

# Statistics in Aquaculture Workshop: Moving Beyond ANOVA: Common Problems in the Analysis of Aquaculture Data

February 28, 2022 — 9:00 AM - 4:00 PM  
Aquaculture America 2022



## Workshop Content

*“The focus will be on applied statistics  
with very little theory or equations”*

An introductory course in experimental statistics that covers ANOVA is a common requirement for educational training in aquaculture. However, while the standard ANOVA is a widely-used and robust statistical procedure, it is not appropriate in all situations. The current workshop will teach participants how to deal with common problems encountered in the analysis of experimental data. Such problems will include identifying and dealing with pseudoreplication, how to analyze non-normally distributed data, analyzing and understanding interactions, and dealing with continuous variables, especially those that have non-linear relationships with the experimental response. Additional topics, as suggested by participants, may be covered as time allows. The goal isn't necessarily for participants to learn 'new' statistical methods *per se*, but rather for participants to learn how to do the statistics they already know better. The focus will be on applied statistics, with only the minimum required amount of theory or equations. Lots of examples will be used to enhance understanding, and examples will focus on topics from aquaculture and other biological and natural resource fields. Analyses will be demonstrated using the statistical package R, which is extremely powerful, widely popular, and best-of-all, free. However, info on implementation in some other packages (SAS, SPSS) may be available.

### **Morning Session:**

- Continuous variables
- Non-linearity
- Non-normal data
- Generalized linear models

### **Afternoon Session:**

- Interactions
- Mixed-effects models
- Pseudoreplication



## Instructor

Todd Steury

Auburn University School of  
Forestry and Wildlife Sciences

**Todd Steury** is Associate Professor of Wildlife Ecology at Auburn University. For the past 10 years, he has been **teaching applied statistics** at the basic and advanced levels to undergraduate and graduate students, post-docs, and professors in natural resources fields.

**Todd is widely known for his ability to explain statistics in a straightforward and easy-to-understand manner**, and he regularly wins awards for his teaching, including the “Harold E. Christen Award for Service to Teaching” from the School of Forestry and Wildlife Sciences, “Outstanding Faculty Member Award” from the Auburn University Student Government Association, and “Teacher of the Year”, which he has received 5 times from the Auburn University Chapter of The Wildlife Society.

Todd's research expertise is in carnivore ecology and conservation, quantitative ecology, and statistics. In his publications, he has used an incredibly diverse array of statistical and quantitative methods such as bootstrapping, Kalman filters, Fourier transforms, and simulation modeling. His favorite statistical method, however, is linearized models. Todd collaborates with and provides statistical consultations to other researchers in a variety of biological fields.

## Pricing Information

- ◆ Base Price - \$300
  - ◆ US Chapter of WAS Member - \$150\*\*
  - ◆ US Chapter of WAS Student Member - \$75
- \*\*WAS members can join USAS— only \$5.00

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