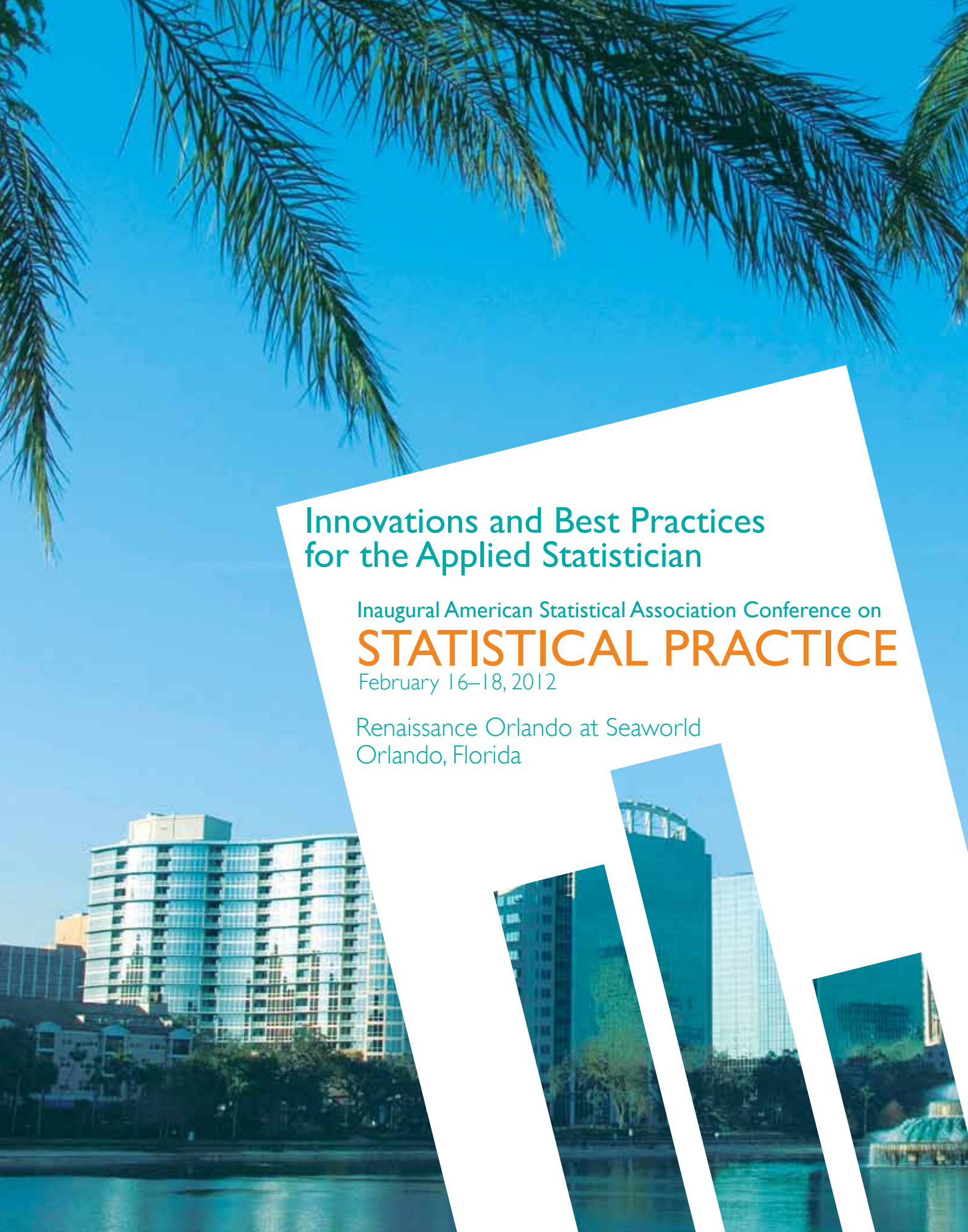

Innovations and Best Practices for the Applied Statistician

Inaugural American Statistical Association Conference on

STATISTICAL PRACTICE

February 16–18, 2012

Renaissance Orlando at Seaworld
Orlando, Florida

Dear Colleague,

I am writing to encourage you to attend the inaugural ASA Conference on Statistical Practice, to be held in Orlando, Florida, February 16–18, 2012.

This conference—a new strategic initiative of the ASA—meets the needs of statistical practitioners engaged in design, analysis, programming, and consulting. The program for Statistical Practice 2012 features three main tracks:

- Research and Development, Engineering, and Operations
- Business Analytics
- Communications, Impact, and Career Development

Both the content and format of this conference have been carefully planned to improve your effectiveness as a statistical problemsolver. Invited sessions, tutorials, and short courses will refresh your statistical training, update your knowledge of emerging areas of practice, and sharpen your career-development skills. Poster sessions will give you the opportunity to share and discuss your work. And if you are looking for employment, a virtual career placement service will benefit your search.

The timing for this conference could not be better, because the opportunities for statistical practitioners have never been greater. I hope to see you there!

Sincerely,

Robert N. Rodriguez

Robert N. Rodriguez,
2012 President of the American Statistical Association

American Statistical Association Conference on

STATISTICAL PRACTICE

Innovations and Best Practices for the Applied Statistician 2012

ASA
AMERICAN STATISTICAL ASSOCIATION
Promoting the Practice and Profession of Statistics

2012

STATISTICAL PRACTICE CONFERENCE **SCHEDULE**

Thursday, February 16

7:30 a.m. – 8:30 p.m.	Registration
8:30 a.m. – 5:30 p.m.	Full-Day Short Courses
8:30 a.m. – 12:30 p.m.	Half-Day Short Courses
1:30 p.m. – 5:30 p.m.	Half-Day Short Courses
7:00 p.m. – 8:00 p.m.	Opening Session/Keynote

Friday, February 17

7:00 a.m. – 5:30 p.m.	Registration
7:30 a.m. – 4:00 p.m.	Exhibits
8:30 a.m. – 10:00 a.m.	Parallel Sessions
10:30 a.m. – 12:00 p.m.	Parallel Sessions
12:00 p.m. – 1:30 p.m.	Lunch
1:30 p.m. – 3:00 p.m.	Parallel Sessions
3:15 p.m. – 4:45 p.m.	Parallel Sessions
4:45 p.m. – 6:00 p.m.	Poster Session

Saturday, February 18

7:00 a.m. – 5:30 p.m.	Registration
7:30 a.m. – 4:00 p.m.	Exhibits
8:30 a.m. – 10:00 a.m.	Parallel Sessions
10:30 a.m. – 12:00 p.m.	Parallel Sessions
12:00 p.m. – 1:30 p.m.	Lunch
1:30 p.m. – 3:30 p.m.	Tutorials
4:00 p.m. – 5:00 p.m.	Wrap-Up Session & Panel

Opening Session and **Keynote** Speaker

7:00 p.m. – 8:00 p.m.

Statistical Practice in the World of Business Analytics: What Do We Need to Succeed?

Robert N. Rodriguez, SAS Institute Inc.
2012 President of the American Statistical Association

I will describe roles for statisticians in business analytics and focus on three keys to success: training needed to formulate and solve complex real-world problems, programming and computing skills needed to work with "big data," and soft skills needed for statisticians to communicate the relevance of their work and succeed as collaborators and leaders.

Thursday, February 16
SHORT COURSES

SC1: Analysis of Messy Data: Design and Analysis of Experiments Requiring Mixed Models
8:30 a.m. – 5:30 p.m. Instructor(s): George Milliken, Kansas State University (retired)

Four basic design structures that are building blocks for complex designs will be presented visually and conceptually. The analyses of the four design structures will be described in such a way that one can determine the appropriate error terms and associated degrees of freedom. Three of the design structures are mixed models. The concept of fixed and random effects will be discussed, as well as analysis of a basic mixed model. Several examples will be used to demonstrate the use of the basic design structures to extract an appropriate model for complex designs. Examples will include incomplete block designs, repeated measures designs, split-plot designs, strip-plot designs, and combinations of these designs. SAS's PROC MIXED and PROC GLIMMIX will be used to demonstrate the construction of code from the results of developing models for complex designs.

SC2: Regression Modeling with Many Correlated Predictors: High-Dimensional Data Analysis in Practice
8:30 a.m. – 5:30 p.m. Instructor(s): Tony Babinec, AB Analytics; Jay Magidson, Statistical Innovations

The availability of vast data in fields such as genomics, marketing research, and signal processing has led to recent advances in high-dimensional data analysis. It is now possible to develop reliable regression models, even when the number of predictors exceeds the number of cases. In this course, we will begin by reviewing problems and limitations with traditional linear and logistic regression. We will then introduce the two primary regularization approaches for analyzing such data—penalized regression and component methods—related software, and recent advances in feature selection. Our applications-oriented presentation provides insight into how the new approaches work in examples with both low- and high-dimensional data and an overview of the relevant theory, supplemented by supporting equations. We will use real and simulated data sets to illustrate the different methods. The material presented will be included in a forthcoming book on this topic by the presenter.

SC3: Introducing R for Statistical Analysis
8:30 a.m. – 12:30 p.m. Instructor(s): Eric Nantz, Eli Lilly and Company

R is a powerful statistical and data analysis software package and has rapidly become the software of choice for understanding data and applying statistical methodologies. Unlike the traditional statistical analysis

software, R is free and open-source. This course will introduce R and supplemental tools to enhance the user experience. We will then discuss how to import common data file formats into R for analysis. We will use example data sets to illustrate how to compute basic statistics, conduct inference procedures, fit linear models, create visualizations of the data, and perform data manipulations. Last, we will discuss best practices for writing R programs and additional resources for learning more about the capabilities of R. When finished, you will be able to use R for a comprehensive data analysis with basic data operations, statistical methods, and visualization. Attendees should have a basic understanding of descriptive statistics and statistical methods such as t-tests, linear regression, and chi-square test. Before the course, instructions for installing R and supplemental materials will be given to all participants. While not required, it is beneficial for attendees to install this software before the course.

SC4: Why Don't They Get It?

8:30 a.m. – 12:30 p.m. Instructor(s): Bill Williams, Organizational Learning Consultant

Many of us make presentations to others as part of our work. These range in length and complexity of situation, from presenting ideas to your supervisor, to presenting analysis results in a small group meeting, to more formal, stand-up affairs in front of rooms full of people. Regardless, if you have ever felt as though you were being tuned out or misunderstood by an audience, it may be time to learn to "see" through their eyes. In this workshop, you'll do a basic assessment of your preferred modes of communication and identify strategies for adjusting to audiences that have different cognitive styles and communication preferences.

SC5: Using Statistical Engineering to Solve Large, Unstructured Problems

1:30 p.m. – 5:30 p.m. Instructor(s): Roger Hoerl, GE Global Research; Ronald D. Snee, Snee Associates

This course was designed to enhance the skills of statisticians in using statistical engineering to solve large, complex, unstructured problems encountered in business, industry, and government. We will identify important gaps in the theory of statistical engineering for which research is needed. Several case studies of the use of statistical engineering in a variety of fields will be presented. Issues to be addressed include understanding what statistical engineering is, why it is important, and how to use it, as well as identifying research gaps. We also will discuss how statistical engineering differs from the classic application of statistics. Participants will be introduced to the critical leadership skills needed for the successful use of statistical engineering. Each participant will develop a personal action plan for using statistical engineering in their work environment. Participants will gain insight into increasing the impact of their work and how to transition from being viewed as passive consultants to proactive leaders within their organizations. We will use presentation and discussion of material from articles about statistical engineering, as well as share personal experiences (participants and course leaders) in solving large, unstructured problems. The course will be highly interactive, enabling extensive participation by all.

SC6: Managing Your Time and Priorities

1:30 p.m. – 5:30 p.m. Instructor(s): Bill Williams, Organizational Learning Consultant

Time management isn't a skill so much as a collection of about a dozen skills, from broader behaviors such as goal setting, to management skills such as delegation, to more granular tactics such as scheduling. Most excel at some and fall short on others. In this course, you will identify your most important priorities, look at what gets in the way of addressing them, identify your time management strengths and areas for improvement, and explore means of shoring up your weak areas.

ABOUT **ORLANDO**

With an average year-round temperature of 82 degrees, Orlando is the ideal location for a winter meeting.

Everyone knows Orlando is home to some of the nation's greatest theme parks, including Walt Disney World; Universal Studios, with the new World of Harry Potter; and Seaworld.

The beautiful city also has much to offer visitors interested in the arts and entertainment.

THREE **TRACKS** FOR THE **APPLIED STATISTICIAN:**

R&D, Operations, and Engineering

Business Analytics

Communication, Impact, and Career Development

Friday, February 17

8:30 a.m. – 10:00 a.m.

R&D, Operations, and Engineering Session 1 Chair(s): Jyoti Rayamajhi, Eli Lilly and Company

Modeling the Reliability of Complex Systems with Multiple Data Sources: A Statistical Engineering Case Study
Christine M. Anderson-Cook, Los Alamos National Laboratory

Applications of Statistics in Aircraft Maintenance
I-Li Lu, The Boeing Company

Business Analytics Session 1
Chair(s): Dominique Haughton, Bentley University

DNA of a Great Data Miner
Elpida Ormanidou, Walmart; Daniel Thorpe, Sam's Club

Uplift Modeling: The Enabler 'to Do More with Less'
John Lin, Epsilon Data Management

Communication, Impact, and Career Development Session 1
Chair(s): Dennis Kunimura, England Logistics

ASA Professional Statistician Accreditation: Why It Might Be Right for You!
Thomas H. Short, John Carroll University

Accreditation: A Perspective from the Committee
Iain Johnstone, Stanford University

10:30 a.m. – 12:00 p.m.

R&D, Operations, and Engineering Session 2
Chair(s): Winson Taam, The Boeing Company

Statistical Influence on Regulatory Processes
John W. Green, DuPont

Statistical Issues in the Product Life Cycle of Implantable Medical Devices
Duane Steffey, Exponent, Inc.

Business Analytics Session 2
Chair(s): Dennis Kunimura, England Logistics

Customer Loyalty in Uncertain Times
Stephan Chase, Marriott International

Best Practices
Gustavo Canton, Walmart

Communication, Impact, and Career Development Session 2
Chair(s): LeAnna Stork, Monsanto Company

Panel Discussion: Statistical Consulting—Working Collaboratively Across Disciplines
Arthur James Kendall, Social Research Consultants; Nathaniel Schenker, National Center for Health Statistics; Stephen David Simon, P.Mean Consulting

Statistical Consulting—Working Collaboratively with Nonstatisticians
Frederick Faltin, The Faltin Group

Statistical Consulting—Best Practices
David Morganstein, Westat, Inc.

1:30 p.m. – 3:00 p.m.

R&D, Operations, and Engineering Session 3
Chair(s): Jyoti Rayamajhi, Eli Lilly and Company

Statistics and Lean+/Six Sigma at Boeing
Sabyasachi Basu, The Boeing Company

Practicing Statistics Can Lead to Interesting Research Problems
William Anthony Brenneman, The Procter & Gamble Company

Business Analytics Session 3
Chair(s): Dave Nickerson, University of Central Florida

Statistical Analytics in Marketing Decisionmaking
Don Ryan, iKnowtion

Optimal Pricing Model for a Logistics Firm: Blending Elasticity Analysis with Predictive Modeling
Sassoon Kosian, EXL Service, Decision Analytics

Communication, Impact, and Career Development Session 3
Chair(s): Jennifer H. Van-Mullekom, DuPont

Panel Discussion: Career Development
Martha Gardner, GE; Brian Allen Harris-Kojetin, Office of Management and Budget; Stephanie Palermo, Capital One

3:15 p.m. - 4:45 p.m.

R&D, Operations, and Engineering Session 4
Chair(s): Jim Rutherford, Chevron Oronite Company, LLC

Screening for Fuel Economy: A Case Study of Supersaturated Designs in Practice
Philip Rocco Scinto, The Lubrizol Corporation

Effective Experimentation Strategies in Aerospace Research: Case Studies and Lessons Learned
Peter Parker, National Aeronautics and Space Administration

Business Analytics Session 4
Chair(s): Don McCormack, SAS Institute

Who's Afraid of Big Bad Data?
Douglas John Newell, Calexus Solutions

Panel Discussion
Stephan Chase, Marriott International; Andrew France, Blue Cross Blue Shield Florida

Communication, Impact, and Career Development Session 4
Chair(s): Sylvia Dohrmann, Westat, Inc.

Networking
Bill Williams, Organizational Learning Consultant

4:45 p.m. - 6:00 p.m.
Poster Session

PARALLEL SESSIONS

Saturday, February 18

8:30 a.m. - 10:00 a.m.

R&D, Operations, and Engineering Session 5
Chair(s): Winson Taam, The Boeing Company

Sample Size Determination Using Applets
Russell V. Lenth, University of Iowa

Enhancements to Acceptance Sampling Methods for Crop Seed Lot Purity Testing
Jean-Louis Laffont, Pioneer Génétique; Kirk Murlin Remund, Monsanto Company

Business Analytics Session 5
Chair(s): Dave Nickerson, University of Central Florida

Inference: Just What Can Be Said?
Dennis L. Eggett, Brigham Young University

Opportunities in Causal Business Analytics
Victor S.Y. Lo, Fidelity Investments / Bentley University

Communication, Impact, and Career Development Session 5
Chair(s): Shelley Brock-Roth, Westat, Inc.

It's Not What You Say, It's How You Say It
Jennifer H. Van-Mullekom, DuPont

Misconceptions About Statistics in an Industrial Setting
William Anthony Brenneman, The Procter & Gamble Company

10:30 a.m. - 12:00 p.m.

R&D, Operations, and Engineering Session 6
Chair(s): Jim Rutherford, Chevron Oronite Company, LLC

Graphing and Testing Interval-Censored Time-to-Event Data: Practical Aspects of Using the Interval R Package
Michael P. Fay, National Institute of Allergy and Infectious Diseases

Monte Carlo: An Underutilized Tool for Understanding Statistics
Frederick Faltin, The Faltin Group

Business Analytics Session 6
Chair(s): Don McCormack, SAS Institute

A Split-Plot Design in Financial Services
Thomas J. Kirchoff, Capital One

Testing at Capital One Auto Finance
Rose Brunner, Capital One Services

Communication, Impact, and Career Development Session 6
Chair(s): Shelley Brock-Roth, Westat, Inc.

The TV Guide to Volunteering in the ASA
Janet P. Buckingham, Southwest Research Institute

Statisticians as Leaders
Paul Berg, Eli Lilly and Company

Register online at www.amstat.org/csp.

REGISTRATION INFORMATION

Register online at *www.amstat.org/csp* or by returning the registration form provided in this booklet.

Registration is open through January 31, 2012.

Onsite Registration also will be available.

HOTEL INFORMATION

Renaissance Orlando at Seaworld
6677 Sea Harbor Drive, Orlando, FL 32821

The conference hotel is in a prime location across from SeaWorld Orlando and near Aquatica, Discovery Cove, Walt Disney World, and Universal Studios. This family-friendly hotel has its own Aqua Zone Water Park featuring water slides, a rain tree, water jets, and a tot pool; fabulous restaurants; and a lavish nèu lotus spa. Guests also enjoy SeaWorld Official Hotel Partner benefits, including dining discounts and front-of-line passes.

A limited number of rooms is available at the group rate listed below, if booked by Monday, January 16, 2012. To make reservations, please call the hotel reservation line at (800) 266-9432 or (506) 474-2009 and reference the American Statistical Association. Reservations using the group rate also can be made online at *www.amstat.org/csp.*

Single/Double: $169

Government: Limited quantity available at prevailing government per diem

TUTORIALS

1:30 p.m. - 3:30 p.m.

Putting Your Best Loafer Forward

Bill Williams, Organizational Learning Consultant

As professionals, the outcomes of our work are critical to our success, but we don't always give sufficient attention to how we achieve those outcomes and, particularly, the impressions co-workers, managers, clients, and others get from interacting with us. This tutorial will help you assess what "foot" you put forward as a professional, enabling you to clarify the impressions you want others to have of you as a professional and identify specific actions you can take to convey those impressions at work, in work-related activities after hours, and online.

Promoting Your Consulting Career in the Era of Web 2.0

Stephen David Simon, P.Mean Consulting

Web 2.0, defined by Wikipedia as "web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration on the World Wide Web," offers new opportunities for you to promote your consulting career. These tools are mostly free or inexpensive, though they are labor intensive. I will describe Web 2.0 that I have used to promote my independent consulting career and some of the unwritten rules about appropriate usage of these tools. I will contrast the tools with simpler Internet methods and noncomputer methods that can help promote your consulting career. Web 2.0 will not replace more traditional modes of career promotion, but it offers unique opportunities to supplement these efforts.

Measurement Systems Analysis

Jennifer H. Van-Mullekom, DuPont

Measurement systems analysis is critical to any development or improvement effort in your business. A poor measurement system can result in the inability to distinguish between product development candidates or the inability to determine the success of an improvement. This tutorial will provide basic instruction on how to complete and communicate measurement systems analysis for continuous variables, attribute (discrete) variables, and in-line systems. Multiple software packages will be demonstrated. Examples will include both transactional and engineering/R&D examples. Emphasis will be on the practical aspects of designing, executing, analyzing, and communicating the measurement system study within the context of multidisciplinary, cross-functional teams.

Bayesian Analysis in SAS

Mike Patetta, SAS Institute

This tutorial focuses on Bayesian analyses using the PHREG, GENMOD, and MCMC procedures. Most of the examples are in clinical trials. Specific topics to be covered are fitting a logistic regression model in PROC GENMOD; fitting a survival model in PROC PHREG; using prior distributions in a Bayesian analysis; fitting a logistic regression model, general linear mixed model, and zero-inflated Poisson model in PROC MCMC; illustrating a Bayesian approach to clinical trials using PROC MCMC; and illustrating the Bayesian approach to meta-analysis.

4:00 p.m. - 5:00 p.m.

WRAP-UP AND FEEDBACK PANEL DISCUSSION

EXHIBIT, SPONSOR, and RECRUIT

Statistical Practice 2012 is a great place to meet a targeted group of statisticians in a comfortable environment.

EXHIBIT

- A six-foot draped table
- Two chairs
- Exhibitor listing on the conference website
- Three exhibitor badges

2012 Exhibitor Fees

One six-foot table	$1,000
Additional six-foot tables	$250 each
One-page flyer in the attendee packet	$750

SPONSOR

Principal Sponsor - $7,500 combined investment

Listing in the February issue of the ASA's membership magazine, *Amstat News*, reaching more than 18,000 members

Exhibit signage indicating your sponsor status

Onsite signage featuring all sponsoring companies

Acknowledgement on the conference website, including a link to your company website

Supporting Sponsor - $2,500 combined investment

Visit *www.amstat.org/csp* or contact Amy Farris at *amy@amstat.org* or (703) 684-1221 for detailed information about any of these opportunities.

RECRUIT

General Virtual Employer Registration: $500/ASA Corporate Member, $750/Nonmember

Listing of up to five job postings, available online in advance of the conference to all registered applicants

Online access to all registered applicants. We will provide an interactive online database and message service, including all applicant data in real time. Enter criteria to narrow the applicant pool to your opening. Available November 15 through April 30. Print résumés and pursue contacts before the conference begins.

Access to the online Message Center, which will allow you to message potential candidates anywhere there is Internet access

Note: This registration does not include access to physical interview space. Interviews will be conducted by you at the location and time of your arrangement with candidates.

Employer Registration with a Hospitality Suite: $1,000/ASA Corporate Member, $1,500/Nonmember

All of the benefits of the General Virtual Employer Registration, plus:

A listing of up to 10 jobs in the online postings, available to all registered applicants

A private hospitality suite for your exclusive use while interviewing candidates

American Statistical Association Conference on
STATISTICAL PRACTICE
Innovations and Best Practices for the Applied Statistician 2012

REGISTRATION FORM

American Statistical Association Conference on STATISTICAL PRACTICE 2012

American Statistical Association Conference on STATISTICAL PRACTICE 2012

February 16–18, 2012 • Renaissance Orlando at Sea World, Orlando, Florida

www.amstat.org/meetings/csp/2012

INSTRUCTIONS

1. Print or type all information and retain a copy for your records.
2. Use a separate form for each registrant.
3. Mail form with payment to CSP Registration, ATTN: Cheryl Behrens, 732 N. Washington Street, Alexandria, VA 22314. Fax form (credit card only) to (703) 684-2037.
4. Registration form must be received by January 31, 2012, to be processed in advance and at the reduced rate.

Forms received without payment will not be processed.

Purchase orders will not be accepted. No exceptions.

ASA Federal ID #53-0204661

ATTENDEE INFORMATION

ASA ID # (if known)

Name

Preferred First Name for Badge

Organization

Address

City State/Province ZIP/Postal Code

Country (non-U.S.)

Phone

Email

In case of emergency, list the name and phone number of the person we should contact (remains confidential).

Emergency Contact _____

❑ Please update my ASA customer contact information with this meeting contact information.

❑ Please exclude my information from third-party contact lists.

This meeting is ADA accessible.

❑ Please check here if you need special services due to a disability and attach a statement regarding your needs.

CANCELLATION POLICY

Cancellations received by January 31, 2012, will be refunded, less 20% all items. Requests for refunds received after January 31 will not be honored. All cancellations must be made in writing to *cheryl@amstat.org*, via fax to (703) 684-2037, or mailed to CSP Registration, ATTN: Cheryl Behrens, 732 N. Washington Street, Alexandria, VA 22314.

REGISTRATION FEES (required)

	By January 31	Onsite February 16-18	
❑ Member	$325	$375	$_____
❑ New Member	$455	$505	$_____
❑ Nonmember	$495	$545	$_____
❑ Student	$150	$150	$_____

ADDITIONAL FEES (optional)

Virtual Career Placement—

Applicant	**ASA Member**	**Nonmember**	
❑ Student	$50	$75	$_____
❑ Nonstudent	$100	$150	$_____

Employer	**ASA Corporate Member**	**Nonmember**	
❑ Virtual Career Placement	$500	$750	$_____
❑ Virtual Career Placement + Interview Hospitality Suite	$1,000	$1,500	$_____

Courses—

Full-Day Short Courses—Thursday, February 16
Fee: $300 each for members and students; $350 each for nonmembers

8:30 a.m.–5:30 p.m.

❑ SC1: Analysis of Messy Data: Design and Analysis of Experiments Requiring Mixed Models—*George Milliken* $_____

❑ SC2: Regression Modeling with Many Correlated Predictors: High-Dimensional Data Analysis in Practice—*Jay Magidson and Tony Babinec* $_____

Half-Day Short Courses—Thursday, February 16
Fee: $200 each for members and students; $250 each for nonmembers

8:30 a.m.-12:30 p.m.

❑ SC3: Introducing R for Statistical Analysis—*Eric Nantz* $_____

❑ SC4: Why Don't They Get It?—*Bill Williams* $_____

1:30 p.m.-5:30 p.m.

❑ SC5: Using Statistical Engineering to Solve Large, Unstructured Problems—*Roger W. Hoerl and Ronald D. Snee* $_____

❑ SC6: Managing Your Time and Priorities—*Bill Williams* $_____

Tutorials—Saturday, February 18
Fee: $60 each for members and students; $70 each for nonmembers

1:30 p.m.-3:30 p.m.

❑ T1: Putting Your Best Loafer Forward—*Bill Williams* $_____

❑ T2: Promoting Your Consulting Career in the Era of Web 2.0—*Steve Simon* $_____

❑ T3: Measurement Systems Analysis—*Jennifer H. Van-Mullekom* $_____

❑ T4: Bayesian Analysis in SAS—*Mike Patetta* $_____

TOTAL FEES: $_____

PAYMENT

❑ Check/money order payable to the **American Statistical Association** *(in U.S. dollars on U.S. bank)*

Credit Card ❑ VISA ❑ MasterCard ❑ American Express

Card Number

Expiration Date Security Code

Name of Cardholder

Authorizing Signature

American Statistical Association
732 North Washington Street
Alexandria, VA 22314-1943 USA

"I am excited about this new ASA conference because it will give practicing statisticians the career skills they need to succeed at a time when the demand for statistical problem solvers has never been greater."

Robert N. Rodriguez (Keynote Speaker)
2012 President, American Statistical Association

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