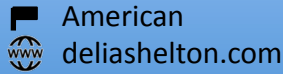


# Delia S. Shelton, PhD



Corvallis, OR, USA  
678.431.0516  
@ [shelton.delia@gmail.com](mailto:shelton.delia@gmail.com)



## PROFILE

- 15 years designing, executing, publishing and disseminating behavioral studies
- Collaborative engagement, research, outreach and diplomacy in 20+ countries across 4 continents with diverse stakeholders
- Awarded > \$770,000 in scholarships, fellowships and grants from industry, government, and other partners to conduct behavioral research and tech development
- Enthusiastic interdisciplinary thinker that delivers next generation solutions

## EDUCATION

2010-2016

### **Ph.D Psychological and Brain Sciences & Evolution Ecology and Behavior, minor Cognitive Science**

Indiana University, Bloomington, IN, USA

Dissertation: *Environmental Features Influence Complex Behavior in Small Animal Groups*

2005-2009

### **B.S. Animal Behavior, minor Spanish**

Southwestern University, Georgetown, TX, USA

Thesis: *Stay in School or Drop Out, What is a Fish to Do?: Multiple Selection Pressures on Teleost Fish.*

## EXPERIENCE

2016-2019

### **National Science Foundation (NSF) Postdoc Fellow** *Tri-institute postdoc in 3 countries.*

- Leibniz Institute (Germany), Oregon State University (USA), University of Windsor (Canada)
- Automated behavior tests, increasing throughput by 5x
- Orchestrated an international field expedition to assess population differences in collective behavior, which generated 3 manuscripts, 10 contributions to national and international research symposia
- Managed research and development budget.
- Submitted annual reports to NSF to document progress and validate strategic plan.

2018-2019

### **NSF Innovation Corps (I-Corps)** *Technical Lead.*

- Awarded NSF Innovation Corps grant to examine commercial potential of my invention, Visioglow – high content screening of visuomotor responses.
- 100+ customer discovery interviews • business model development • market research • startups

## EXPERIENCE

2010-2016

### **NSF Graduate Research Program Fellow** *Graduate Student.*

#### *Research*

- Independently conduct behavioral research including study design, statistical analysis, presentation and publication
- Applied social network analyses to identify influential individuals in social groups, results were presented at an international conference.
- Implemented machine learning software (Noldus) to track interactions for behavioral and statistical analysis
- Executed empirical studies to identify environmental features that affect social behavior, preferences, cohesion, ingestion, group responses, and aggression.
- Authored 10 publications, and 50+ presentations at national and international conferences.

#### *Technology Development*

- 2017-2019 Visioglow – led a team of engineers and business personnel to develop a high-content behavioral screening tool to meet customer needs in biotech/Pharma in Europe and US. Acquired funding from Oregon Hatchery Research Center and NSF.
- 2015-2016 Flow tank – collaborated with engineers and biologists to develop a fluvial tank to assess collective behavior. Behavioral data generated with the tech. resulted in 1 published and 1 submitted manuscript.
- 2007-2010 Robotic Shark – worked with a physicist to modify a robotic shark for behavioral assays. The technology was also piloted in the science curriculum of the 7<sup>th</sup> largest school district in the USA, Houston I.S.D.

2007, 2008

### **Merck Research Laboratories Boston, MA, USA** *Research Associate- Summer Intern*

- Partnered with a team of 8 scientists and engineers to develop an attention and memory assay that reduced the procedure from 3-4 months to a single session, fast-tracking drugs to market
- Authored 1 publication
- Attention & Memory assay development • Operant conditioning • Drug Discovery • Behavior Assessments

## INTELLECTUAL PROPERTY

- Invention Id: DRAFT/250/18- Sole inventor, submitted institutional disclosure to Oregon State University. Technology served as a platform for NSF I-Corps award.

## PUBLICATIONS

15 publications with 115 citations

- Shelton D.S.** and Alberts J.R. (2018) Development of behavioral responses to thermal challenges, *Developmental Psychobiology*, 54(7), 766. 10.1002/dev.21588
  - 2018 Wiley #top20article award: top downloaded article in recent publication history.
- Shelton D.S.** and Martins, E.P. (2017). Behavioral variation, adaptation, and evolution. In: Call, J., Burkhardt, G., Pepperberg, I., Snowdon C., and Zentall T. (Ed.s), *APA Handbook of Comparative Psychology: Basic concepts, methods, neural substrate, and behavior, Vol. 1* (pp. 219-236). Washington, DC, US: American Psychological Association.
- Suriyampola, P.S., **Shelton, D.S.**, Shukla, R., Roy, T., Bhat, A. and Martins, E.P. (2016). Zebrafish social behavior in the wild. *Zebrafish*, 13(1), 1-8.
- Shelton D.S.**, Atagi, E., Keene, J. R., and Ross, T. (2015). Netlogo Boomshakalaka model. [http://ccl.northwestern.edu/netlogo/models/community/Boomshakalaka\\_shelton-atagi-keene-ross](http://ccl.northwestern.edu/netlogo/models/community/Boomshakalaka_shelton-atagi-keene-ross)
  - Model featured at <https://ccl.northwestern.edu/>
- Dillon G.M., **Shelton D.**, McKinney A.P., Caniga M., Marcus J.N., Ferguson M.T., Kornecook T.J., and Dodart, J.C., (2009). Prefrontal cortex lesions and scopolamine impair attention performance of C57BL/6 mice in a novel 2-choice visual discrimination task, *Behavioral Brain Research*, 204, 67-76.

## ACHIEVEMENTS

- 8 fellowships for undergraduate, graduate and postdoctoral studies in behavior totaling ~ \$500 million
- National Science Foundation (NSF) Postdoctoral Fellow • United Negro College Fund~Merck Fellowship • NSF IGERT in Cognitive Science • GEAR UP Innovation Grant • IU Presidential Scholar Fellowship
- Led a team of up to 6 researchers and engineers, and mentored 29 individuals from diverse backgrounds - 19 women, 15 people of color, 3 first generation college students, 2 LGBTQ students and one veteran
- 2017 Animal Behavior Society Allee Competition Semi-finalist, 1 of 13 individuals selected from a pool of 40+ candidates for the premier dissertation competition.
- 2014 Be More Engaged Award, City of Bloomington, IN USA – encouraging literacy in youth
- 2013 STEM Ambassador to Malaysia for Indiana University, briefed Environment, Science, Technology and Health Officer Nelson Wu on collective behavior
- 2005-2009 King Creativity Fund: collaborated with a physicist to develop a robotic shark to study behavior and associative learning in animals.

## SKILLS

## Languages

English  
Spanish  
Twi

Native  
Intermediate  
Elementary

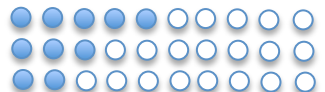
## Research

- Behavioral Study Design
- Regulatory Compliance Protocols



## Analysis of Behavioral Data

- R
- SPSS
- MATLAB



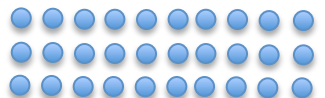
## Dissemination of Behavioral Data

- PowerPoint
- Publishing



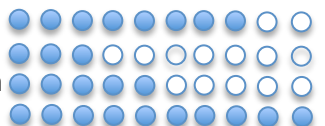
## Leadership

- Mentoring & Training
- Hiring
- Budgeting



## Business Development

- Customer Discovery
- Customer Acquisition
- Business Model Generation
- Seed Funding



## CERTIFICATES

2011

**Poynter Institute Teaching Research Ethics**  
Indiana University, Bloomington, IN, USA

2009-2010

**Alternative Teacher Certification Program**  
Prairie View A&M University, Prairie View, TX, USA  
Secondary Education, General Science Teacher

## STRENGTHS

Communication

Challenge Solver

Team Player

Transdisciplinary Thinker

Independent Learner

Customer Focused

Mentoring

## HOBBIES



Traveling



Dancing



Hiking



Theater



Foodie



Animal Lover