PharmaSUG Single Day Event －TOKYO 2019

Let's Join the SAS Global Forum : Build Your Bravery Muscles

October 24, 2019

EPS Corporation
Yutaka Morioka

Presenters

Yutaka Morioka (35)

Besides my work as a clinical data scientist, actively engaging in disseminating various SAS programming techniques from introductory level to advanced.

>General Biography

Drug Wholesaling[MS] –1 year

↓

CRO[DM,STAT] – Total 5 years

↓

Research Company – Total 2 years

↓

(2016-Now) EPS−STAT

>Presentation History at SAS Japan Users General Forum

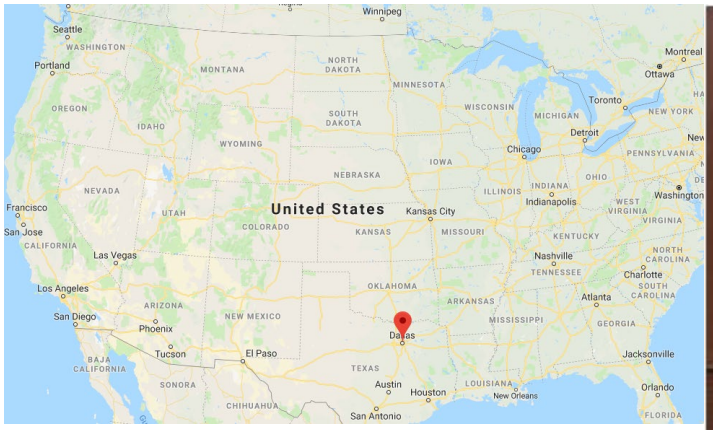
2013-2019 – Total 10 Times

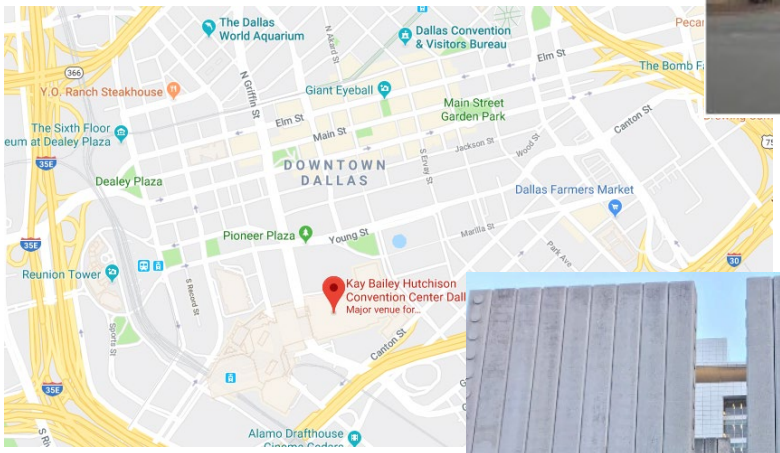
SAS Global Forum 2019

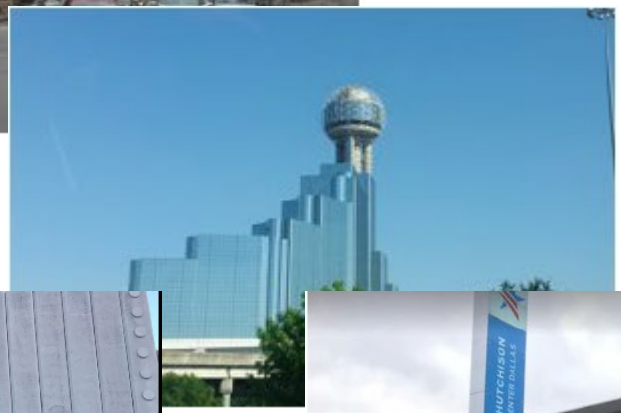
SAS Global Forum is a premier worldwide event for SAS professionals.

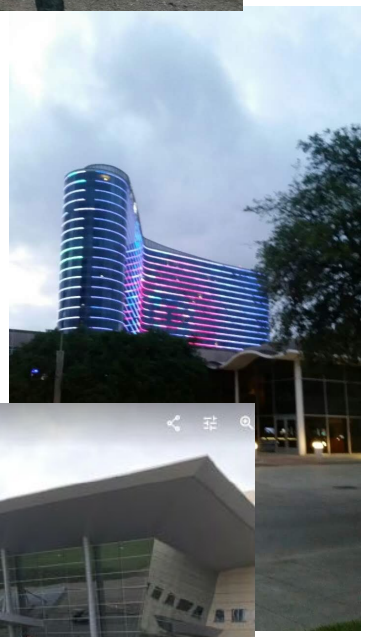
I have been dreaming for over 10 years.

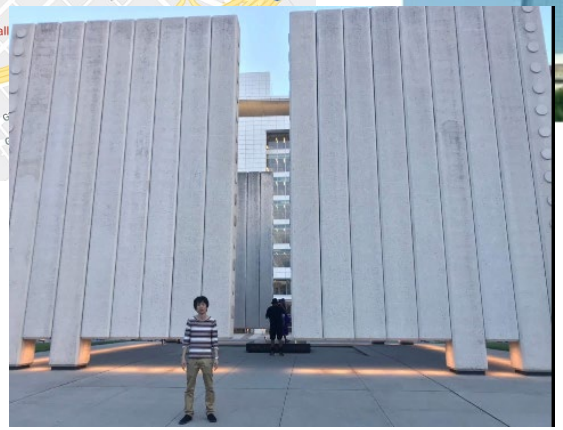
DALLAS,TX

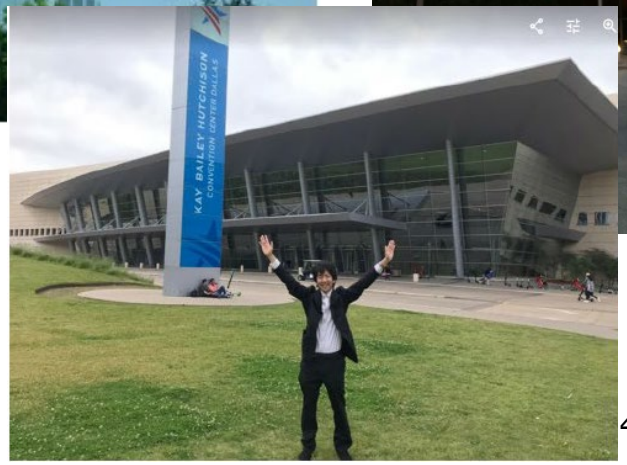

Winnipeg
Seattle
WASHINGTON
Portland
OREGON
MONTANA
NORTH DAKOTA
MINNESOTA
Montreal
Ottawa
Toronto
WISCONSIN
MICHIGAN
NEW YORK
IDAHO
SOUTH DAKOTA
Detroit
WYOMING
Chicago
IOWA
PENNSYLVANIA
NEBRASKA
OHIO
NEVADA
ILLINOIS
INDIANA
Indianapolis
Washington
Francisco
San Jose
CALIFORNIA
UTAH
United States
COLORADO
Kansas City
KANSAS
MISSOURI
WEST VIRGINIA
VIRGINIA
KENTUCKY
Las Vegas
Nashville
NORTH CAROLINA
TENNESSEE
Charlotte
Los Angeles
OKLAHOMA
SOUTH CAROLINA
ARIZONA
ARKANSAS
Atlanta
San Diego
NEW MEXICO
MISSISSIPPI
GEORGIA
Phoenix
Dallas
Tucson
El Paso
Jacksonville
BAJA CALIFORNIA
TEXAS
SONORA
Austin
Houston
LOUISIANA
New Orleans
Orlando
CHIHUAHUA
San Antonio
FLORIDA


The Dallas World Aquarium
Dallas Convention & Visitors Bureau
Y.O. Ranch Steakhouse
Giant Eyeball
Main Street Garden Park
The Sixth Floor eum at Dealey Plaza
DOWNTOWN DALLAS
Dealey Plaza
Dallas Farmers Market
Pioneer Plaza
Reunion Tower
Kay Bailey Hutchison Convention Center Dall
Major venue for...
Alamo Drafthouse

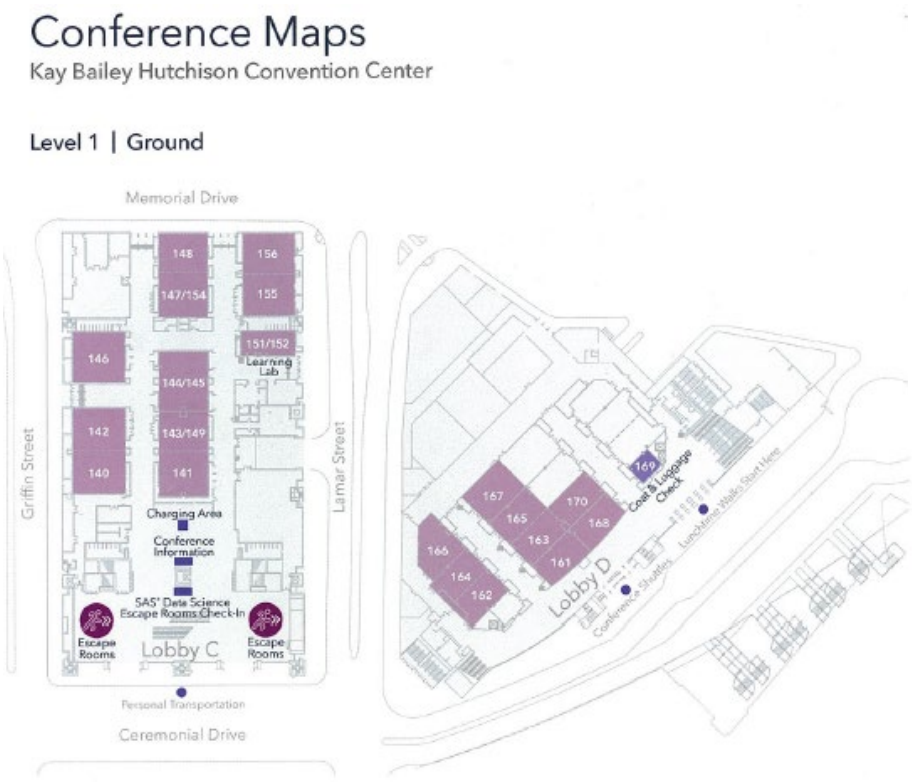


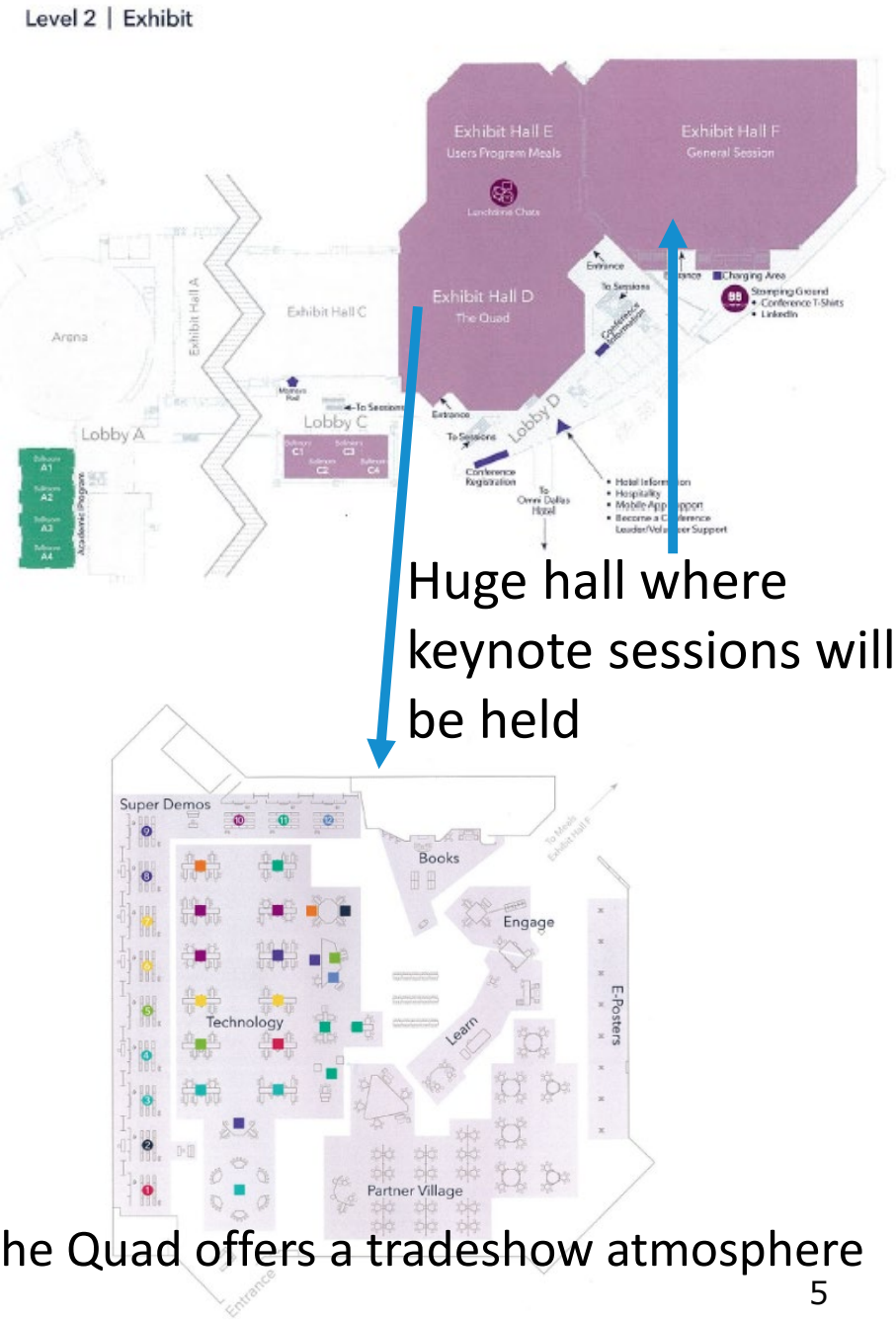





KAY BAILEY HUTCHISON
CONVENTION CENTER DALLAS

Venue map





More than 20 users presented at the same time.

Keynote Sessions

Amazing Scale!!

Gorgeous!!

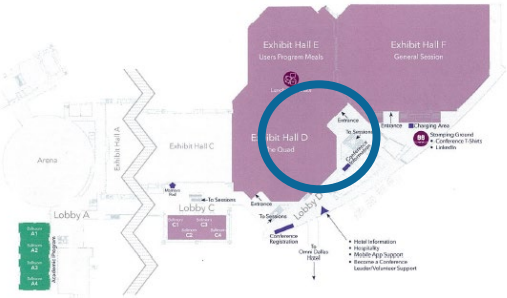
James Goodnight

Dr. Michio Kaku

Shannon Heath

QUAD

Level 2 | Exhibit



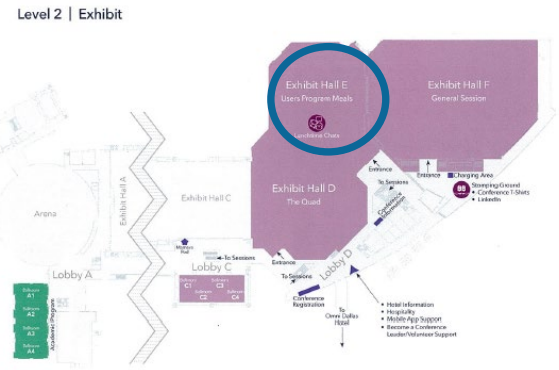
Mark Jordan

Master of DS2 Procedure

Many SAS legends are wandering around the venue

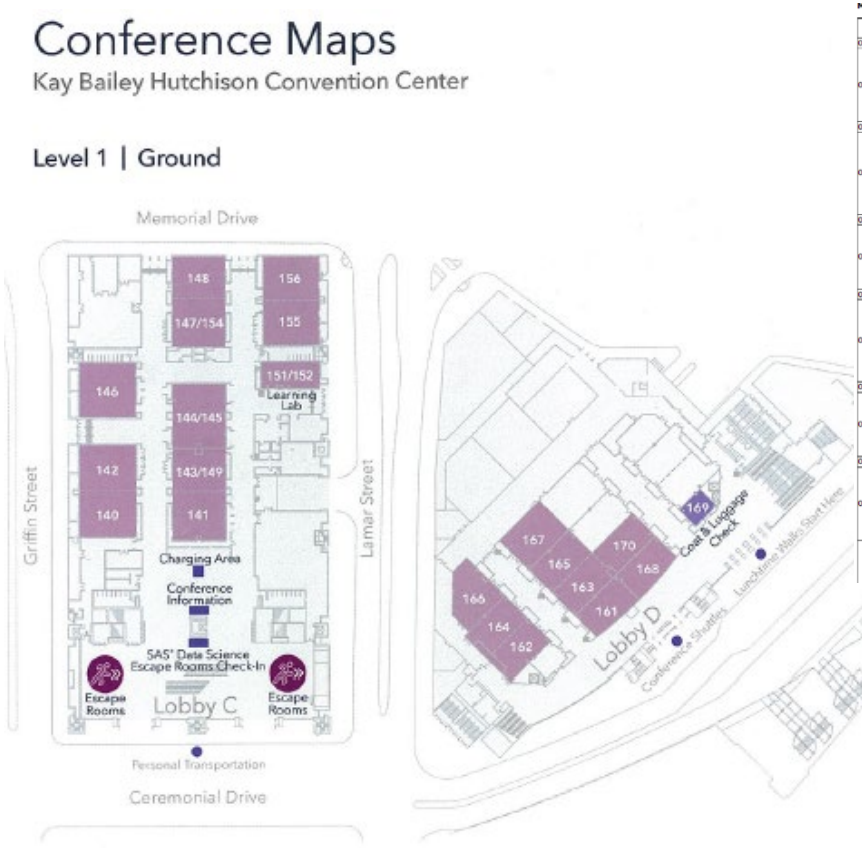
Let's prepare with face photo in advance

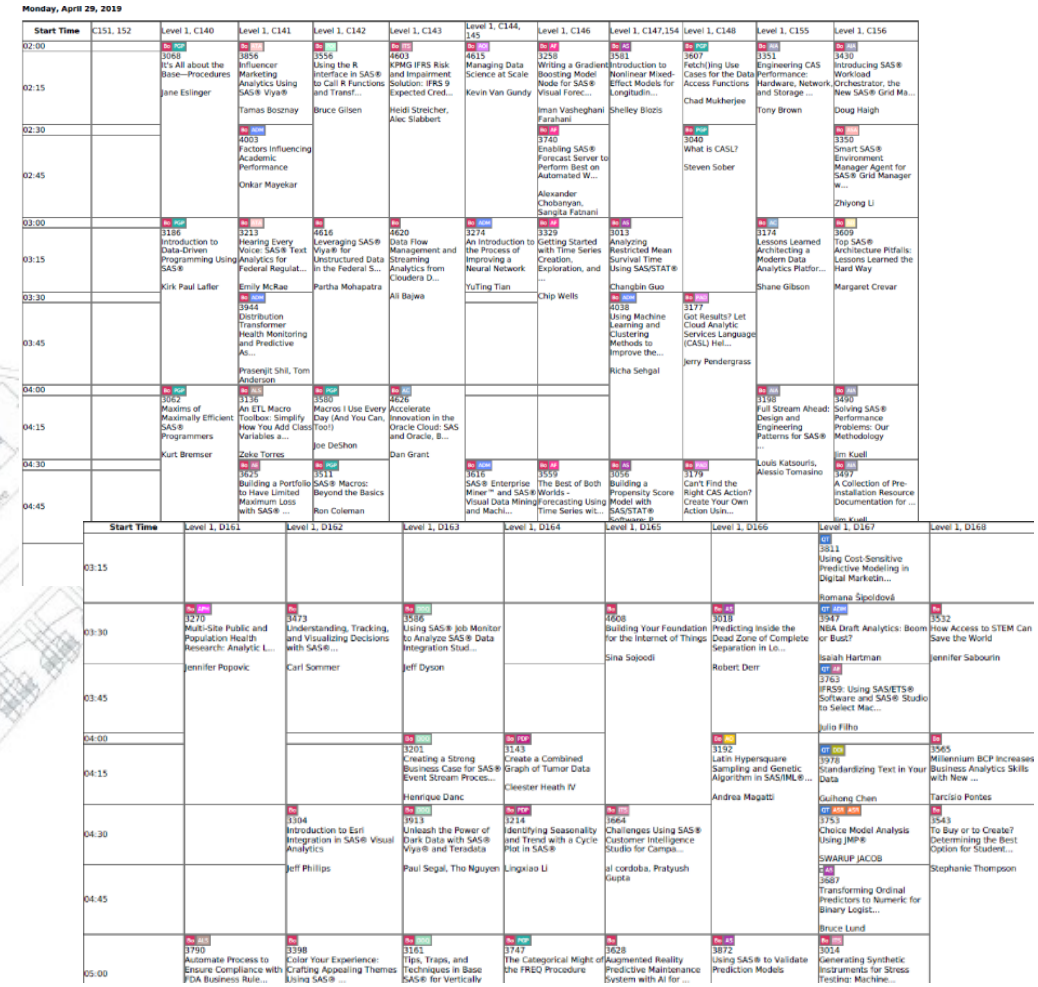
Grume



Lots of delicious food and drinks!!

User Presentation





If only I had been able to use Art of the Shadow Doppelganger

Maxims of Maximally Efficient SAS Programmers

KurtBremser

Maxim 1

Read the documentation.

SAS provides extremely well done documentation for its products. Learning to read the documentation will enhance your problem-solving skills by orders of magnitude.

Maxim 2

Read the log.

Everything you need to know about your program is in the log. Interpreting messages and NOTEs is essential in finding errors.

Maxim 3

Know your data.

Having a clear picture of data structures – variable types, lengths, formats – and content will provide you with a fast-path to solving problems. Many simple problems can be cleared by taking a look at the "Columns" section in dataset properties. Use proc contents frequently.

Maxims of Maximally Efficient SAS Programmers

Maxim 5

Ask, and you will be answered.

SAS Technical Support and the SAS user community stand at the ready to help you. Provide a clear question, example data, your code (with or within the log, see Maxim 2), and where you seem to have failed. Help will be on the way.

Maxim 13

When you're through learning, you're through.

(Will Rogers, John Wooden)

As long as you keep your ability and will to learn, you are alive. When you stop learning, you may not be dead, but you start smelling funny. Never say "I don't have the time to learn that now". The time to learn is NOW

My Favorite ！

Deadline 2018

Site Open: **Aug, 2018**

Proposals due: **Oct. 22, 2018**

Decisions sent: **Dec. 11, 2018**

Application for International Professional Award :**Jan.30 2018**

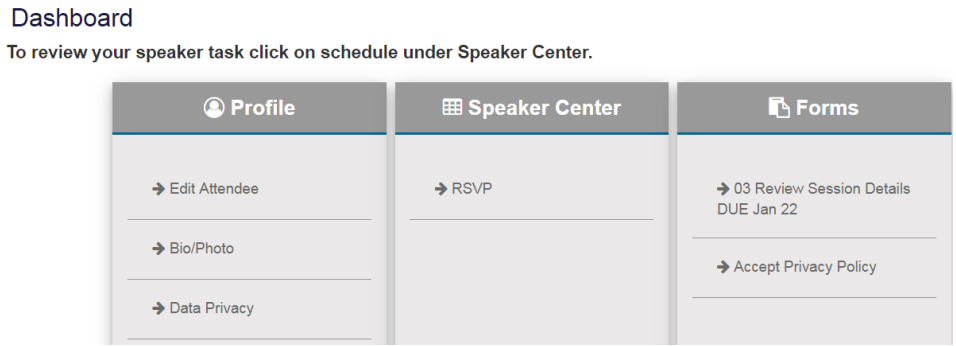
Presentation times assigned: **February 2019**

E-posters due: **March 21, 2019**

Papers due: **March 28, 2019**

Final presentations due: **April 12, 2019**

2019/4/28～ START



International Professional Award

Congratulations 2019 SAS® Global Forum International Professional Award Winners

Peterson Colares
Banco Cooperativo Sicredi S/A
Brazil

Mamadou Dakouo
Cancer Care Ontario
Toronto, Ontario, Canada

Bartosz Jabłoński
Warsaw University of Technology /
Citibank Europe PLC Poland
Warsaw, Poland

Hitesh Kharbanda
Optum Global Solutions
Noida, India

Banoo Rekha Madhanagopal
McDougall Scientific Ltd.
Toronto, Canada

Sanket Mitra
Core Compete
Milton Keynes, United Kingdom

Nicholas Morin
TD Bank
Toronto, Canada

Yutaka Morioka
EPS Corporation
Osaka, Japan

Bruno Ferreira da Paixao
Federal District Legislative Chamber
Brasilia, Brazil

Balraj Pitlola
Core Compete , Gachibowli
Hyderabad, India

Patrick Sekgoka
South African Reserve Bank
Pretoria, South Africa

Ateeque Ibrahim Shaikh
Bristlecone India Ltd.
Pune, India

Wanting Tao
Loblaw Companies Ltd.
Brampton, Ontario, Canada

Ayush Tiwari
Core Compete
Hyderabad, India

Shilpakala Vasudevan
Ephicacy Lifescience Analytics,
Bangalore
Chennai, India

My Presentation

EPS

DOSUBL Function + SQL View + Hash Obje
≅ FedSQL + PROC DS2 Hash Package

Yutaka Morioka, Jun Hasegawa, EPS Corporation, Japan

#3128-2019

Approach 1: Relying on a summary calculating procedure

Run a summary calculating procedure first, and retrieve the summary next.

```
proc summary data=sashelp.class nway;
  class sex;
  var age;
  output out=sex_summary
  mean=age_mean;
run;

data output1;
  set sashelp.class;
  if 0 then set sex_summary;
  if _N_=1 then do;
    declare hash h1(dataset:"sex_summary");
    h1.definekey("sex");
    h1.definedata("age_mean");
    h1.definedone();
  end;
  if h1.find() ne 0 then call missing(age_mean);
run;
```

Approach 3: FedSQL + PROC DS2 Hash Package

Specify a FedSQL query for the argument of the DATASET method

```
proc ds2; data output3(overwrite=yes);
  declare package hash h1();
  dcl double age_mean;

  method init();
    h1.dataset( '{select sex,mean(age) as age_mean
                  from sashelp.class{options locktable=share} group by sex }' );
    h1.keys([sex]);
    h1.data([age_mean]);
    h1.definedone();
  end;

  method run();
    set sashelp.class(locktable=share);
    h1.find();
  end;
  enddata;
run;
quit;
```

[タイトルなし]

	Sex	age_mean
1	F	13.222222222
2	M	13.4

Approach 4: DOSUBL Function + SQL View + Hash Object

The solution

```
data output4;
  set sashelp.class;
  if _N_ = 1 then do;
    rc=dosubl("proc sql noprint; create view v1 as
               select sex ,mean(age) as age_mean
               from sashelp.class group by sex; quit;");
    drop  rc;
    declare hash h1(dataset:"v1");
    h1.definekey("sex");
    h1.definedata("age_mean");
    h1.definedone();
  end;
  if h1.find() ne 0 then call missing(age_mean);
run;
```


Conclusion

- It started with my pure curiosity that I wanted to replicate the feature of the DS2 procedure by the traditional DATA step.
- But the result of this challenge was unexpectedly interest
- Accommodating the creation of source data for a hash ob DATA step makes the code just beautiful, and it increases maintainability of the SAS code.
- The approach with the DOSUBL function might exceed th in a sense that it enables dynamic generation and executi
- It's fun coding the DATA step for it never run out of new f

新手一生

Kōzō Masuda（升田 幸三）
Japanese Professional Shogi Player

At first I was afraid putting a SQL view created through the DOSUBL function into a hash object could be an error, but when I tried, it actually worked.

The above kanji is a motto of a professional Shogi (Japanese Chess) player, meaning "always try a new move". I always wish to be like such an leading SAS programmer.

Approach 4: DOSUBL Function + SQL View + Hash Object

The solution

```
data output4;
  set sashelp_class;
  if _N_ = 1 then do;
    rc=dosubl("proc sql noprint; create view v1 as
               select sex ,mean(age) as age_mean
               from sashelp_class group by sex; quit;");
    drop  rc;
    declare hash h1(dataset:"v1");
    h1.definekey("sex");
    h1.definedata("age_mean");
    h1.definedone();
  end;
  if h1.find() ne 0 then call missing(age_mean);
run;
```

	Sex	age_mean
1	F	13.222222222
2	M	13.4

SQL view: v1

My Presentation

At first I was afraid putting a SQL view created through the DOSUBL function into a hash object could be an error, but when I tried, it actually worked.

The above kanji is a motto of a professional Shogi (Japanese Chess) player, meaning "always try a new move". I always wish to be like such an leading SAS programmer.

My Presentation

Feedback comment

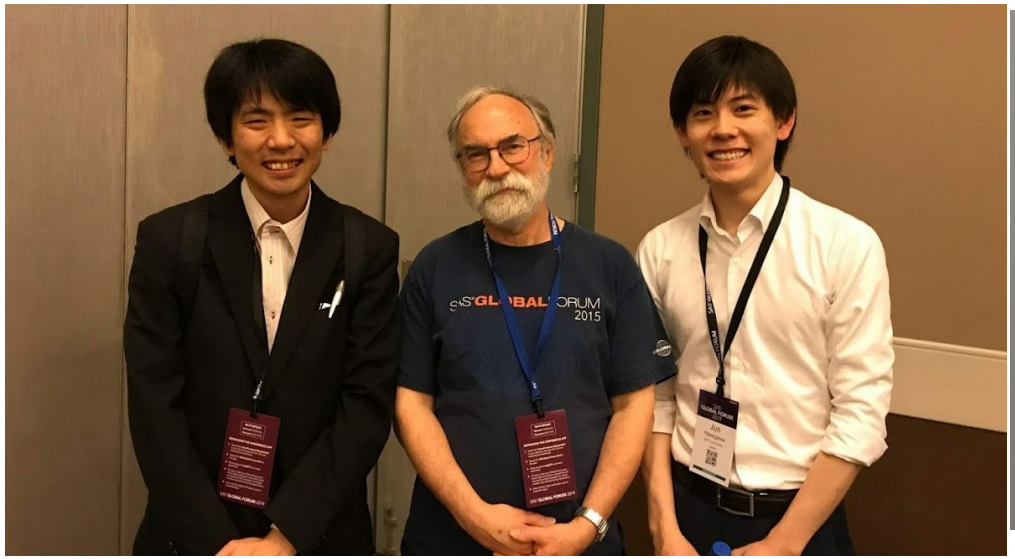
・Good slides and presentation1. How valuable did you find this content?
Response Count: 11 Mean: 4.54 Standard Deviation: 0.49

2. How effective was the presentation of this content?
Response Count: 11 Mean: 4.72 Standard Deviation: 0.44

3. How satisfied are you with the length of this session?
Response Count: 11 Mean: 4.63 Standard Deviation: 0.48

4. Comments
・Excellent work Gentlemen.
・Good example code. The presenters did a good job
・It was great that we could see the different approaches compared against each other,
especially seeing how powerful and simple approach #3 was. Approach #4 was also a real eye opener.
Thank you so much for sharing the results with us! Please continue to be curious, to always find a new move.

Rick Langston



He could be a top contender - if there were a prize - for "Attended the Most SUGI/SGFs"

He has been at SAS for 40 years.

The 2019 forum was his last participation.

His last paper, like me, used a hash object

He said, "The dosubl function was developed by me. I didn't expect it to be used in such a great way."

→The greatest pleasure for me.

Free talk

Talk my SASGF episodes according to the remaining time

Bravery Muscle

Reshma Saujani used the keyword "Bravery Muscle" in her speech.

Bravery is the same as muscle and can be applied through training.

1. Set your compass to courage.
2. Face your fears.
3. Do what scares you.
4. Embrace uncertainty.
5. Allow yourself to be vulnerable.

(Debra DiPietro)

Muscle won't betray

Why the presence of Japanese SAS programmers is so small in the world?

I think it's because we don't have enough bravery muscle.

Train, train, train!!

Points

-Breaking free of perfectionism.

-Everyone is not as great as you think.

-Anyway, let's talk to various places.

Let's Join

Don't be withdrawn!

SAS papers can be read at the desk, but great encounters are outside.

Let's Join

Thank you!

Yutaka Morioka

E-mail: morioka038@eps.co.jp