**AAA weARE 14: March 18, 3:30-4:30 p.m.**

**How Useful are *p*-values for Inference?**

**PANELISTS (alphabetical by last name):**

[Sudipta Basu](https://www.fox.temple.edu/about-fox/directory/dr-sudipta-basu/), Temple U. (moderator)

[Bill Cready](https://jindal.utdallas.edu/faculty/william-cready), U. Texas at Dallas

[Sanjay Kallapur](https://www.isb.edu/en/research-thought-leadership/faculty/faculty-directory/sanjay-kallapur.html), Indian School of Business

[Murray Lindsay](https://www.cpacanada.ca/en/career-and-professional-development/event-biographies/r-murray-lindsay), U. Lethbridge

[Ron Wasserstein](https://www.amstat.org/ASA/About/Ronald-L-Wasserstein.aspx), American Statistical Association

**WEBINAR PRE-READINGS**

Wasserstein, R. L., Lazar, N. A., 2016, ASA statement on statistical significance and *p*-values, *The American Statistician* 70 (2), [131-133](https://doi.org/10.1080/00031305.2016.1154108).

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Leek, J. T., Jager, L. R., 2014. Is most published research really false? *Annual Review of Statistics and its Application* 4, [109-122](https://doi.org/10.1146/annurev-statistics-060116-054104).

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**Polling Questions for 3/18 webinar**

Poll questions adapted from [Gigerenzer et al. (2004, pp. 2-3)](https://tuprd-my.sharepoint.com/personal/sudiptab_temple_edu/Documents/Sudipta%20Basu/AAA%20Committees/2021%20P-Values%20Webinar/%5BSearch%20domain%20library.mpib-berlin.mpg.de/ft/gg/GG_Null_2004.pdf%5D%20library.mpib-berlin.mpg.de/ft/gg/GG_Null_2004.pdf)

**Polling question 1**

Suppose you have a treatment that you suspect may alter performance on a certain task. You compare the means of your control and experimental groups (say, 20 subjects each), using a simple independent means t-test and your result is significant (t = 2.7, df = 18, p = .01). Please mark each statement below as “true” or “false.” False means that the statement does not follow logically from the above premises.

(1) You have absolutely disproved the null hypothesis (i.e., there is no difference between the population means). ® True False ®

(2) You have found the probability of the null hypothesis being true. ® True False ®

(3) You have absolutely proved your experimental hypothesis (that there is a difference between the population means). ® True False ®

**Polling question 2**

Suppose you have a treatment that you suspect may alter performance on a certain task. You compare the means of your control and experimental groups (say, 20 subjects each), using a simple independent means t-test and your result is significant (t = 2.7, df = 18, p = .01). Please mark each statement below as “true” or “false.” False means that the statement does not follow logically from the above premises.

(4) You can deduce the probability of the experimental hypothesis being true. ® True False ®

(5) You know, if you decide to reject the null hypothesis, the probability that you are making the wrong decision. ® True False ®

(6) You have a reliable experimental finding in the sense that if, hypothetically, the experiment were repeated a great number of times, you would obtain a significant result on 99% of occasions. ® True False ®