Cornell University
Cornell Statistical Consulting Unit

Stats Happening – Spring 2018

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1. **Congratulations to the graduates**
   The statistical consultants at CSCU extend their congratulation to all the graduates. We have enjoyed working with many of you and hope that you will keep on using and expanding the statistical knowledge you acquired at Cornell. We wish you all the best in your future endeavors.

2. **CSCU Summer Schedule**
   CSCU will be available for appointments and walk-in consulting throughout the summer as usual.

   - Appointments: Scheduling of appointments is encouraged for matters that require more than 10 minutes of time. To schedule an appointment, contact a staff statistician or visit: https://www.cscu.cornell.edu/consulting/appointment_form.php.

   - Walk-in Consulting: Staff statisticians will be available for questions that take ten minutes or less daily at the following times and locations:

- o **Monday – Friday 11:00am - 11:30am** in B11 and B13 Savage Hall
- o **Monday – Friday 1:30pm - 2:00pm** in B07, B09, and B18 Savage Hall.
- o **Monday – Friday 1:30pm - 2:00pm** online (go to:
  https://www.cscu.cornell.edu/consulting/walkin.php).
- o Mann walk-in hours will not be held in this summer but will resume with classes in the fall.

3. **Summer 2018 Workshops**
   Our summer workshops are starting very soon. If you have not done so yet, sign up soon. We are offering you the following selection:

Workshop	Date and Time
Basic Data and Research Skills	June 11th 10:00am-12:00pm
Introductory Statistical Analysis using JMP	June 11th 2:00pm- 4:00pm
Introductory Statistical Analysis using R	June 12th 10:00am- 12:00pm
Introduction to Multilevel Modeling (3-part workshop)	June 13th 10:00am-12:00pm June 14th 10:00am-12:00pm June 14th 2:00pm- 4:00pm
Introduction to Statistical Genomics	June 15th 2:00pm- 4:30pm
Interpreting Linear Models: Regression and ANOVA (2-part workshop)	June 18th 10:00am-12:00pm June 20th 10:00am- 2:00pm
Time Series Analysis	June 19th 2:00pm- 4:00pm

To obtain more information on these workshops and to register, please visit https://www.cscu.cornell.edu/workshops/schedule.php .

4. **Short Course in SEM to be Offered this Summer**
   Do you want a thorough introduction to Structural Equation Modeling?
   If so, it is not too late to sign up for the Cornell Statistical Consulting Unit's short-course on SEM which will be held from June 25th to June 27th. The course will include a mixture of lectures and hands-on experiences on path analysis, confirmatory factor analysis, and structural regression models with latent variables. For more information and to register, please visit:
   https://www.cscu.cornell.edu/workshops/SEM.php.

5. **Alternative-specific mixed logit Regression in Stata 15**
   A useful addition to Stata 15 is the **asmixlogit** command that fits an alternative-specific mixed logit model, which is also referred to as a mixed multinomial logit model, a random-parameters logit model or a hybrid logit model. This is a type of discrete choice model where a case (e.g. an individual) selects a choice among a set

of alternatives. The alternative-specific mixed logit model allows users to incorporate variables that vary both across cases and alternatives as random effects relaxing thus the assumption of independence of irrelevant alternatives (IIA) of multinomial logistic regression. For more information, visit: https://www.stata.com/manuals/rasmixlogit.pdf.

6. **Sample Size Calculations for Mediation Analysis**
Researchers from East Carolina University, the University of Delaware, and the College of Charleston have developed a sample size calculator for indirect effects using Monte Carlo simulations. Users can select a model with one mediator, two parallel mediators, or two serial mediators. This calculator can be accessed via the web by visiting https://schoemanna.shinyapps.io/mc_power_med/. For more information regarding their methodology, you can read their article by visiting: http://journals.sagepub.com/doi/pdf/10.1177/1948550617715068.

7. **Multiple Factor Analysis in JMP 14**
JMP 14 was released in March 2018. One of the noteworthy new capabilities in this latest version is the ability to perform a multiple factor analysis. Multiple factor analysis is a generalization of principal components analysis (PCA) that allows researchers to analyze several sets of data collected on the same set of observations. To learn more about what is new in JMP 14, visit https://www.jmp.com/en_us/software/new-release/new-in-jmp-and-jmp-pro.html.

8. **New bife R package to estimate fixed effects binary choice models**
Have you experienced computational limitation when estimating fixed effects logit or probit models using glm when having many fixed effects? Then you might want to try the bife package that was recently released in R. It uses a special iteratively reweighted least squares demeaning algorithm (Stammann, Heiss, and McFadden, 2016) which allows for computationally efficient estimation of model parameters. For further details see: https://cran.r-project.org/web/packages/bife/bife.pdf.

9. **Good news for the SPSS and SAS PROCESS Macro users**
The SPSS and SAS PROCESS macro can be used to estimate path models. In the latest version, there are several noteworthy upgrades. New utilities include the ability for a user to customize their own model, to specify the list of covariates for each equation estimate, to define the coding for multi-categorical independent variables and moderators and to obtain linear contrasts of specific indirect effects in multiple mediator models. To download the macros see: http://www.processmacro.org/index.html.

The documentation of the current version of PROCESS is not available for free, but it is documented in Appendices A and B of the second edition of "Introduction to Mediation, Moderation, and Conditional Process Analysis" by Andrew Hayes. An electronic version of the book is available for Cornell Community members via the Cornell Library using the direct link: http://proxy.library.cornell.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1617631.

10. **Stata Markdown**
In Stata 15, you now have the ability to create Word, PDF, and HTML files directly from a Stata do with the commands **putdocx**, **putpdf**, and **dyndoc**. Dynamic markdown files can also be written in simple text files. The resulting documents can contain graphs, tables, and analyses from Stata along with accompanying text. For more information, visit: https://www.stata.com/new-in-stata/markdown/.

11. **What's Going on in This Graph?**
The American Statistical Association and the NY Times have partnered to create a monthly feature called "What's Going On in This Graph?" The column posts a new graph on the second Tuesday of each month, stripped of its caption and some of the key information. Readers are then invited to consider three questions: What do you notice? What do you wonder?) What's going on in this graph? A live discussion moderated by the ASA is held from 9am-2pm EST on the day the graph is posted. At the end of the week, more information about the graph is revealed along with a synopsis of the discussion and "Stat Nuggets" from the ASA moderators to help you gain a better understanding of the graph and statistical information it was intended to convey. For more information check out: https://www.nytimes.com/2017/09/06/learning/announcing-a-new-monthly-feature-whats-going-on-in-this-graph.html.

12. **Podcasts We are Listening to**
We recently discovered the podcasts produced by the Public Library of Science (PLoS), which covers issues concerning science, academia, and the future of scholarship. We love that these podcasts touch upon important contemporary statistical issues such as big data, data management, and reproducibility. For more information, visit: http://blogs.plos.org/plospodcasts/episode-list/.