Bay Area SAS® Users Group

BASAS Newsletter August 2017

Newsletter for SAS® Programmers in the San Francisco Bay Area

Bay Area SAS® Meeting Announcement

Dear BASAS User Group Member,

The next meeting of the Bay Area SAS Users Group will be held on **August 31st, 2017**. Your Bay Area SAS peers, colleagues and friends will come together to exchange ideas, job/contract opportunities, and for networking.

We have three featured speakers, roundtable discussion, and open time where you can share concepts, ideas and a great networking opportunities.

Please bring along your business cards, not only for networking, but to facilitate our registration process.

There will be a bulletin board where job and/or contract opportunities, related events, and other announcements can be affixed. Hiring managers and consultants seeking contracts should bring their requirements on hardcopy for distribution as well as to post on the board.

RSVP Method:

The **R.S.V.P** for this meeting is now closed. Thank you to those who have registered. If there are any questions, please basas@tmcsoftware.com.

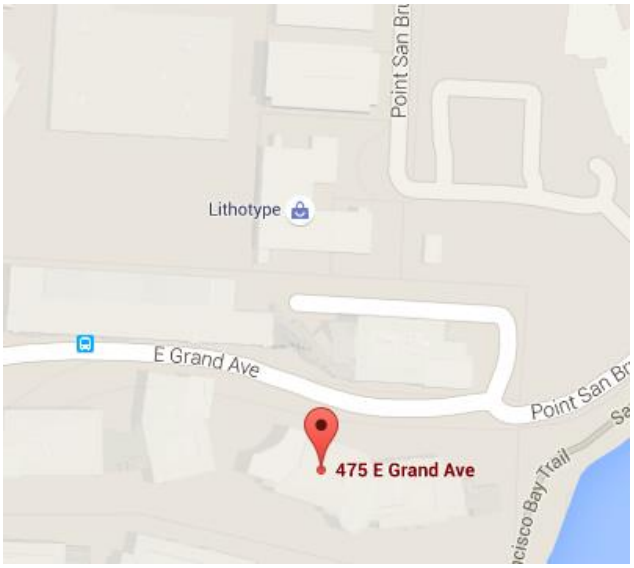
Details of the Meeting

Date:	Thursday, August 31st, 2017
Time:	12:30 PM (Registration) 1:00 – 4:00 PM (Meeting)
Location:	Genentech, Inc. 475 East Grand Avenue South San Francisco, CA 94080 Building 42, Room SSF- 42-1D

Meeting Contacts

Facility Host:	Chandra Mannem mannem.chandra@gene.com
Event Host:	Thomas Leung (415) 956-3611 tleung@tmcsoftware.com

Map of Genentech, Inc.



DIRECTIONS FROM SOUTH BAY:

- Merge onto US-101N / Bayshore Fwy N via Exit 9B on the left toward San Francisco.
- Take Exit 425A toward South San Francisco.
- Turn right onto E Grand Ave.
- Destination will be at the end of E Grand Ave.

DIRECTIONS FROM EAST BAY:

- Merge onto I-580 W via Exit 2A toward San Francisco.
- Merge onto I-80 W via Exit 19A on the left side.
- Merge onto US-101 S via Exit 1 A on the left toward San Jose.
- Take the Oyster Point Blvd E exit, Exit 425B.
- Turn right onto Gateway Blvd.
- Turn left onto E Grand Ave.
- Destination will be at the end of E Grand Ave.

Bay Area SAS® Meeting Agenda

SAS Coding Techniques for Meta-Programmers
Greg Steffens, Noumena Solutions

How Can JMP Help a SAS User?
Laura A. Higgins, SAS Institute

Automating Complex Data Analysis for Fun, Profit, and the Greater Good
John F. McGowan, Mathematical Software

More about the meeting:

SAS Coding Techniques for Meta-Programmers
Greg Steffens, Noumena Solutions

Abstract:

I introduced the concepts of metadata and meta-programming in previous presentations, to define how standards are just a component of a larger solution. Today's presentation will get into more details about the SAS coding techniques used in meta-programming to create highly reusable SAS macros.

These SAS coding techniques go beyond those that are commonly used in single-use study programming and represent a way to attain very high levels of automation. An example project of creating define.xml files will be used in the presentation, to show how SAS programmers can create macros that are easy to use and that get the job done fast, correctly and transparently!

About the speaker:

Greg Steffens has been using SAS for programming and applications development since 1981, primarily in the pharmaceutical and health insurance industries. He has held job positions ranging from lead technical to director-level management in seven pharmaceutical companies.

Greg's experience includes the design and development of metadata and software to automate data definition, data transformation, data validation and FDA submissions.

How Can JMP Help a SAS User?
Laura A. Higgins, SAS Institute

Abstract:

JMP is interactive software for data visualization and statistical analysis. Because JMP is an original SAS product, integration of SAS and JMP is straightforward and results in each program extending the capabilities of the other. JMP can extend SAS programs to include interactive JMP platforms and visualizations.

I will show examples of JMP's interactive graphics and analysis, including Graph Builder, a drag and drop graphing program, as well as the Prediction Profiler, JMP's way to visualize and simulate from modeling equations. I will also show how to generate SAS code from JMP models.

About the speaker:

Laura Higgins is a Senior Systems Engineer at JMP, a business unit of SAS. Since joining SAS in 2008, Higgins has been working with JMP customers to help them discover opportunities in their data and bring data-driven problem solving to their organizations.

Before joining SAS, Higgins worked as an ontology engineer for Ingenuity Systems, makers of IPA genomic analysis software, following a 15-year career in biological research. Her most recent research in genomic analysis was undertaken at the NASA Ames Research Center.

In addition to having been a JMP user since 1996, Higgins' statistical background includes multivariate statistics, genomic data analysis and extensive modeling experience. Higgins holds a PhD in biology from the University of Texas at Austin and a BS in biology from Purdue University.

Automating Complex Data Analysis for Fun, Profit, and the Greater Good

John F. McGowan, Mathematical Software

Abstract:

Complex data analysis attempts to solve problems with one or more inputs and one or more outputs related by complex mathematical rules, usually a sequence of two or more non-linear functions applied iteratively to the inputs and intermediate computed values. A prominent example is determining the causes and possible treatments for poorly understood diseases such as heart disease, cancer, and autism spectrum disorders where multiple genetic and environmental factors may contribute to the disease and the disease has multiple symptoms and metrics, e.g. blood pressure, heart rate, and heart rate variability.

Another example are macroeconomic models predicting employment levels, inflation, economic growth, foreign exchange rates and other key economic variables for investment decisions, both public and private, from inputs such as government spending, budget deficits, national debt, population growth, immigration, and many other factors.

A third example is speech recognition where a complex non-linear function somehow maps from a simple sequence of audio measurements — the microphone sound pressure levels — to a simple sequence of recognized words: “I’m sorry Dave. I can’t do that.”

State-of-the-art complex data analysis is labor intensive, time consuming, and error prone — requiring highly skilled analysts, often Ph.D.’s or other highly educated professionals, using tools with large libraries of built-in statistical and data analytical methods and tests: SAS, MATLAB, the R statistical programming language and similar tools. Results often take months or even years to produce, are often difficult to reproduce, difficult to present convincingly to non-specialists, difficult to audit for regulatory compliance and investor due diligence, and sometimes simply wrong, especially where the data involves human subjects or human society.

A widely cited report from the McKinsey management consulting firm suggests that the United States may face a shortage of 140,000 to 190,000 such human analysts by 2018: http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation.

This talk discusses the current state-of-the-art in attempts to automate complex data analysis. It discusses widely used tools such as SAS and MATLAB and their current limitations. It discusses what the automation of complex data analysis may look like in the future, possible methods of automating complex data analysis, and problems and pitfalls of automating complex data analysis. The talk will include a demonstration of a prototype system for automating complex data analysis including automated generation of SAS analysis code.

About the speaker:

John F. McGowan, Ph.D. solves problems using mathematics and mathematical software, including developing gesture recognition for touch devices, video compression and speech recognition technologies. He has extensive experience developing software in C, C++, MATLAB, Python, Visual Basic and many other programming languages.

He has been a Visiting Scholar at HP Labs developing computer vision algorithms and software for mobile devices. He has worked as a contractor at NASA Ames Research Center involved in the research and development of image and video processing algorithms and technology.

He has published articles on the origin and evolution of life, the exploration of Mars (anticipating the discovery of methane on Mars), and cheap access to space. He has also worked for a number of startup companies and Apple. He has a Ph.D. in physics from the University of Illinois at Urbana-Champaign and a B.S. in physics from the California Institute of Technology (Caltech).

Join BASAS Newsletter Mailing List

To be added to the mailing list for the Bay Area SAS Users Group Newsletter, please write or e-mail to the following address, with your name, mailing address (US Mail), business phone, and e-mail address to:

Thomas Leung
Bay Area SAS Users Group
155 Sansome Street Suite 650, San Francisco, CA 94104

tleung@tmcsoftware.com