Analytics ● PROC REPORT ● PROC SQL ● Arrays ● Hash Objects ● SAS Macros
SAS Metadata ● SAS Studio ● Enterprise Guide ● Display Manager ● SAS EG Batch

For SAS Users from Illinois, Wisconsin, and Anywhere Else

Wisconsin Illinois SAS Users Conference on June 29, 2016

At the Woman's Club of Wisconsin in Milwaukee

~ Learn from SAS experts and users just like you in three parallel sessions on SAS (two) and SAS Analytics
~ Network with fellow SAS users (including at the optional post-conference social)
~ See SAS demos and get in-depth questions answered

What to Expect at This Thirtieth Anniversary International Event 🇺🇸 🇨🇦

Steven First (founder of the Wisconsin Illinois SAS User Group in 1986, who LeRoy Bessler calls "Wisconsin's Distinguished Professor of SAS") opens the day sharing what are the most important features and design elements of the SAS System, based on his long and wide experience. **Charu Shankar,** returning again (her fourth visit) from SAS Toronto, will talk about Display Manager vs Enterprise Guide vs the new SAS Studio, sharing special tips, and to discuss Arrays vs Hash Objects. **Carolyn Olsen** and **Daniel Fuhrmann**, from Northwestern Mutual, will present Predictive Modeling using SAS Enterprise Miner and SAS/STAT. **Nancy Brucken** will present an introductory tutorial on Arrays. Trainer, consultant, and the World's Most Frequent SAS Presenter, **Kirk Paul Lafler**, will be back on the Main Stage to talk about PROC SQL as well as use of SAS MetaData, AND in the SAS BreakOut Room he will demonstrate SAS Studio in depth. **Jane Eslinger,** from SAS Institute (and one of the newest SAS Press authors), will talk about the PROC REPORT Compute Block on the SAS Main Stage, and she will offer a PROC REPORT tutorial (twice) in the SAS BreakOut Room. **Russell Lavery**, contractor from Bryn Mawr, Pennsylvania, will discuss Penalized Variable Selection and Quantile Regression in SAS, as well as The Logic of the ROC Curve. **Deanna Schreiber-Gregory** from National University will present latent analyses in longitudinal studies and how to deal with selection bias. **G. Gordon Brown** from SAS Institute will cover Methods for Massive, Missing or Multifaceted Data and the new PROC HPGENSELECT. **LeRoy Bessler** will do a SAS Macro Language tutorial (twice) in the SAS BreakOut room, and will present a tool to enable you to better monitor and manage your SAS jobs from Enterprise Guide or PC SAS. In the **SAS Demo Room** will be **Mindy Kiss** from our perennial sponsor Experis, and for demos, Q&A, tips, and other follow-up will be Steve First & **Jennifer First,** Nancy Brucken, Carolyn Olsen & Daniel Fuhrmann, G. Gordon Brown, Kirk Lafler, and LeRoy Bessler. Meet the indispensable **Andrea Littleton,** from SAS Institute's user event support team. You will receive a SAS tip sheet for the ODS EXCEL destination and, as Proceedings-Only content, LeRoy Bessler's work on this valuable capability.

Proceedings/Tools - Conference slides/papers, a selection of other conference-topic-related slides/papers, code tools, and guided links to resources at SAS and around the world are provided for attendees via post-conference download.

Books – Examination copies of books by Jane Eslinger and Kirk Lafler will be available, and raffled off at end of conference. Also raffled off will be four free book coupons redeemable at sas.com/store. After the conference, an email from SAS Institute will allow attendees to order books from SAS at 20% discount and with free shipping.

Conference Admission - Online registration or mail-in pre-payment must be received no later than June 22. We accept credit cards, personal check, company check, or money order, but no purchase orders. The fee includes admission, Conference Proceedings & Tools, continental breakfast, lunch, breaks, and beverages. **REGISTER EARLY. Space is limited. Registration information is on the last page of this brochure.**

Conference Site, etc. – We provide free valet parking. See later page for map and overnight accommodations.

Sponsors - We thank SAS Institute, the Oklahoma State Spears School of Business, and Experis for their sponsorship and support! For how they can help with your SAS-related needs, see www.sas.com , analytics.okstate.edu , and www.Experis.com .

We look forward to seeing you at the conference.
Craig Wildeman, Laura MacBride, David Bruckner, Daniel Fuhrmann, and LeRoy Bessler
Your WIILSU Conference Team ~ www.wiilsu.org
For Questions about Registration: Craig at registrar@wiilsu.org or 920-457-4442 Ext. 72118
For Questions about the Conference: Le_Roy_Bessler@wi.rr.com or 262-512-9484

Conference Speakers Who Are Authors

Kirk Paul Lafler is consultant and founder of Software Intelligence Corporation, and has been programming in SAS since 1979. He is a SAS Certified Professional, SAS Institute Alliance Member (1996 – 2002), UCSD Extension professor, sasCommunity.org emeritus advisory board member, and provider of IT consulting services and training to SAS users around the world. He is author of PROC SQL: Beyond the Basics Using SAS, Second Ed. and other books, has written hundreds of SAS papers, is a frequent invited speaker at SAS conferences, and has received 23 "Best" awards for presentations.

PROC SQL: Beyond the Basics Using SAS®, Second Edition

An example-driven guide that helps readers master the language of PROC SQL, this book is packed with analysis and examples illustrating an assortment of PROC SQL options, statements, and clauses. The Second Edition explores new and powerful features in SAS 9.3, and includes such topics as: adding data to a table with a SET clause; bulk loading data from Microsoft Excel; distinguishing between DATA step merges and PROC SQL joins; rules for designing indexes; cardinality and index selectivity; and demystifying join algorithms. It also features an expanded discussion of CASE expressions, and new sections on complex query applications, and grouping and performance.
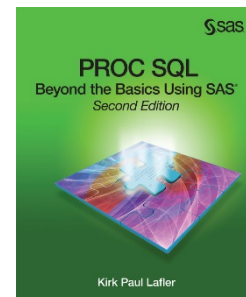
Google Search Complete!
Tips, Tricks and Shortcuts for Better Searches and Better Results

A tip-filled guide to help everyone become an Internet search pro quickly and easily! As the premier Internet search tool today, Google® search is used to find practically anything on the web, and in almost any form. With useful tips, techniques, and shortcuts, Google Search Complete! provides insights into how Google search works and shows numerous ways to find web sites, people, businesses, articles, reference works, information tools, directories, PDFs, images, current news stories, user and professional groups, and other content.

Jane Eslinger is a Senior Technical Support Analyst at SAS World Headquarters in Cary, North Carolina. She supports SAS customers using ODS and Base SAS procedures, with an emphasis on PROC REPORT. Prior to joining SAS, Jane served as a statistician and statistical programmer in the social science and clinical research fields. She has a Bachelor of Science in Statistics from North Carolina State University.

The SAS® Programmer's PROC REPORT Handbook:
Basic to Advanced Reporting Techniques

This book is intended for programmers of all skill levels. Learn how to link multiple reports, add graphics and logos, and manipulate table of contents values to help refine your programs, macrotize where possible, troubleshoot easily, and get great-looking reports every time. From beginner to advanced, the examples in this book will help you harness all the power and capability of PROC REPORT.

Speakers, Sponsors, Volunteers (no photo available for G. Gordon Brown, Speaker, SAS Institute, Cary, NC)

Andrea Littleton
SAS User Group Support
SAS Institute
Cary, NC

Nancy Brucken
Speaker
InVentiv Health
Ann Arbor, Michigan

David Bruckner
Volunteer
Kohler Co.
Kohler, WI

Jane Eslinger
Speaker
SAS Institute
Cary, NC

Steven First
Speaker, Founder WIILSU 1986
Systems Seminar Consultants
Madison, WI

Jennifer First
SAS Demo Room Presenter
Systems Seminar Consultants
Madison, WI

Daniel Fuhrmann
Speaker
Northwestern Mutual
Milwaukee, WI

Mindy Kiss
Sponsor
Experis
Kalamazoo, MI

Kirk Paul Lafler
Speaker
Software Intelligence Corp
San Diego, CA

Russell Lavery
Speaker
Contractor
Bryn Mawr, PA

Laura MacBride
Volunteer
Marquette University
Milwaukee, WI

Carolyn Olsen
Speaker
Northwestern Mutual
Milwaukee, WI

Deanna Schreiber-Gregory
Speaker
National University
Moorhead, MN

Charu Shankar
Speaker
SAS Institute
Toronto, ON, Canada

Craig Wildeman
Volunteer
Kohler Co.
Kohler, WI

LeRoy Bessler, Speaker & WIILSU Volunteer Team Leader 1989-1992 & 1997-2016, Bessler Consulting & Research, Mequon, Milwaukee, WI

Presentation Abstracts and Information about Speakers & Volunteers

SAS Section 1 (MAIN ROOM, SECOND FLOOR)

We Have Computers, We Should Use Them!
Steven First, Systems Seminar Consultants

SAS® is unique and particularly suited for applications, and has weathered the test of time.   This presentation will discuss what the author views are the most important features, and design elements of the SAS system that he has employed over the years. Topics will include: SAS design considerations, naming, and job structure, tuning, and debugging, favorite SAS language features, and a few quick tips.

Steven First, President of Systems Seminar Consultants (SSC), has worked with SAS for over 35 years. His SAS experience includes hundreds of manufacturing, retail, government, marketing, and financial applications. Steve has developed SSC into an esteemed provider of SAS solutions. His commitment to quality has resulted in a successful, fast-growing business. He is a regularly invited speaker at user group meetings. Steve has a B.S. in Computer Science from the University of Wisconsin-La Crosse.

Array of Sunshine: Casting Light on Basic Array Processing
Nancy Brucken, InVentiv Health

An array is a powerful construct in DATA step programming, allowing you to apply a single process to numerous variables simultaneously, without having to resort to macro variables or repeat code blocks. Arrays are also useful in transposing data sets when PROC TRANSPOSE does not provide a necessary degree of control. However, they can be very confusing to less-experienced programmers. This paper describes how arrays have been implemented in SAS®, and how they can be used to solve some common programming problems.

Nancy Brucken has been a SAS programmer for over 30 years, nearly 25 of which have been spent in the pharmaceutical industry. She has been a frequent presenter at local, and regional SAS User Groups, mainly on Base SAS, and pharmaceutical industry data standards topics. A proud graduate of Marietta College, she is also a devout Ohio State Buckeyes fan.

40 Years of SAS® – 3 Incredible Coding Tools
Charu Shankar, SAS Institute

SAS turns 40 this year. It's time to celebrate with the evolution of SAS: from the Display Manager, to SAS Enterprise Guide®, to SAS Studio. Learn the relative advantages of each; learn when to use which tool to code SAS. If you are a classic SAS Display Manager user, and you have always wanted to check out SAS Enterprise Guide, and SAS Studio, this session is for you. On the other hand, if you are a classic GUI (graphical user interface) point and click user, and wondered what the classic SAS Display Manager has in store for you, this session is equally for you. In this session, it's also time to reveal some of SAS best kept secrets like the monotonic function, the SAMPSIO library, boolean circuitry, etc., and much much more. Come join us in this fun session, walking down memory lane with SAS, and boldly march into the future with these 3 tools comfortably in your hands to churn out efficient code.

Charu Shankar helps train individuals and organizations make winning decisions using Analytics. She is a Technical Training Specialist with SAS since 2007. Before SAS, Charu worked at UNESCO, Rotman School of Management, etc. She teaches SAS, SQL, DS2, SAS Enterprise Guide, and BI. She enjoys teaching by engaging her students with logic, visuals, and analogies to spark critical reasoning. Charu interviews clients to recommend the right SAS training to help meet their needs. She is a frequent blogger for the SAS Training Post, at www.Blogs.sas.com. When she's not teaching technology, she is passionate about helping people come alive by teaching yoga and is an ardent foodie—chef, caterer, & blogger. Check out www.charuyoga.com for yoga tips n tricks. Also check out her YouTube yoga channel charuyoga .

The REPORT Procedure: A Primer for the Compute Block
Jane Eslinger, SAS Institute

It is well known in the world of SAS® programming that the REPORT procedure is one of the best procedures for creating dynamic reports. However, you might not realize that the compute block is where all of the action takes place! Its flexibility enables you to customize your output. This paper is a primer for using a compute block. With a compute block, you can easily change values in your output with the proper assignment statement and add text with the LINE statement. With the CALL DEFINE statement, you can adjust style attributes such as color and formatting. Through examples, you learn how to apply these techniques for use with any style of output. Understanding how to use the compute-block functionality empowers you to move from creating a simple report to creating one that is more complex and informative, yet still easy to use.

See bio on page 2.

Baking or Cooking – Learn the Difference between SAS® Arrays and Hash Objects
Charu Shankar, SAS Institute

Hash objects and arrays are exciting to SAS users, but users can often get lost and not grasp the micro-level difference between the two techniques. Both are in-memory DATA Step techniques. The big difference is arrays are to hash as baking is to cooking. Arrays are like baking. Everything in exact measure has to be put into the pan; the oven has to be just the right temperature, the pans, dough consistency & texture, etc. Once the oven door is shut, don't open it until the cake is ready. Hash objects on the other hand provide more creativity like cooking. You don't have to have all the measurements at compile time. Unlike an array which needs exact measurements at compile, with hash objects, you can change as you go. Come to this exciting session to learn the difference between these two in-memory techniques. Watch a live demo. Learn to write code to use these techniques. Take away two valuable techniques, and learn to write code to perform both of these techniques with advantages: time savings, programmer efficiency, etc.

Important & Valuable Things You Can Do with SAS® Metadata DICTIONARY Tables and SASHELP Views
Kirk Paul Lafler, Software Intelligence Corp.

SAS users can easily and quickly access metadata content with a number of read-only SAS data sets called DICTIONARY tables or their counterparts, SASHELP views. During a SAS session, information (known as metadata) is captured including SAS system options along with their default values, assigned librefs, table names, column names and attributes, formats, indexes, and more. This presentation explores how metadata can be used as input into a SAS code generator or a SAS macro to produce desired results, the application of specific DICTIONARY table and SASHELP view content, examples related to the creation of dynamic code, and the creation of a data dictionary.

See bio on page 2.

Powerful PROC SQL SELECT Queries Every SAS® User Should Know
Kirk Paul Lafler, Software Intelligence Corp.

PROC SQL represents an essential language component for millions of SAS users. This presentation highlights PROC SQL SELECT queries every SAS user should know to harness the power of this powerful data base language. Topics include: PROC SQL SELECT queries to retrieve all rows and columns from one or more tables; select a specific column or columns from a table; subset rows of data based on some condition from a table; rearrange rows of data in ascending and/or descending order; select distinct (unique) rows from columns; retrieve rows of data using comparison and logical operators; retrieve rows of data using the IN operator; select rows of data containing missing or null data; retrieve rows of data containing values between a range of values; select rows of data matching some pattern of data values; perform summary operations to compute down rows and across columns; retrieve matched rows of data from two or more tables; construct and search the contents of a value-list macro variable for a specific value; and capture vital optimizer information using the MSGLEVEL= system option and _METHOD SQL option.

SAS Section 2 (Lower Level Breakout Room)

Why and How to Use SAS Macro Language
LeRoy Bessler, Bessler Consulting and Research

SAS Macro Language and macro variables (a.k.a. symbolic variables) let your SAS program do things for you that would ordinarily require you to make manual changes to your code every time you run it (e.g., changing title text, changing data filters, graph controls, etc.). Whenever you change your code, not only does it take extra time, but also there is a risk of inadvertently introducing an error. SAS Macro Language makes code situation-adaptive. It can adapt to changes in data, run date, data date, data date range, etc. It is an essential tool for Software-Intelligent Application Development, which delivers Reliability, Reusability, Maintainability, Extendability, and Flexibility. Strong Smart Systems are essential for production programs that are run by automatic batch scheduling or must respond in a custom fashion in real time to interactive requests. Such programs must correctly run hands-off every time. Code using macro language also saves time and reduces error risk for ad hoc work. Any supposedly one-time ad hoc code you build has the possibility of being needed again, very likely with minor variation, to satisfy a future request for analysis, report, or data. Programs that are basically similar, but with minor variations in purpose and output, need to differ only in macro invocation code, which is easy to find and understand, as compared to changes buried somewhere in a huge number of lines of SAS code. This introductory tutorial will get you started using a powerful feature of Base SAS software that you already have, and which can be used with all of your other SAS software products as well.

Dr. LeRoy Bessler has presented at software users conferences in the US, Canada, and Europe, on effective visual communication (using graphs, tables, web pages, maps, or color), highly formatted Excel reporting from SAS, his tools to assist SAS server administrators, users, and managers, and Software-Intelligent Application Development to maximize Reliability, Reusability, Maintainability, Extendability, and Flexibility. His 38 years of SAS experience includes application development and supporting users, servers, software, and data.

PROC REPORT In-Depth
Jane Eslinger, SAS Institute

This session will explore one of the most powerful reporting procedures in SAS: PROC REPORT. It will focus on the procedure's most used capabilities: header creation and border control.

Downloading, Configuring, and Using the Free SAS® University Edition Software
Kirk Paul Lafler, Software Intelligence Corp.

The announcement of SAS Institute's free "SAS University Edition" is an exciting development for SAS users and learners around the world! The software bundle includes Base SAS, SAS/STAT, SAS/IML, Designer Studio (user interface), and SAS/ACCESS for Windows, with all the popular features found in the licensed SAS versions. This is an incredible opportunity for users, statisticians, data analysts, scientists, programmers, students, and academics everywhere to use (and learn) for career opportunities and advancement. Capabilities include data manipulation, data management, comprehensive programming language, powerful analytics, high quality graphics, world-renowned statistical analysis capabilities, and many other exciting features. This 50-minute presentation describes the process of downloading and configuring the SAS University Edition. Additional topics include the process of downloading the required applications, "key" configuration strategies to run the "SAS University Edition" on your computer, and the demonstration of a few powerful features found in this exciting software bundle.

Maximize and Manage Job Run Capabilities with SAS Enterprise Guide® or PC SAS®
LeRoy Bessler, Bessler Consulting and Research

Enterprise Guide users send code to a remote (or local) server, with no idea of what is happening until the work completes, and the SAS log and any in-client results are displayed. If a remote SAS process is hung, or taking forever for reasons unknown, you probably want to terminate it, but might find the EG option fails. Or, for some reason, you might need to shut down your EG laptop while the remote process is running, which means you will never see the SAS log or your output. Your only option is to kill your EG client session, with unknown consequences for the remote process.

My tools let you run your program in batch mode, from Enterprise Guide or Standalone PC SAS. You get job start, end, and end status emails. They identify your program, and its Windows Process ID (PID). (For EG-submitted code, that PID is NOT for your EG session.) The status email, if the job ran OK, can include a link to the report created; if not OK, the link is instead to the SAS log. There is an option to send email to the user of report, including a link to the report and/or attaching it to the email.

In batch mode, your log and report are written to your specified disk location, and can be viewed while your job is running. You know what's happening, and how far your job is in its processing.

Accessory tools: (a) display a list in the SAS log of all SAS processes you have running concurrently (if using EG, its PID will be listed also, but not identified as such—at the start of your EG session, you should trigger a display of that PID in the SAS log); and (b) can kill any SAS process that you own. The process display and kill tools are useful even if not using the batch processing tool.

Other options are SAS log post-processing, to detect and report unexpected messages, but ignoring expected, though non-normal, messages. Log post-processing, rather than job end status, can determine what is sent to your report user. Also included is an overview of my SAS resource consumption monitoring tools.

SAS Analytics Section (FIRST FLOOR BREAKOUT ROOM)

Introducing the HPGENSELECT Procedure: Model Selection for Generalized Linear Models
G. Gordon Brown, SAS Institute

Generalized linear models are highly useful statistical tools in a broad array of business applications and scientific fields. How can you select a good model when numerous models that have different regression effects are possible? The HPGENSELECT procedure, which was introduced in SAS/STAT® 12.3, provides forward, backward, and stepwise model selection for generalized linear models. You can specify common distributions in the generalized linear models family, such as the Poisson, binomial, and multinomial distributions. You can also specify the Tweedie distribution, which is important in ratemaking by the insurance industry and in scientific applications. This paper shows you how to use the HPGENSELECT procedure both for model selection and for fitting a single model. The paper also explains the differences between the HPGENSELECT procedure and the GENMOD procedure.

Dr G. Gordon Brown is a Senior Research Statistician in the Statistical Applications R&D department at SAS Institute. Before joining SAS in 2015 Dr. Brown performed contract research for 14 years, specializing in survey data analysis, regression modeling, and environmental statistics. He has a PhD in statistics from North Carolina State University, and has been a SAS user since 1989.

An Animated Guide: The Logic of the ROC Curve
Russell Lavery, Contractor

Many statistics classes explain how to use the ROC curve by saying that, for a good model, the area under the ROC curve should be close to 1, and as the model gets worse two things happen: (1) the area under the curve approaches .5;, and (2) the ROC curve approaches a 45-degree line. This talk, with its example-based, and cartoon-like format, shows why those rules are appropriate. This talk is appropriate for anyone who uses SAS/STAT® procedures, like Logistic Regression, that produce ROC Curves.

Russ is a frequent, and multiple award winning presenter on SAS, and statistical topics. He has presented all over the US, in Europe, and in Asia. He is an independent contractor, and specializes in statistics and big data.

SAS/STAT® 14.1: Methods for Massive, Missing or Multifaceted Data
G. Gordon Brown, SAS Institute

The latest release of SAS/STAT software brings you powerful techniques that will make a difference in your work, whether your data is massive, missing, or somewhere in the middle. New imputation software for survey data adds to an expansive array of methods in SAS/STAT for handling missing data, as does the production version of the GEE procedure, which provides the weighted generalized estimating equation approach for longitudinal studies with dropouts. An improved quadrature method in the GLIMMIX procedure gives you accelerated performance for certain

classes of models. The HPSPLIT procedure provides a rich set of methods for statistical modeling with classification and regression trees, including cross-validation and graphical displays. The HPGENSELECT procedure adds support for spline effects and lasso model selection for generalized linear models. And new software implements generalized additive models by using an approach that handles large data easily. Other updates include key functionality for Bayesian analysis and pharmaceutical applications.

Employing Latent Analyses in Longitudinal Studies:
An Exploration of Independently Developed SAS® Procedures
Deanna Schreiber-Gregory, National University

This paper looks at several ways to investigate latent variables in longitudinal surveys by utilizing three independently created SAS procedures. Three different analyses for latent variable discovery will be reviewed and explored: latent class analysis, latent transition analysis, and latent trajectory analysis. The latent analysis procedures explored in this paper (all of which were developed outside of SAS Institute) are PROC LCA, PROC LTA, and PROC TRAJ. The specifics behind these procedures and how to add them to one's procedure library will be explored and then applied to an explorative case study question. The effect of the latent variables on the fit and use of the regression model compared to a similar model using observed data may also be briefly reviewed. The data used for this study was obtained via the National Longitudinal Study of Adolescent Health, a study distributed and collected by Add Health. Data was analyzed using SAS 9.4. This paper is intended for moderate to advanced level SAS users. This paper is also written for an audience with a background in behavioral science and/or statistics.

Deanna recently obtained her Master's degree in Health and Life Science Analytics from National University, and also holds two bachelor's degrees, one in Psychology and another in Statistics, from North Dakota State University. She currently lives in Moorhead, MN with her husband, who has a degree in Art. Deanna has presented at several local, regional, national, and global SAS user group conferences, with SCSUG last October being her 20th conference since 2011. She also has three published articles on binge-eating disorder at peer-reviewed clinical journals, and has had work presented at regional and national clinical psychology conferences.

Predictive Modeling using Enterprise Miner™ and SAS/STAT®: Principles and Best Practices
Carolyn Olson & Daniel Fuhrmann, Northwestern Mutual

Predictive modeling is the use of known, historical data and mathematical techniques (statistical algorithms) to identify the probability of an unknown, future outcome. Typically, the end result is to streamline decision-making and to create new insights that lead to better actions. Therefore, predictive modeling is widely used in industry to more accurately answer business questions that improve performance, increase profitability, and reduce costs. Prior to embarking on a predictive analytics venture, however, it is important to define the content and rationale of the question(s) for which an analysis is performed, and to outline the analysis process one intends to follow. Both of these points are addressed in this paper before the SEMMA methodology and typical project work flow in SAS Enterprise Miner are introduced. Considerations for predictive modeling are outlined next, they include data preparation (definitions of target and observation window, offset window, sampling, missing value treatment, and variable transformations), variable selection methods, overfitting, validation methods, and criteria to assess model performance. This paper concludes with an introduction to several supervised learning techniques (regression, decision trees, neural networks, and ensemble models) and applications of these methods to a use case in the insurance industry. The intended audience for this paper are beginning and intermediate-level data scientists, analysts, and modelers. While the paper focuses on applications in SAS Enterprise Miner, it provides alternative approaches implemented in SAS/STAT, wherever possible.

Carolyn Olsen is an analytics consultant with Northwestern Mutual and is passionate about using data science to turn information into actionable insight. At Northwestern Mutual she has led predictive modeling and text mining projects to facilitate data-driven decision making. She holds a Masters in Applied Economics from Marquette University with a specialization in Marketing Research. Prior to Northwestern Mutual, Carolyn worked in marketing research for the State of Wisconsin as the primary analyst for the State's Uniform Crime Reporting Analyst, and as a senior data analyst for the Wisconsin Health Information Organization. Carolyn is a SAS newbie experiencing the joys of SAS Enterprise Miner, and has a soft spot for the quirky R statistical programming language, with which she has three years of experience. She is excited to see SAS incorporating R through its SAS Enterprise Miner "Open Source" node.

Daniel Fuhrmann is a Data & Analytics Lead Consultant with Northwestern Mutual. He currently works on projects involving both predictive analytics and clustering techniques. His recent professional interests center on effective leadership of data science teams and strategies to foster data-driven decision making in the enterprise to create business value. Daniel has been a SAS user since 2003 and has used his programming and analytics skills in both academe and industry. He holds an MA in Economics and a PhD in Applied Microeconomics with a specialization in Health from the University of Wisconsin-Milwaukee (UWM). Prior to joining Northwestern Mutual, Daniel worked as a Data Analyst at Assurant Health, a health insurance company in Milwaukee, and later served as Statistician and Director of the Data Core at the Center for Applied Behavioral Health Research, UWM. He coordinated UWM's "Graduate Certificate in Applied Data Analysis using SAS®" in partnership with the SAS Institute Inc., as part of that role. He has co-authored over 25 papers and conference presentations on topics such as the effects of smoking bans, utility of biomarkers, the reliability and validity of health measures, and data visualization with SAS software.

Selection Bias: How Can Propensity Score Utilization Help Control for It?
Deanna Schreiber-Gregory, National University

An important strength of observational studies is the ability to estimate a key behavior or a treatment's effect on a specific health outcome. This is a crucial strength as most health outcomes research studies are unable to use experimental designs due to ethical and other constraints. Keeping this in mind, one drawback of observational studies (that experimental studies naturally control for) is that they lack the ability to randomize their participants into treatment groups. This can result in the unwanted inclusion of a selection bias. One way to adjust for a selection bias is through the utilization of a propensity score analysis. In this paper we explore an example of how to use these types of analyses. In order to demonstrate this technique, we will seek to explore whether recent substance abuse has an effect on an adolescent's identification of suicidal thoughts. In order to conduct this analysis, a selection bias was identified and adjustment was sought through three common forms of propensity scoring: stratification, matching, and regression adjustment. Each form is separately conducted, reviewed, and assessed as to its effectiveness in improving the model. Data for this study was gathered through the Youth Risk Behavior Surveillance System, an ongoing nationwide project of the Centers for Disease Control and Prevention. This presentation is designed for any level of statistician, SAS® programmer, or data analyst with an interest in controlling for selection bias.

Penalized Variable Selection and Quantile Regression in SAS®: Overview
Russell Lavery, Contractor

This example-based and cartoon-like presentation is about: (1) some new PROCs for modeling, using penalized variable selection; and (2) some PROCs for building models that are a richer description of your data than models built using OLS or Maximum Likelihood. The four PROCS we will cover are: REG, GLMSELECT, QUANTREG, and QUANTSELECT. The paper explains theory and gives examples of SAS code and of output for the four PROCs.

Conference Team

Craig Wildeman is Treasurer, Registrar, email manager, and webmaster. Craig is a Senior Systems Project Leader for the Cast Iron Division at Kohler Co. **Laura MacBride** handles all conference communications and serves as SAS (non-analytics) Section Chair. She is Assistant Director in the Office of Institutional Research and Analysis at Marquette University. **David Bruckner,** Systems Project Leader at Kohler Co., assists with email communication, name badges, on-site registration check-in, and sponsor recruitment. **Daniel Fuhrmann** (see bio above) is Section Chair for SAS Analytics. **LeRoy Bessler** (see bio above) serves as conference coordinator and artistic director.

Wisconsin Illinois SAS Users Conference Agenda – June 29, 2015
Woman's Club of Wisconsin, 813 E. Kilbourn Ave., Milwaukee, WI 53202, 414-276-5170

NOTE: Order of speakers might need to change without notice. Two topics offered twice due to small room.

8:30 Registration Check-In

PRE-CONFERENCE OPENING (DINING ROOM, FIRST FLOOR)

8:30 Coffee, Tea, Continental Breakfast

CONFERENCE OPENING (MAIN ROOM, SECOND FLOOR)

9:00 Welcome
LeRoy Bessler, Conference Coordinator

9:10 We Have Computers, We Should Use Them!
Steven First, Systems Seminar Consultants

SAS SECTION 1 (MAIN ROOM, SECOND FLOOR)

10:05 Array of Sunshine: Casting Light on Basic Array Processing – Continued after Break
Nancy Brucken, InVentiv Health

10:25 Break (DINING ROOM, FIRST FLOOR)

10:45 Array of Sunshine: Casting Light on Basic Array Processing – Continuation
Nancy Brucken, InVentiv Health

11:10 40 Years of SAS® - 3 Incredible Coding Tools
Charu Shankar, SAS Institute

12:00 Lunch (MAIN ROOM, SECOND FLOOR)

1:00 The REPORT Procedure: A Primer for the Compute Block
Jane Eslinger, SAS Institute

1:55 Baking or Cooking - Learn the Difference between SAS® Arrays and Hash Objects
Charu Shankar, SAS Institute

2:50 Break (DINING ROOM, FIRST FLOOR)

3:00 Important and Valuable Things You Can Do
with SAS® Metadata DICTIONARY Tables and SASHELP Views
Kirk Paul Lafler, Software Intelligence Corp.

3:55 Powerful PROC SQL SELECT Queries Every SAS® User Should Know
Kirk Paul Lafler, Software Intelligence Corp.

SAS SECTION 2 (LOWER LEVEL BREAKOUT ROOM)

10:05 Why and How to Use SAS® Macro Language – Continued after Break
LeRoy Bessler, Bessler Consulting and Research

10:25 Break (DINING ROOM, FIRST FLOOR)

10:45 Why and How to Use SAS® Macro Language – Continuation
LeRoy Bessler, Bessler Consulting and Research

11:10 PROC REPORT In-Depth
Jane Eslinger, SAS Institute

12:00   **Lunch** (MAIN ROOM, SECOND FLOOR)

1:00   **Downloading, Configuring, and Using the Free SAS® University Edition Software**
Kirk Paul Lafler, Software Intelligence Corp.

1:55   **Maximize and Manage Job Run Capabilities With Enterprise Guide® or PC SAS®**
LeRoy Bessler, Bessler Consulting and Research

2:50   **Break** (DINING ROOM, FIRST FLOOR)

3:00   **PROC REPORT In-Depth**
Jane Eslinger, SAS Institute

3:55   **Why and How to Use SAS® Macro Language**
LeRoy Bessler, Bessler Consulting and Research

4:45   **Return to Main Room**

SAS ANALYTICS SECTION (FIRST-FLOOR BREAKOUT ROOM)

10:05   **Introducing the HPGENSELECT Procedure: Model Selection for Generalized Linear Models**
G. Gordon Brown, SAS Institute

10:25   **Break** (DINING ROOM, FIRST FLOOR)

10:45   **An Animated Guide: The Logic of the ROC Curve**
Russell Lavery, Contractor

11:10   **SAS/STAT® 14.1: Methods for Massive, Missing or Multifaceted Data**
G. Gordon Brown, SAS Institute

12:00   **Lunch** (MAIN ROOM, SECOND FLOOR)

1:00   **Employing Latent Analyses in Longitudinal Studies:**
An Exploration of Independently Developed SAS® Procedures
Deanna Schreiber-Gregory, National University

1:55   **Predictive Modeling using Enterprise Miner™ and SAS/STAT®: Principles and Best Practices**
Carolyn Olsen & Daniel Fuhrmann, Northwestern Mutual

2:50   **Break** (DINING ROOM, FIRST FLOOR)

3:00   **Selection Bias: How Can Propensity Score Utilization Help Control For It?**
Deanna Schreiber-Gregory, National University

3:55   **Penalized Variable Selection and Quantile Regression in SAS®: Overview**
Russell Lavery, Contractor

4:45   **Return to Main Room**

CONFERENCE CLOSING (MAIN ROOM, SECOND FLOOR)

4:45   **Conference Closing**

POST-CONFERENCE (OPPOSITE THE MAIN ROOM, SECOND FLOOR)

5:00   **Post-Conference Networking Social – for everyone who can stay**

See Next Page for Schedule of SAS Demo Room Activities

SAS DEMO ROOM (OPPOSITE THE MAIN ROOM, SECOND FLOOR)

Sponsor – will be present most of the day
    Mindy Kiss, Experis
    Gaining Competitive Advantage and Generating Success with Experis

Speaker/Author Book Display
    Books by speakers Jane Eslinger and Kirk Paul Lafter will be available for examination

Speaker Demos, Q&A, Tips, and Presentation Follow-Up

10:05 Demo Enterprise Guide® **for coders and non-coders, quick tips and answering user questions.**
       Also demo SSC SAS® **Job Performance Optimization Tool,**
       built with SAS to identify bottlenecks and troublesome steps.
       Steven First and Jennifer First, Systems Seminar Consultants

Jennifer First-Kluge, Vice President, has been with SSC since 2001, as a SAS consultant and trainer. She has worked on projects in the healthcare, financial, marketing, retail, and manufacturing industries. She also assists clients customized training sessions. Jennifer coordinates Wisconsin SAS User Group Meetings. She is also the publisher of <u>The Missing Semicolon</u>, *SSC's SAS technical blog. She is a regular presenter at local, regional, and international SAS user conferences.*

10:25 Break (DINING ROOM, FIRST FLOOR)

10:45 Two Demos, quick tips, and answering user questions. (See above.)
to   *Steven First and Jennifer First, Systems Seminar Consultants*
12:00

11:10 Follow-up To Predictive Modeling using Enterprise MinerTM **and SAS/STAT**®
       Answer "how-to" questions about data preparation for analytics and supervised learning techniques
       Carolyn Olsen & Daniel Fuhrmann, Northwestern Mutual

12:00 Lunch (MAIN ROOM, SECOND FLOOR)

1:00 Two Demos, quick tips, and answering user questions. (See above.)
to   *Steven First and Jennifer First, Systems Seminar Consultants*
2:45

1:00 Demo features and procedures new in SAS/STAT® **14.1 using a collection of example programs.**
      Choice of programs to demo will be based on user preference.
      G. Gordon Brown, SAS Institute

1:55 Q&A on SAS® **University Edition, PROC SQL, DICTIONARY Tables, SASHELP Views, etc.**
      Kirk Paul Lafler, Software Intelligence Corp.

2:50 Break (DINING ROOM, FIRST FLOOR)

3:00 Q&A Follow-up to "Array of Sunshine" presentation, and on arrays in general
      Nancy Brucken, InVentiv Health

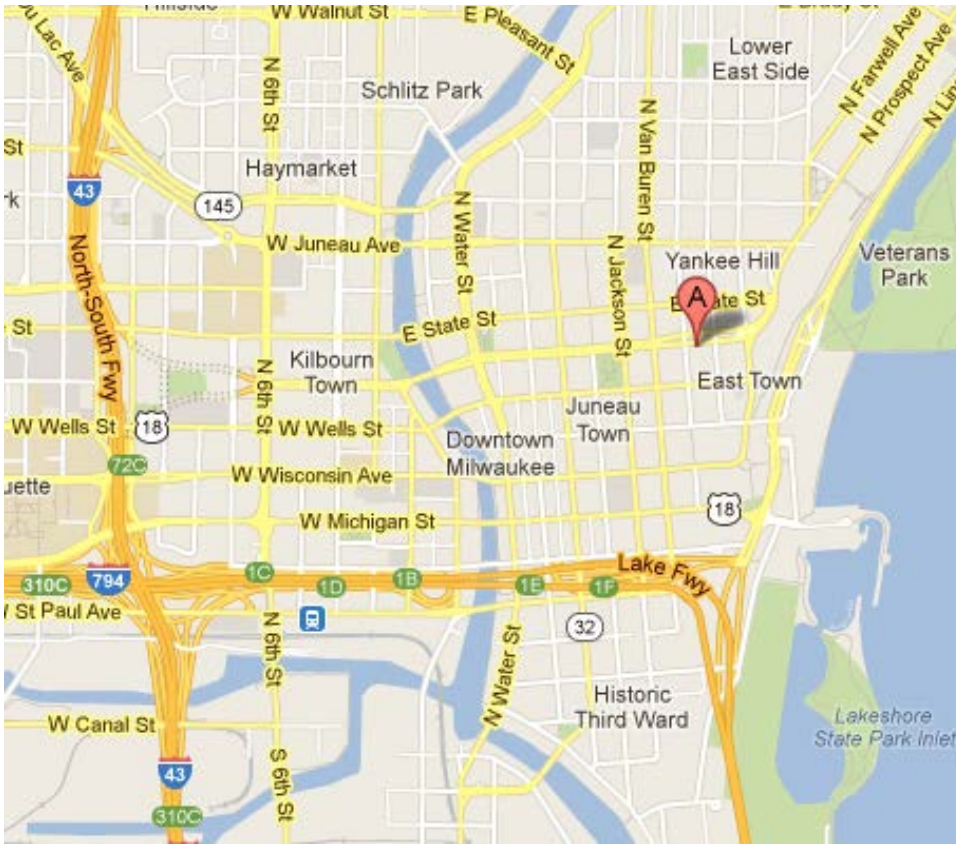**3:00 Demo & Q&A for Maximize and Manage Job Run Capabilities With Enterprise Guide**® **or PC SAS**®
      LeRoy Bessler, Bessler Consulting and Research

3:50 Demo Room Closes
      Go To Main Room, SAS Analytics BreakOut Room, or SAS BreakOut Room

Map

Woman's Club of Wisconsin
813 East Kilbourn Avenue, Milwaukee, WI 53202
Telephone: 414-276-5170

The **Woman's Club of Wisconsin** is located at 813 East Kilbourn Avenue, at the intersection of East Kilbourn Avenue and North Cass Street. The Club entrance has a discreet marquee.
(Handicapped entry is also available.)

Club Parking Lot
Please use our free valet parking.

NOTE: Please consult http://www.511wi.gov/Web/ for information about any road construction, work zones, or detours.

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University Club (Mention the conference to get our rate at this Club. Book early. Rooms are limited.)
414-271-2222 http://universityclubmil.com/

County Clare Irish Inn & Pub
414-272-5273 http://countyclare-inn.com/

Park East Hotel
800-328-7275 http://www.parkeasthotel.com/

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877-638-7620 http://www.hotelmetro.com/

The Pfister Hotel
800-558-8222 http://www.thepfisterhotel.com/

Hyatt Regency
414-276-1234 or 888-591-1234 http://milwaukee.hyatt.com/hyatt/hotels/

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The Astor Hotel
800-558-0200 http://theastorhotel.com/

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If payment is not received by June 22, you will not be allowed to attend the conference.

Cancellations will not be accepted unless received before June 22. To cancel a registration, please edit your online registration by selecting My Registration tab and enter your confirmation number, and then select unregister. If you pay by credit card and need to cancel, your credit card will be refunded what you paid. If you paid by check, it will be sent back to you as soon as possible. You cannot substitute someone for your registration.

*****   Online Registration site: www.wiilsu.org   *****

For questions about registration,
contact our Registrar Craig Wildeman at 920-457-4442 x-72118 or registrar@wiilsu.org.

NOTE: Order of speakers on the agenda might need to change without notice.

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