as the social distance between the decision maker and those the issue affected. Results demonstrate that participants' ratings followed a discounting function for both delay and social conditions. Longer delays and increased social distance diminished reports of concern and time allotment. Perhaps most interestingly, results also indicated a disparity

between reports of concern and time allotment; for a given delay value or social distance, participants regularly rated their concern higher than how much time they would allot to fixing the problem. These results serve as an important first step in isolating and quantifying factors influencing decisions regarding environmental issues, and may prove useful in developing effective environmental interventions.

**22. Learning to Think About Green Behavior: An Undergrad Psychology Research Practicum on Energy Saving** (Applied Research) SATORU SHIMAMUNE, Mai Shimura, Wakana Tajiri, Natsuki Ueshima, Yoshiaki Ooshima, and Shunsuke Kawamura (Hosei University)

**Abstract:** Five junior-level undergraduate psychology students enrolled in a research practicum in a Japanese university conducted an experiment on energy saving. Under the supervision of the last author, the students wrote a research proposal, recruited participants, conducted experimental sessions, and analyzed the data they collected. In the experiment, three freshman students observed the wattage meter equipped at their homes, and reported the recordings every day through email. We provided the participants with a list of energy-saving behaviors such as turning off the lights and changing the air-conditioning temperature, and asked them to make a pledge to do some of the things on the list the next day. Although the results of the experiment are not consistent, the practicum students reported learning the connection between the environmental issues and personal behavior, contingency analysis, experimental design, and statistical procedures such as moving (or rolling) averages and standardizing data. The merits of providing a research project on green behavior at a college level will be discussed.

**23. Using "Big Data" to Combat Global Warming** (Theory) SATORU SHIMAMUNE (Hosei University)

**Abstract:** To stop global warming and make the world sustainable, we need to design, implement, and evaluate interventions on a much larger scale than behavior analysts have usually dealt with. In this study, I applied the visual inspection of cause-effect relationships--a traditional behavior analysis technology--to evaluate governmental policies, regulations, and interventions on consumer behavior. For example, I re-organized time-series data on the installation of solar panels around the world into a multiple-baseline design to show which governmental intervention may be the most effective. Additional examples of "big data" will be demonstrated.

Although these kinds of post-hoc analyses are of limited value as a source of scientific evidence, they can provide hypotheses about ways of influencing behavior on a large scale.

**24. Moving Toward a Sustainable World, 600 Words at a Time** (Theory)  
W. JOSEPH WYATT (Marshall University)

**Abstract:** Failure to reach the populace has long been an issue for behavior analysts. Our efforts to engage the public through the popular media regarding a greener world are no exception. This poster reviews my efforts as a writer of green-related editorials for a statewide newspaper, and as a weekly commentator to an am talk-radio audience, both in West Virginia. The reinforcers may be minimal at times and there are punishers, as well, but it is one way to influence behavior. Methods for sustaining such efforts will be suggested.

**25. Mother Nature and Self-Control** (Theory) MEREDITH S. BERRY, Amy Odum, Justice M. Morath, and Kerry Jordan (Utah State University)

**Abstract:** The purpose of the present experiment was to investigate the effects of natural environments (e.g., forests) on impulsivity. People were given a hypothetical choice between receiving a small amount of money now or a larger amount later. Before making their choice, some people looked at photographs of natural environments (e.g., forests, meadows), some looked at human-made environments (e.g., cities, roads), and some at geometric shapes. The results showed that viewing natural environments resulted in more self-control—that is, willingness to wait for a delayed, but better outcome.

**26. Clearing the Air: How Behavior Analysis Can Assist Labor's Contribution to a Green Economy** (Theory) Thomas David Mann (New Brunswick Union of Public and Private Employees) and CHARLOTTE MANN (New England Center for Children)

**Abstract:** Labor organizations have a proven capacity for influencing public policy and social issues. This poster will propose that the implementation of behavior analytic principles can help labor organizations in their efforts to move toward a greener economy, a movement that helps their membership and society. For example, behavior analysts can help labor leaders develop an operational definition of “green job” and identify ways that green jobs can improve the lives of their members.

## **27. Transition to a Sustainable World Through Early Intervention** (Service Delivery) WAN-YU JENNY LIN (University of Cincinnati)

**Abstract:** Sustainability is a long-term maintenance of well-being. In a society, sustainability is determined by the performance of every member of the society. By maximizing the potential of all members of society, we will free up resources that can be used to improve the quality of life for all. One way to do this is through early-intervention programs. In this poster I will review findings from studies on early interventions. For example, Reynolds (2005) found early education program promote skills and competencies for adult well-being. Longitudinal studies found early education and intervention programs produce prosocial behavior, higher academic achievement, employment, and family stability (Schweinhart & Weikart, 1997). Studies also found early education and intervention programs produce long-term effects in reducing crime, delinquency, teenage pregnancy, and welfare dependency (Parks, 2000). It is important to take a better look at the early education and intervention programs and discuss how to improve those programs to help the world become a more sufficient and sustainable place.

## **28. A Walk in the Park to Save the World** (Service Delivery) SHERRY L. SCHWEIGHARDT (Temple University)

**Abstract:** At the same time over-consumption depletes the earth's resources, the incidence and prevalence of "lifestyle diseases" are rising dramatically. Getting people to eat less and exercise more would both improve their health and slow the depletion of natural resources, but these behavioral repertoires are difficult to shape and maintain due to the delay of reinforcers, such as weight loss and improved fitness. There is plenty of evidence that both physical activity and exposure to nature can be rewarding. A review of recent literature on outdoor exercise and exposure to nature, suggests that physical activity in natural areas can be self-maintaining, thereby improving health and helping the environment. Examples of the kinds of settings and rewards that can be effective will be described, along with specific techniques individuals and communities can use to maintain the exercise. Behavior analysts are well-equipped to work with health care professionals, community recreation organizations, and parks/open space managers to help them improve the health and well-being of both people and natural habitats.

### **30. Interpersonal Behavior of Health Workers in the Cultural Practice of the Municipal Program for Dengue Control: Brazil** (Applied Research)

TATIANA NUNES AMARAL and Elizeu Batista Borloti (Universidade Federal do Espírito Santo)

**Abstract:** Behavior change to fight human-made threats to world sustainability requires simultaneous actions affecting large populations. The present work describes comments and criticizes the public program of Governador Valadares, Brazil, for control of the dengue mosquito. Dengue is a serious problem in tropical countries. The mosquito breeds in still waters, such as those resulting from excess watering of flower pots, plants like bromelias that naturally retain water from rain, and old tires abandoned in yards. The way to avoid mosquito breeding is to guarantee that everyone is alert to the problem. Informer public health problems, like vaccination, governments all over the world used to rely on coercion to foster behavior change. For problems like dengue, coercion didn't work. It would be too expensive to have agents of the state visit every home, establishment, building, etc., continuously and with police characteristics in their action. The program in Governador Valadares tried to convince people that by avoiding still waters in the home they would be protecting themselves, their family and neighbors from dengue. To change citizens' behavior, the program had to change the behavior of state agents first. In spite of the new rules, government representatives continued with old, coercive, cultural practices. The present work involved examination of documents and interviews to analyze the program using the concepts of macrocontingencies and metacontingencies. It is suggested that in any large-scale program aimed at changing individual behavior each citizen be involved through clear statements of the consequences of his or her behavior.

### **31. Making Recycling Clear and Easy: The Effects of Prompts and Response Effort Interventions** (Applied Research) ELIAN ALJADJEFF-ABERGEL, Kathryn M. Kestner, and Yannick Schenk (Western Michigan University)

**Abstract:** This poster will describe a study designed to evaluate the effectiveness of two interventions for increasing appropriate recycling and trash sorting in a university classroom and office building. The first intervention will use visual prompts (cues) appearing over the existing recycling and trash stations in the hallways on the first and second floors of Wood Hall. These prompts will include more detailed waste-sorting information in order to increase appropriate recycling and decrease errors. The second intervention will be the addition of lids on top of existing

classroom trash cans to increase the effort of throwing material into those trash cans and thereby encourage individuals to instead choose the less effortful recycling/trash centers in the hallway. An additional prompt will appear on the classroom trash cans to indicate that recyclable materials should be disposed of in the appropriate cans in the hallway. There are no recycling receptacles in the classrooms; individuals using the receptacles in the hallway will come in contact with the opportunity to recycle. Our hypothesis is that providing detailed waste sorting information in the hallway receptacles will increase appropriate sorting. We hypothesize that the additional component of increasing the response effort involved in the use of the classrooms trashcans will further increase appropriate recycling and waste disposal.

### **32. That's Not Trash! The Impact of Receptacle Design, Centralized Placement, and Signage on Recycling Rates** (Applied Research) Katherine Binder and DANIEL FLACK (Western Michigan University)

**Abstract:** This poster will describe a study designed to improve recycling. Waste audits on Western Michigan University's campus revealed that approximately 25% of landfill waste was recyclable material. In an effort to address this issue, I designed a pilot study to test alternative collection methods on four floors of an academic building. The study will compare the effects of centrally located, comprehensive recycling and landfill receptacles with those from dispersed classroom trash and recycling bins. Utilizing the findings of recycling research within the field of behavior analysis, I developed a treatment package that includes a newly designed comprehensive bin along with detailed, consistent signs containing information about exactly what can be recycled in each location. The primary dependent measure will be the percentage of trash that is comprised of inaccurately sorted recyclable material. Secondary dependent measures will include the total mass of waste from each floor of the building along with the weights of landfill waste, paper/cardboard waste, and plastic/glass/metal waste. In order to evaluate the effects of the treatment package itself, along with the adjustment period on each floor, the treatment package will be implemented progressively. The results of the study will be used to aid a campus-wide collaboration among Waste Reduction and Recycling Services, Custodial Services, and the Office for Sustainability, to streamline and systemize the campus waste and recycling programs. The broader implications of this research program and campus-wide collaboration will also be discussed.

**33. Design for a University Course Sequence in Green Behavior** (Applied Research) THOMAS WADE BROWN, William D. Newsome, and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** Education of students about detrimental behaviors that contribute to global warming and consideration of climate-related issues from a psychological perspective is important in building a sustainable culture. This poster describes a course model implemented at the University of Nevada, Reno designed to instruct students on the implications of climate change and the impact of human behavior. The sequence is to be offered within the context of an undergraduate psychology curriculum. Green practices and guidelines for sustainability are described from a behavioral approach. In addition, didactic components of the course are outlined and described, including course objectives, competencies, and assignment design. A discussion of community projects is presented as a technique for students to gain research experience and also disseminate green practices into the surrounding university community. Guidelines and recommendations for replication of course design are encouraged to incorporate behavioral technologies of instruction into community settings and build sustainable and ecofriendly cultural practices.

**34. Sustainability and Reducing the Negative Impact of Tourism** (Applied Research) EMILY MICHELLE LEEMING (University of Nevada, Reno), David Hansen (Embassy Suites Lake Tahoe Hotel & Ski Resort), and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** Lake Tahoe, the largest alpine lake in North America and surrounded by the Sierra Nevada Mountains, is widely regarded as a premier vacation destination offering year-round activities. The Lake Tahoe Basin is home to approximately 66,000 permanent residents with approximately 3,000,000 visitors annually. Lake Tahoe provides a high visibility laboratory to study climate change and human behavior and is routinely monitored to create a record of change in one of the world's most beautiful and vulnerable alpine lakes. The Embassy Suites Lake Tahoe, a Hilton Corporation hotel located in South Lake Tahoe, California, has become a leader in sustainable lodging using behavior based programs to encourage guests and employees to engage in ecologically friendly practices, installing technological upgrades, and influencing local individuals and business to adopt similar initiatives. This poster will elaborate on the innovative sustainability efforts within the Embassy Suites

Lake Tahoe resort as a practical, cost effective, and profitable example of environmental stewardship. The impacts of these efforts indicate that investments in sustainable technologies and practices have a positive impact on the environment, as local and visiting populations are invited to participate and learn about the sustainability efforts at the resort. Additionally the environmental initiatives described align with community values towards preservation and positive business outcomes.

### **35. Green Conferences: Can We Get Together in an Ecofriendly Way?**

(Theory) KENNETH J. KILLINGSWORTH and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** The longstanding tradition of professional conferences offer a medium by which people share information, theories, results, and ideas for future directions. While several benefits are afforded to the conference attendee and the professional association, these benefits come at a price in the form of a carbon footprint. This poster explains the environmental cost of conference attendance, and provides suggestions for shrinking their carbon footprint. The main sections of analysis will be the green initiatives of the 2012 conference, Behavior Change for a Sustainable World; the green initiatives of other conferences and mass meetings; suggestions for improvement; and a rough framework for a virtual conference. The data generated by an analysis of the environmental impact of hosting a conference will help inform organizations concerned about the status of the environment, and could shape the practices of businesses marketing to these organizations (e.g., hotels, restaurants, transportation). Ultimately, ABAI has the potential to lead the development of green practices within other professional associations.

**36. A Gallon to Burn** (Applied Research) WILLIAM D. NEWSOME and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** The costs of unsustainable consumption of fossil fuels include environmental degradation, social injustice, political and economic instability, and more. Motor vehicle operation is a salient means by which individuals contribute to these unsavory ends. While engineers do the work of developing more efficient vehicles, it is up to behavior scientists to develop the technology for shaping more efficient drivers. This poster will present data from an ongoing investigation of the effects of feedback and self-generated rules on driving efficiency. With the assistance of on-board-computers, various combinations of real time aggregate feedback streams are systematically

introduced such that their effects on efficiency may be observed and compared. Tracking of self-generated rules throughout the study should show how the rules are influenced by the various feedback conditions. Implications for driver training, vehicle design and public policy will be discussed.

**37. "The Patch" Cooperative Gardening Project** (Applied Research) William D. Newsome, TODD A. WARD, Brooke M. Berry, and Timothy C. Fuller (University of Nevada, Reno); Kendra L. Brooks Rickard (Fit Learning); Greg Smith (University of Nevada, Reno); Estes Ward (By the Yard Organics); and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** The Patch cooperative was built on the shared needs and values of its members. Its goals are to provide an affordable source of fresh produce in a way that is environmentally friendly and sustainable. In the first season, The Patch provided its members with a slightly better than 2:1 return on investment based on local retail prices of comparable organically cultivated produce. The total edible yield from that year was just shy of 200 pounds of tomatoes, peppers, eggplant, and so on. The Patch also maintained a minimal ecological footprint thanks to a simple water recycling system and lack of any transportation or cultivation-related emissions. Despite the small scale of the Patch project, its potential for stimulating large-scale pro-environmental behavior is provocative. With some enthusiasm and ingenuity, any small group of citizens can meet their collective needs and pursue their shared environmental values in a way that is financially viable, ecologically friendly, sustainable, and replicable. Thanks to the high degree of flexibility with which cooperative principles can be applied, those wishing to begin their own small collective ventures need only understand some basic cooperative principles. This poster will present cost-benefit data and some practical guidelines helpful in the development of cooperative efforts.

**38. An Interdisciplinary Approach to Sustainable Practices** (Theory) MOLLI LUKE and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** Research related to creating a sustainable world has increased over the past few years in many scientific disciplines. This research informs practices, products and systems that can help the sustainability movement in a variety of ways. Each science has a distinct subject matter but all sciences are looking at events in the natural world. Therefore, an interdisciplinary approach to sustainability has potential for a more thorough and effective approach to creating long-lasting change. For instance, it is not within the scope of behavior analysts to measure regional

kilowatts per hour and it is not for the engineer to study how a person's learning history interacts within his/her home environment to affect behavior. However, by combining their skills they can link a person's behavior within the home and the kilowatt hours of energy used to produce metrics by which interventions can be measured. This poster provides points of contact between behavior science and other sciences as well as areas that behavior analysts can contribute to impacting sustainability.

### **39. The Icky Antecedents and Consequences of Recycling at Work**

(Applied Research) AMY MCCARTY (Haworth, Inc.)

**Abstract:** Do the sights and smells of others' awful offal thwart efforts for encouraging recycling? Who wants to touch that? We are taking a look at the sensory antecedents and consequences of recycling in the workplace, and how to eliminate factors that discourage the behavior we want to occur. Along the way, we're also looking at other aspects of the physical and cultural environment that could influence recycling behavior. A dependent variable is the ratio of desired recycling behaviors to the recycling opportunities. A second dependent variable is the proportion of recyclable, compostable, waste-to-energy, and waste-to-landfill materials. Independent variables include changes to the physical environment (designed to reduce perception of unpleasantness associated with recycling; to heighten visibility of its positive aspects; and to prompt appropriate sorting, disposal, etc.) and communications to employees explaining the changes and encouraging them to recycle. A multiple-baseline design will be employed, with observations performed periodically over several months at recycling stations throughout the organization's office, manufacturing, and/or distribution facilities.

### **40. Reduce, Reuse, Remember! Promoting Energy Saving by Sorority**

**Students** (Applied Research) NICOLE SCHULTZ,Carolynn S. Kohn, and Kelly Rush (University of the Pacific)

**Abstract:** Studies have demonstrated short-term energy reduction through various behavioral interventions (e.g., Bekker et al., 2010). However, few studies have examined the long-term (e.g., several months) effects of these methods. The purpose of the present study was twofold: (1) replicate a recent study that used visual prompts, feedback, and incentives to reduce energy consumption on a college campus, and (2) follow participants after the intervention to assess the durability of its effects. Two campus sorority houses (an intervention and a control house) were selected to participate. Data were collected daily over a 7-week period (3-week baseline, 4-week

intervention) by reading each house's energy meter. The intervention phase consisted of placing signs in all rooms suggesting methods to reduce energy consumption. Furthermore, a "savings thermometer" placed in the main room and updated daily displayed the cumulative monetary savings (toward an end goal) accrued throughout the intervention phase. Results indicated that the intervention house saved 12% (\$108), whereas the control house saved less than 1%. Thus, in the short-term the intervention package effectively reduced energy consumption. Data collected through March 2012 will indicate whether this behavior change has persisted.

#### **42. Making Recycling Accessible: A Test of Bin Location at the University of Guam** (Basic Research) Diana C. Carlos and MICHAEL B. EHLERT (University of Guam)

**Abstract:** In 2009, the University of Guam founded the Center for Island Sustainability. "UOG Green" became a major initiative for the campus with an annual conference and research grants. Disappointedly, most activities focus on large-scale and infrastructure changes; no presentations focused on behavior changes at the last Island Sustainability Conference (April 2011). Behavior analysts understand that changing behavior is vital for a sustainable future (see Skinner, 1974). This project investigated the effects of simple stimulus changes on large-scale conservation. We used an ABA design to explore the effect of bin locations. Each condition was in effect for a week and recycled aluminum cans and plastic bottles were counted and weighed daily. The standard arrangement at the University of Guam is to have large bins located in the hallways only (Condition A). During Condition B, the researchers placed boldly labeled recycle bins beside standard trash bins in two classrooms. The recycle bins were removed during the second Condition A. During Condition B, recycling in the classrooms increased and about 50% fewer recyclable items were discarded in the trash bins. These results suggest that recycling disposal shifted to the classroom from the hallway while overall recycling increased.

#### **43. The Meaning of "Green:" Consumer Trends of Green Labeled Products** (Applied Research) Jeanine Stratton and HALEY JONES (Furman University)

**Abstract:** Consumers often report interest in purchasing products that are better for the environment. The 2010 Terra Group report identified recent steep trends in consumer goods being advertised as sustainable. Such labels include descriptors including the word "green." However, the word "green" is often misunderstood, since it doesn't specify how or how much

the product helps the environment. The poster will present various categories of consumer goods with evidence of such labeling practices. A conceptual analysis of products in each category will be presented to describe recent consumption trends of durable and nondurable goods. Discussion will include marketing practices of products using such labels with or without verifiable evidence of “green” function, “green” source of materials, or profits on the purchase towards “green” initiatives. Implications for consumers, manufacturers, and suppliers involved in such labeling practices and consumer demand of goods will be discussed.

**44. Spatial Characterization and Analysis of the Campus Residential Waste Stream at a Small Private Liberal Arts Institution** (Applied Research) Erika Baldwin and WESTON DRIPPS (Furman University)

**Abstract:** The generation and management of solid waste on college campuses have presented challenges to pursuing institutional sustainability. Characterizing, analyzing, and understanding the composition of a campus residential-waste stream is a critical first step toward developing successful and effective waste-management strategies across university campuses. This study presents a multiyear (2008-11) assessment of the composition and spatial variability of the residential waste stream, by both weight and volume, at Furman University, a small private liberal arts institution in Greenville, SC. Waste audits were conducted on a dumpster-by-dumpster basis during the 3-year period. Garbage was sorted into eight waste categories. Of the total 1,292.2 pounds and 524.4 cubic feet of residential waste sampled, 25% by weight and 41% by volume could have been recycled under the university's current waste-management program, and 61% by weight and 63% by volume could have been diverted from the landfill through a combination of the university's recycling plan, the county's recycling program, and the composting of food waste. Distinct spatial differences were found in the composition of the waste stream with regard to the glass, compost material, and cardboard content among the different housing complexes. Our analysis found the observed variability to be the result of differences in the age and class of the student residents, the meal plans of the residents, social patterns of alcohol consumption and Greek life within the residence halls, and the presence or absence and quantity of kitchens in each building. Design of an efficient waste-management program requires not only an assessment of the waste stream, but also an understanding of the mechanisms and behaviors

responsible for generating this garbage. The utility of site-specific audits lies within their ability to capture these spatial differences in campus residential-waste streams, allowing for specific recommendations for individual residential buildings on strategies for minimizing waste and improving recycling efforts.

**45. The Overlooked Stepchild of Sustainability: Occupational Safety and Health** (Applied Research) THOMAS R. CUNNINGHAM (National Institute for Occupational Safety and Health)

**Abstract:** Meeting the environmental challenges that confront us, particularly the depletion of natural resources and climate change, requires major changes in human behavior. Despite the importance of this effort, many people in the business community are not supportive, focusing instead on developing business practices with short-term financial benefits. However, if it can be shown that the environmental movement can increase profits, businesses are likely to “go green” (e.g., [www.carrotmob.org](http://www.carrotmob.org).) One way of doing this may be to show businesses that techniques used to get people to adopt green practices may be used to get workers to behave in ways that increase profits. For example, the expense of work-related injuries and illnesses can be substantially reduced by getting workers to reliably use safety equipment and follow certain protocols. This poster will describe research aimed at identifying behavior change techniques used in the green movement that businesses may find useful in the workplace. I will describe the results of interviews conducted with the owners of 18 small construction companies, including some who consider their companies to be “green.” The questions asked were about both sustainability and occupational health and safety. For example, I asked, What does green mean to you? What does health and safety mean? What do you do to support the green movement? What do you do to improve the safety and health of your employees? Why do you do these things? What barriers block your efforts? And so on. I intend to use the data from these interviews to develop a survey that will identify practices derived from the green movement that businesses may find profitable in the workplace by reducing the costs of work-related injuries and illnesses. The result may be improved health for employees, greater profits for businesses, and more support of the sustainability movement among companies.

**46. Don't Shoot the Messenger: Integrating Behavior Analysis, Climate Science, and Advertising Tools to Achieve Policy Reform** (Applied Research) JOSHUA K. PRITCHARD, Ken Lindeman, Anita Li, and Lauren Dame (Florida Institute of Technology)

**Abstract:** Climate change science is difficult to convey to non-scientists, especially when the message includes the need for behavioral adaptations that involve near-term costs. The combination of complexity and adverse consequences makes rejecting the reality of climate change appealing. That rejection, in turn, means we lose the opportunity to take effective action. In this poster we will report on efforts to interpret scientific explanation in terms of behavioral principles. Interdisciplinary tools are being employed to identify system archetypes including information from environmental NGO campaigns, climate denial outlets, advertising firms, and scientific organizations. The latter institutions are concerned about the trend towards dogma that climate change denial is taking, increasing hostility towards climate scientists, and the underlying causes of these developments. We will provide tools for improved messaging and further applied behavioral research with a focus on sea level rise adaptation. Peeling back the mechanisms behind these trends and developing responses that work on the ground are essential for many reasons, particularly since the next UN IPCC reports will generate complex scientific predictions that suggest even faster and more challenging behavioral adaptations are increasingly overdue.

**47. How Culture Blocks the Road to Sustainability: The Case of Africa** (Basic Research) JULIUS WARINDU (North Attleboro Public Schools)

**Abstract:** Research on environmental degradation in Africa frequently emphasizes a variety of causes including sociopolitical factors, effects of global changes associated with international industrial activities, and the irregularity in weather patterns. It is true that these factors play major roles, for example, in determining land policies, preservation of forests, and commercialization of natural resources. However, there are often immediate, yet ignored cultural contingencies that affect the ways in which local populations try to adapt to the rapidly changing world. The appropriate metaphor here is fighting new wars with old weapons. Often, it is a losing battle. Africans who are exposed to new and unfamiliar conditions often find themselves constrained more by ethnic and cultural norms than by governmental policy. While these cultural norms are mostly inadequate at proscribing effective solutions, they are, nonetheless, full of prohibitions of

the very changes that might lead to the solutions. The problem here is not a lack of cultural change; indeed, there have been significant cultural changes over the years. The problem is that the rate at which cultural evolution occurs at the local level is significantly slower than the pace of change in the global and geopolitical environment. This poster will review some of the African cultural practices that may be considered impediment to the rapid adaptation of modern practices necessary for survival in a highly dynamic world. In addition, the poster will suggest the means with which individuals in African societies could accelerate the pace of cultural evolution.

#### **48. Working Together on Green, Part I: An Annotated Bibliography**

(Theory) THOMAS WADE BROWN and Kenneth J. Killingsworth (University of Nevada, Reno), Michael A. Magoon (NORC at the University of Chicago), Zachary H. Morford and Emily Michelle Leeming (University of Nevada, Reno), Verle-Ranae L. Hoskins (Center for Advanced Learning), and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** This poster will present the first of a two-part project aimed at facilitating collaboration between behavior analysts and environmental organizations (see Poster 17097). It will describe the methods used to conduct a comprehensive literature search of the work behavior analysts have done to address green behavior. That work is wide and varied, and goes back several decades. The results from the search are categorized by their contribution to theory, research, methods, practice, and results or some combination of these. The poster presents a sampling of the results by category, and the complete results will be available in a handout.

#### **49. Working Together on Green, Part II: Developing a Searchable**

**Database to Facilitate Collaboration** (Service Delivery) MICHAEL A. MAGOON (NORC at the University of Chicago), Julia H. Fiebig (San Ramon Valley Unified School District), Joel Vidovic (Autism M.O.D.E.L. School), Kenneth J. Killingsworth (University of Nevada, Reno), Kathleen Kelly (California State University, Los Angeles), Angela Sanguinetti (University of California, Irvine), and Stephanie Stilling (Western Michigan University)

**Abstract:** This poster will present the second of a two-part project aimed at facilitating collaboration between behavior analysts and environmental organizations (see Poster17903). It will describe a searchable database which allows the user to identify organizations from across the country whose mission is, at least in part, to address green behavior change. It will describe the methods used to develop search and inclusion criteria, the

process used for searching, and the development of a typology for organizing the results. It will also present a sampling of organizations according to the typology.

**50. Behavior Analysis for Sustainable Societies Special Interest Group** (Service Delivery) JULIA H. FIEBIG (San Ramon Valley Unified School District) and Mark P. Alavosius (University of Nevada, Reno)

**Abstract:** The Behavior Analysis for Sustainable Societies (BASS) Special Interest Group was established to advance applications of behavior analysis to environmental issues and contribute to the development of solutions to climate change, pollution, over consumption of resources, and imbalances in environmental sustainability. Information on BASS's mission, events, membership, and other pertinent information will be presented in poster format.



Sunday, August 5

Breakout Sessions  
Summary Comments  
Poster Awards  
Closing Keynote Address

## # 18 Panel Discussion

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9:00 am–10:20 am

Senate Chamber

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: João Claudio Todorov, Ph.D.

### **Making Environmental Legislation More Acceptable and Effective: Ideas From Behavior Analysis**

Chair: João Claudio Todorov (Universidade de Brasilia)

SIGRID S. GLENN (University of North Texas)

BRIAN KAISER (Ohio Environmental Council)

RICHARD F. RAKOS (Cleveland State University)

INGUNN SANDAKER (Oslo and Akershus University College)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Analyze how the if-then contingencies spawned by environmental legislation and policies that affect the behavior of energy producers and consumers.
- Identify creative, pragmatic applications of behavior principles to make future legislation and existing policies more effective.
- Brainstorm how the application of behavior-change principles can result in more effective utility efficiency programs by producers and a higher rate of adoption by consumers.

**Educational Level:** Introductory

## # 19 Panel Discussion

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9:00 am–10:20 am

Cartoon Room 2

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Janet S. Twyman, Ph.D.

### **Putting Behavior Change Into K–12 Green Curriculum and Instruction**

Chair: Janet S. Twyman (UMass Medical School/Shriver Center)

BRIAN COOPER (Stanley Middle School, Lafayette, CA)

EMILY CARR (Stanley Middle School, Lafayette, CA)

ANNIE PAGE (Stanley Middle School, Lafayette, CA)

KIMBERLY LIGHTLE (Ohio State University)

JULIA H. FIEBIG (San Ramon Valley Unified School District)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Describe efforts to increase “green behavior” in a K–12 setting.
- Explain how school communities and environmentally aware curriculum can help spread awareness and most importantly, behavior change.
- Describe what behavior analysis has to offer to help make effective K–12 green behavior change a reality.

**Educational Level:** Introductory

## # 20 Panel Discussion

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9:00 am–10:20 am

Great Hall Meeting Room 3

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Mark P. Alavosius, Ph.D.

### **Greening Business Practices With Behavior Analysis**

Chair: Mark P. Alavosius (University of Nevada, Reno)

Discussant: Darnell Lattal (Aubrey Daniels International)

SANDY KNOTT (Supervalu, Inc.)

EMILY MICHELLE LEEMING (University of Nevada, Reno)

RAMONA HOUMANFAR (University of Nevada, Reno, and Cambridge Center for Behavior Studies)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Identify and celebrate leading corporate citizens who protect or restore our environments.
- Identify “greenwashing” practices that purport to protect the environment, but may be marketing ploys with little real impact.
- Verify ecofriendly outcomes in the context of accreditation of “green” practices by independent, third-party advocate organizations.

**Educational Level:** Introductory

## # 21 Panel Discussion

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9:00 am–10:20 am

Great Hall Meeting Room 1 and 2

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Ron Van Houten, Ph.D.

### **Green Driving: Behavioral Strategies to Help Fleet Operators and Private Citizens Save Fuel**

Chair: Ron Van Houten (Western Michigan University)

Discussant: William D. Newsome (University of Nevada, Reno), Joshua K. Pritchard (Florida Institute of Technology)

ANDREW CONLEY (Clean Fuels Ohio)

GLENN REYNOLDS (Frito-Lay)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Identify best practices for managing high performing, efficient, and cost-effective vehicle fleets.
- Describe what fleets and private citizens are doing—and can do better—to ensure driver behavior optimizes the efficiency and environmental performance of vehicles.
- Address behavioral opportunities and challenges from the perspective of fleet management.

**Educational Level:** Introductory

## # 22 Panel Discussion

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9:00 am–10:20 am

Cartoon Room 1

CSE; Applied Research

### **A Rind is a Terrible Thing to Waste: Changing Behavior One Plate at a Time**

Chair: Fred Provenza (Utah State University)

NICHOLAS SMITH-SEBASTO (Kean University)

## # 23 Panel Discussion

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9:00 am–10:30 am

U.S. Bank Conference Theater

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Thomas S. Critchfield, Ph.D.

### **Spurring People to Action: Exploring Translational Insights**

Chair: Thomas S. Critchfield (Illinois State University)

RONNIE DETRICH (The Wing Institute)

MARK R. DIXON (Southern Illinois University)

SHAWN R. CHARLTON (University of Central Arkansas)

MICHAEL A. MAGOON (NORC at the University of Chicago)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Identify some of the professional areas outside of behavior analysis that address the problem of persuading policy-makers and the public to embrace and act upon new technologies.
- Identify some impediments to the dissemination of new technologies and describe them in terms of behavioral processes.
- Sketch general strategies for exporting the fruits of behavior science to non-experts.

**Educational Level:** Introductory

## # 24 Panel Discussion

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10:40 am–12:00 pm

Great Hall Meeting Room 3

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Timothy E. Heron, Ph.D.

### **Faith-Based Communities Respond to Climate Change: How Can Behavior Analysis Help?**

Chair: Timothy E. Heron (The Ohio State University)

Discussant: Richard F. Rakos (Cleveland State University)

CRAIG FOSTER (Ohio Interfaith Power and Light)

SARA WARD (Ohio Interfaith Power and Light)

**Target Audience:** BACB-behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Describe how to overcome the barriers that often prevent clergy members from participating in green programs.
- List specific ways to encourage faith-based communities to enable sustainable practices.
- Motivate volunteers to change their behavior to be more sustainable.

**Educational Level:** Introductory

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### # 25 Panel Discussion

10:40 am–12:00 pm

Cartoon Room 1

CSE; Applied Research

#### **The Happiness Factor: Learning to Give Thanks for Nothing**

Chair: Richard W. Malott (Western Michigan University)

Discussant: Ramon Esteban Armendariz (Comunidad Los Horcones)

ANNIE WARMKE (Blue Rock Station)

JAY WARMKE (Blue Rock Farm)

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### # 26 Panel Discussion

10:40 am–12:00 pm

U.S. Bank Conference Theater

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Janet S. Twyman, Ph.D.

#### **101 Ways Technology Can Help Increase Your Green Behavior**

SATORU SHIMAMUNE (Hosei University, Japan)

JANET S. TWYMAN (UMass Medical School/Shriver Center)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Be aware of numerous simple, low-cost tools that can be used on computers or smart devices to help people monitor, track, evaluate, and ideally change their behavior to better help the environment.
- Know about particularly useful, innovative, or effective "apps" and systems.
- Describe some of the 101 different tools that they can use.

**Educational Level:** Introductory

## # 27 Panel Discussion

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10:40 am–12:00 pm

Great Hall Meeting Room 1 and 2

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Jeanine Stratton, Ph.D.

### **Sustainability in Higher Education: Integrating Behavior Change Principles Into Interdisciplinary Curricula**

Chair: Jeanine Stratton (Furman University)

MARK P. ALAVOSIUS (University of Nevada, Reno)

WESTON DRIPPS (Furman University, SC)

NICHOLAS SMITH-SEBASTO (Kean University)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Explore key factors of success stories and the benefits of blended course content.
- Discuss common or anticipated barriers and ways to effectively manage those barriers.
- Foster a collaborative network of interested parties for future discussion, information sharing, and ongoing support.

**Educational Level:** Introductory

## # 28 Panel Discussion

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10:40 am–12:00 pm

Cartoon Room 2

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Susan G. Friedman, Ph.D.

### **Finding Out How to Tap Into Our Connection and Dependence on Nature When Seeking Public Support for Conservation: Behavioral Science and Marketing Research Join Forces**

Chair: Susan G. Friedman (Utah State University)

SAMANTHA ATTWOOD (The Nature Conservancy)

PETER KAREIVA (The Nature Conservancy)

HAZEL WONG (The Nature Conservancy)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to do the following:

- Understand the results of the surveys and trends in conservation attitudes found from 2000–2012.
- Determine how future surveys might be modified to obtain new information or test ideas about changing environmental attitudes.
- Translate these ideas into action and modified surveys.

**Educational Level:** Introductory

### # 29 Panel Discussion

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10:40 am–12:00 pm

Senate Chamber

CSE; Applied Research

PSY/BACB CE Offered. CE Instructor: Nancy A. Neef, Ph.D.

### **The Campus as a Living Laboratory in Sustainable Behavior Change**

Chair: Nancy A. Neef (The Ohio State University)

APARNA DIAL (The Ohio State University)

DEREK D. REED (University of Kansas)

**Target Audience:** BACB-certified behavior analysts and licensed psychologists.

**Learning Objectives:** At the conclusion of this session, participants should be able to:

- Form ideas on several campus sustainability initiatives to reduce electric energy consumption.
- Educate large groups of individuals in promoting sustainable practices through service learning and applied research experiences.
- Discuss resources, strategies, and challenges in extending behavior change efforts through cross-disciplinary collaborations.

**Educational Level:** Introductory

### # 30 Special Event

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12:15 pm–12:30 pm

U.S. Bank Conference Theater

### **Summary Comments and Poster Awards**

Chair: William L. Heward (The Ohio State University)

## Summary Comments and Poster Awards (Applied Research)

WILLIAM L. HEWARD (The Ohio State University)

**Abstract:** Summary Comments and Poster Awards

# 31 Invited Presenter

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12:30 pm–1:30 pm

U.S. Bank Conference Theater

CSE; Theory

## Closing Keynote: Resurrecting the Environmental Movement

Chair: William L. Heward (The Ohio State University)



PETER KAREIVA (The Nature Conservancy)

Peter Kareiva, Ph.D., is the chief scientist for The Nature Conservancy, where he is responsible for developing and helping to implement science-based conservation throughout the organization and for forging new links with partners. Dr. Kareiva received a master's of science degree in environmental biology from the University of California, Irvine, and his Ph.D. in ecology and evolutionary biology from Cornell University. Dr. Kareiva joined The Nature Conservancy's staff in 2002 after more than 20 years in academics and work at the National Oceanic and Atmospheric Administration, where he directed the Northwest Fisheries Science Center Conservation Biology Division. In addition to his duties as the Conservancy's chief scientist, his current projects emphasize the interplay of human land-use and biodiversity, resilience in the face of global change, and marine conservation. Dr. Kareiva has authored more than 100 scientific articles in such diverse fields as mathematical biology, fisheries science, insect ecology, risk analysis, genetically engineered organisms, agricultural ecology, population viability analysis, behavioral ecology, landscape ecology and global climate change. In 2007, he was elected to the American Academy of Arts and Sciences, and in 2011, he was named a member of the National Academy of Sciences for his excellence in original scientific research. He also has received a Guggenheim Fellowship and is a member of the Ecological Society of America and the Society for Conservation Biology. In addition to conducting research, Dr. Kareiva believes that general communications and writing are essential in science, and has written (with Dr. Michelle Marvier, of Santa Clara University) the conservation textbook *Conservation Science: Balancing the Needs of People*

*and Nature* (Roberts & Company 2010). He is co-founder (with Gretchen Daily and Taylor Ricketts) of the Natural Capital Project, a pioneering partnership among The Nature Conservancy, Stanford University, and World Wildlife Fund to develop credible tools that allow routine consideration of nature's assets (or ecosystem services) in a way that informs the choices we make every day at the scale of local communities and regions, all the way up to nations and global agreements.

**Abstract:** Polls, presidential politics, and relentlessly increasing greenhouse gas emissions expose an environmental movement that is running on 20th Century metaphors in a 21st Century world. All of the land protection in the world will do little good if 7 billion people do not move to "green behavior." By dissecting past failures, we can learn where to go in the future with how we talk about and do conservation. We need to stop overstating doom and gloom, and recognize that opportunity, not despair, motivates people. Luckily, we have the science to support a new message of a resilient earth, which can then be a foundation for leaving behind worshipping at the false temple of pristine nature.

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