



**UNIVERSITY OF  
SOUTH FLORIDA**

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## **EDUCATION**

Florida State University, Ph.D.; Biology 1996  
Florida State University, M.S.; Biology, 1991  
Florida State University, B.S.; Biology, 1988 (magna cum laude)  
University of West Florida, M.P.A., 1980  
Rollins College, Florida Teacher's Certificate; Special Education, 1972  
University of Iowa, B.A.; Psychology, 1969

## **CAREER**

University of South Florida St. Petersburg, Associate Professor, 2006 - present  
University of South Florida St. Petersburg, Assistant Professor, 2001 - 2006  
Texas A & M University, College Station, TX, Post Doctoral Fellow, 2000-2001  
University of Arizona, Tucson, AZ, Center for Insect Science, NIH Fellow, 1998-2000  
Florida State University, Tallahassee, FL, NSF Fellow, 1996-1998  
Florida State University, Tallahassee, FL, Research Assistant, 1994-1996  
Florida State University, Tallahassee, FL, Teaching Assistant, 1988-1994  
Department of Labor & Employment, Tallahassee, FL, Medical Program Analyst III,  
1983-1988  
Health & Rehabilitative Services, Tallahassee, FL, Program Analyst II, 1981-1983  
NW Florida Mental Health Center, Panama City, FL, Program Analyst I, 1977-1980  
Publisher, Antique Guides, 1974-1977  
Crippled Children's Clinic, Mila Elementary School, Merritt Island, FL, Special Ed.  
Teacher, 1971-1974  
Wuestoff Hospital, Rockledge, FL, Recreation Therapist, Psychiatric Unit, 1970-1971

## RESEARCH

### Refereed publications #Author of correspondence

46. \*\*Deeken, D., Macdonald, C., Gainsbury, A., Green, M. L., & #Cassill, D. L. (2024). Maternal risk-management elucidates the evolution of reproductive adaptations in sharks by means of natural selection. *Scientific reports*, 14(1), 20088.
45. \*Coticchio LA, Vetter R and #Cassill DL. 2023 Predation by the introduced Brown Widow spider (Araneae: Theridiidae) may explain local extinctions of native Black Widows in urban habitats. *Annals of the Entomological Society of America*, saad003. IF 2.3  
<https://academic.oup.com/aesa/advance-article/doi/10.1093/aesa/saad003/7044733>
44. #Cassill DL and Watkins A. 2022 Nest-site choice by loggerhead sea turtles as a risk-management adaptation to offset hatching failure by unpredictable storms and predators. *Frontiers in Ecology and Evolution*, 10, 1175.  
<https://doi.org/10.3389/fevo.2022.850091>
43. Sullivan, S., Heinrich, G. L., Mattheus, N., Cassill, D., & #Doody, J. S. 2022. Can Reptiles Use Nest Site Choice Behavior to Counter Global Warming Effects on Developing Embryos? Potential Climate Responses in a Turtle. *Frontiers in Ecology and Evolution*, 10, 1155.  
<https://www.frontiersin.org/articles/10.3389/fevo.2022.850091/full>
42. Ataman A, Gainsbury AM, Manire CA, Hoffmann SL, Page-Karjian A, Hirsch S, Polyak MMR, Cassill DL, Aoki DM, Fraser KM, Klingshirm K, Stoll JA, #Perrault JR. 2021. Evaluating prevalence of external injuries on nesting loggerhead sea turtles (*Caretta caretta*) in southeastern Florida, USA. *Endangered Species Research* 46, 137-146.
41. #Cassill, D.L. 2021. Multiple maternal risk-management adaptations in the loggerhead sea turtle (*Caretta caretta*) mitigate clutch failure caused by catastrophic storms and predators. *Scientific Reports*. <https://doi.org/10.1038/s41598-021-81968-0>  
Science Daily blurb: <https://www.sciencedaily.com/releases/2021/01/210128155623.htm>
40. #Cassill, D.L. 2019. Extending r/K selection with a maternal risk-management model that classifies animal species into opposing natural selection categories. *Scientific Reports* 9:6111 <https://rdcu.be/bxaMP>
39. \*Rosario, K., Mettel KA, Benner BE, Johnson, R., Scott C., Yusseff-Vanegas, S., Baker, CCM, Cassill DL, Storer C, Varsani A, & #Breitbart M. 2018. Virus discovery in all three major lineages of terrestrial arthropods highlights the diversity of single-stranded DNA viruses associated with invertebrates. *PeerJ online*. IF: 2.2
38. #Cassill, D.L., \*Ford, Krista, \*Lieu Huynh, \*Daniel Shiffman, S. Bradleigh Vinson. 2016. A study of abdominal wagging in the fire ant (*Solenopsis invicta*) with speculation on its meaning. *Journal of Bioeconomics* 18(2), 159-167.
37. #Cassill, D.L. \*Alexander Casella, \*Jaeson Clayborn, \*Matthew Perry and \*Michael Lagarde 2015. What can ants tell us about collective action during a natural catastrophe? *Journal of Bioeconomics* 1-16.  
<http://link.springer.com/article/10.1007/s10818-015-9195-2>
36. #Cassill, D.L. 2014. What can ants tell us about corporate social responsibility? *Handbook of Research on Marketing and Corporate Social Responsibility* Eds: Ronald Paul Hill and Ryan Langan. Edward Elgar Publishing Ltd, Abingdon, Oxon UK.

35. \*Dellert, L., D. O'Neal, D.L. #Cassill. 2014. Effects of Nest Relocation and Beach Renourishment on the Success of Loggerhead Sea Turtle Hatchlings (*Caretta caretta*) Journal of Herpetology 48: 186-187.
34. Asano, E. and D.L. #Cassill. 2012. Modeling seasonal fluctuations in colony size in the fire ant, *Solenopsis invicta*. Journal of Theoretical Biology 305:70-77.
33. Asano, E. and D.L. #Cassill. 2011. Impact of worker longevity and other endogenous factors on colony size in the fire ant, *Solenopsis invicta*. Insectes Sociaux 58: 551-557.
32. #Cassill, D.L. 2011. Sex ratio theory is a contradiction, not an extension, of kin selection. The Open Evolution Journal 5:5-7.
31. #Cassill D.L. Hardisty B.E. and Watkins A. 2011. Skew selection solves the enigma of altruism' in the Shedao pit-viper, *Gloydus shedaoensis*. Journal of Bioeconomics 13:17-29.
30. \*\*Hardisty, B.E. and D.L. #Cassill 2010. Memes and the Ecological Niche. Biological Theory 5:1-3.
29. \*\*Hardisty, B.E. and D.L. #Cassill. 2010. Extending eusociality to include vertebrate family units. Biology and Philosophy 25:437-440.
28. Allen, S. and D.L. #Cassill 2010. Skew selection theory applied: The wealth and welfare of nations. Journal of Sociology and Social Welfare 37:115-134.
27. #Cassill, D.L. and A. Watkins. 2010. The emergence of cooperative hierarchies through natural selection processes. Journal of Bioeconomics (12) 29-42.  
<http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10818-010-9080-y>
26. #Cassill, D.L. and \*Devon Singh. 2009. Ambidextrous mandibles in the fire ant, *Solenopsis invicta*. Annals of the Entomological Society of America 102(4):713-716.
25. #Cassill, D.L., \*Skye Brown, \*Devon Swick 2009. Polyphasic wake/sleep episodes in the fire ant, *Solenopsis invicta*. Journal of Insect Behavior 22:313-323.
24. #Cassill, D.L., \*K. Vo and \*B. Becker. 2008. Young fire ants feign death and survive aggressive neighbors. Naturwissenschaften 95:617-624.
23. #Cassill, D.L. and S.B. Vinson. 2007. Effects of larval secretions on queen fecundity in the fire ant. Annals of the Entomological Society of America 100:327-332.
22. #Cassill, D.L., \*\*I. Kuriachan and S.B. Vinson. 2007. A test of two skew models to explain cooperative breeding among unrelated individuals. Journal of Bioeconomics 9:19-37.
21. Cassill, D.L. and R.P. #Hill. 2007. A naturological approach to corporate governance: An extension of the Frederick model of corporation-community relations. Business and Society 46:286-303.
20. #Cassill, D.L., Anthony Greco, \*Rajesh Silwal and Xuefeng Wang. 2007. Opposable spines facilitate fine and gross object manipulation in fire ants. Naturwissenschaften 94:326-332. (<http://www.springerlink.com/content/a08132x3718p236p/>).  
*Research Highlights. 2007 Handy Legs, Nature 446:834.*
19. #Cassill, D.L. 2006. Why skew selection, a model of parental exploitation, should replace kin selection. Journal of Bioeconomics 8: 101-119.  
<http://www.springerlink.com/content/63j12k7w561gr667>.

18. #Cassill, Deby L., \*James Butler, S. Bradleigh Vinson and Diana Wheeler 2005. Cooperation in prey digestion between workers and larvae in the ant, *Pheidole spadonia*. *Insectes Sociaux* 52:339-343.
17. #Cassill, D.L. 2005. The social gene. *Journal of Bioeconomics* 7:73 – 84.
16. #Cassill, D.L. and A. Watkins. 2004. Mogul games: In defense of inequality as an evolutionary strategy to cope with multiple agents of selection. In: *Advances in Austrian Economics* (Ed. R. Koppl). Kluwer Academic Publisher, Norwell, MA. 7:35-59.
15. Hill, R.P. and D.L. #Cassill. 2004. The naturological view of the corporation and its social responsibility: An extension of the Frederick model of corporate-community relations. *Business and Society Review* 109:281-296.
14. #Cassill, D.L. 2003. Skew selection: Nature favors a trickle-down distribution of resources in ants. *Journal of Bioeconomics*. 5:83-96.
13. #Cassill, D.L. 2003. Rules of supply and demand regulate recruitment to food in the fire ant, *Solenopsis invicta*. *Behavioral Ecology and Sociobiology*. 54:441-450.
12. #Cassill, D.L. 2002. Yoyo-bang: A risk aversion investment strategy by a perennial insect society. *Oecologia* 132:150-158.
11. #Cassill, D.L. 2002. Brood care strategies by newly-mated monogyne *Solenopsis invicta* queens during claustral colony founding (Hymenoptera: Formicidae). *Annals of the Entomological Society of America* 95:208-212.
10. #Cassill, D.L., W.R. Tschinkel and S. B. Vinson. 2002. Nest complexity, group size and brood rearing in the fire ant, *Solenopsis invicta*. *Insectes Sociaux*. 49:158-163.
9. #Cassill, D.L. and W.R. Tschinkel. 2000. Behavioral and developmental homeostasis the fire ant, *Solenopsis invicta*. *Journal of Insect Physiology* 46:933-939.
8. #Cassill, D.L. and W.R. Tschinkel. 1999. Task selection by workers of the fire ant, *Solenopsis invicta*. *Behavioral Ecology and Sociobiology* 45:301-310.
7. #Cassill, D.L. and W.R. Tschinkel. 1999. Regulation of diet in the fire ant, *Solenopsis invicta*. *Journal of Insect Behavior* 12:307-327.
6. #Cassill, D.L. and W.R. Tschinkel. 1999. Effects of colony-level attributes on larval feeding in the fire ant, *Solenopsis invicta*. *Insectes Sociaux* 46:261-266.
5. #Cassill, D.L. and W.R. Tschinkel. 1999. Information flow during social feeding in ant societies. In: *Information Processing in Social Insects* (Eds: C.T. Detrain and J.L. Pasteels). Birkhauser Verlag, Basel, Switzerland. 69-81.
4. #Cassill, D.L., A. Stuy and R. Buck. 1998. Emergent properties of food distribution among fire ant larvae. *Journal of Theoretical Biology* 195:371-381.
3. #Cassill, D.L. and W.R. Tschinkel. 1996. A duration constant for worker-larva trophallaxis in fire ants. *Insectes Sociaux* 43:149-166. IF = 1.02; Citations NA
2. #Cassill, D.L. and W.R. Tschinkel. 1995. Allocation of liquid food to larvae via trophallaxis in colonies of the fire ant, *Solenopsis invicta*. *Animal Behaviour*, 50:801-813. IF = 3.14; Citations NA
1. #Miller, T., D.L. Cassill, C. Johnson, C. Kindell, J. Leips, D. McInnes, T. Bevis, D. Mehlman and R. Richard. 1994. Intraspecific and interspecific competition of *Wyemyia smithii* (Diptera: Culicidae) in pitcher plant communities. *Amer. Medl. Nat.* 131:136-145.

## In review

2. Cassill, D.L. Rates of predation on cetacean species by apex predators, killer whales, sharks, and humans. *Behavior Ecology and Sociobiology* (in review (02/10/2025)).
3. \*\*Aretz, J.M., Cassill DL, Catenazzi A, Deban SM, #Gainsbury AM. Thermal Ecology and Swimming Performance of Native Tadpoles *Dryophytes femoralis* in Central Florida, *Thermal Biology* (in review 01/15/25).
4. \*Turner, L. and #Cassill. D.,\L. Chimpanzee tool use: An illustrated field guide to grip types. *American Journal of Primatology* (in review, 01/31/25).
5. \*Turner, L. and #Cassill. D.L. Chimpanzee tool use proficiency across eight regions in Africa. *American Journal of Primatology* (submitted, 02/08/25).
6. \*\*Seigel, A., #Cassill, D.L. Tool use by the dwarf hawkfish, *Cirrhichthys falco*, in captivity. *Coral Reefs* (submitted 02/09/2025).

## In preparation (38 manuscripts)

- Cassill, DL, and Watkins A. Modeling the shift from binary fertility phenotypes to multiple fertility phenotypes (in preparation).
- Cassill DL. On the origin of altruism by means of natural selection (in preparation).
- Cassill DL. On the transition from unicellular females to multicellular binary fertility phenotypes (in preparation).
- Cassill D.L. Rates of predation on cetacean species by apex predators, killer whales, sharks, and human (in review).
- Cassill D.L. Fission-fusion societies are risk-management adaptation in the transient mammal-eating killer whale, *Orcinus orca* (in preparation).
- Cassill DL Integrating the social, ecological, and environmental risk factors that favor the evolution of uniparity in iteroparous species of insects, birds and mammals (in preparation).
- Cassill DL Comparing the ecological and environmental risk factors that favor annual versus perennial reproduction in plants (in preparation).
- Cassill DL. Maternal investment patterns in *Homo sapiens*. *Journal of Bioeconomics*.
- \*Kizer R, \*Richardson L, \*Cardillo P, #Cassill DL. A maternal risk management model illuminates the evolution of extended maternal care in the slipper lobster *Scyllarus chacei* (Decapoda: Scyllaridae). *Scientific Reports* (rejected, revise and submit elsewhere).
- \*\*Ramirez A and #Cassill DL. Comparing bird diversity and abundance in urbanized and preserved areas of the coastal city of St. Petersburg, Florida, US. (in preparation).
- \*\*Klein C and #Cassill DL. Presenting a novel population-replacement index as a tool for conservation management within and across cetaceans species (in preparation)
- \*\* Klein C and #Cassill DL. Drivers of interspecific altruism in the humpback whale, *Megaptera novaeangliae*. (in preparation).
- \*\*Sawl A. and #Cassill DL. Abundance, interactions, and the life histories of two sympatric species, the critically imperiled Florida scrub millipede *Floridobolus penneri* and the smokey oak millipede *Narceus gordanus*. (in preparation).
- \*\*Seigel A. and #Cassill DL. Assessing fish species richness using eDNA and seine nets in a restored estuary in Tampa Bay, Florida, US.

- \*\*Deeken, D and #Cassill DL. Presenting a novel population-replacement index as a tool for conservation management within and across shark species.
- \*\*Masnjak, A. and #Cassill DL. Connecting the social hormone, inotocin, to brood care in *Solenopsis invicta*. *Animal Behavior* (in preparation).
- \*\*DeJohn FJ and #Cassill DL. Phenological shifts in emergence dates by nesting leatherback sea turtles, *Dermochelys coriacea*, in response to climate change along Southeastern Florida beaches (in preparation).
- \*\*Depner H. and Cassill DL. Comparing mortality based on body size and group size in response to simulated climate change in the pine scrub harvester ant, *Pogonomyrmex badius*, and the riparian fire ant, *Solenopsis invicta*. *Urban Naturalist* (in preparation)
- #Cassill, D.L. \*Prince, Valerie & \*Pagen-Colon, Yessaira. On the evolution of maternal investments in uniparity in insects, birds, and mammals. *Animal Behaviour* (in preparation).
- \*\*Masnjak A and #Cassill DL. Explaining brood care behaviors across five fertility phenotypes in relation to the expression of inotocin in the fire ant, *Solenopsis invicta* (in preparation).
- \*Coticchio LA and #Cassill DL. Bite behaviors: Dispelling the myths and misdiagnosis of venomous bites by the invasive recluse spider, *Loxosceles* ?
- \*Schmidt Jessica and Cassill DL. A comparative study of egg-laying rates and relative egg size by marine, freshwater, and terrestrial turtles (in preparation).
- \*Ford, Krista, Devon Swick, Lauren Dellert, #Cassill DL. Tool use in the fire ant, *Solenopsis invicta*. (in preparation)

Cassill, D.L., Laura Sehault, Lindsey Flynn and Devon Singh. Ant wars: a multi-factor study of cooperation and aggression in the fire ant, *Solenopsis invicta*. *Animal Behaviour*. (in preparation).

Cassill, DL. Blackwood, Z, Wheeler D, Vinson SB. Trophic castration is not a mechanism for caste determination in the fire ant. *Proceedings of the Royal Society-B*. (in preparation)

Cassill, D.L. Michael Lagarde, Rongrong Qi, Fan Yang. What can ants tell us about excavating and constructing domiciles to protect the queen and her altricial young? *Nature Ecology Evolution* (in preparation)

\*Kash Dylan, Howerton Ali, Ford, Krista, \*Cassill DL. The role of personalities in division of labor in the fire ant, *Solenopsis invicta*. *Animal Behaviour* (in preparation).

Cassill, DL. Extending game theory with a cost-benefit classification system for social encounters. *Journal of Bioeconomics* (revise and submit).

\*\*Hajastron, Hunter, \*Cassill DL. A comparison of plant communities in an urban lake in central Florida. *Urban Naturalist* (in preparation).

\*\*Miller JD, Cassill DL. Comparing the fertility of the eastern mosquitofish, *Gambusia holbrooki*, in urban and non-urban aquatic systems. *Southeastern Naturalist* (in preparation).

\*\*Cricton LJ and Cassill DL. Abundance and distribution of the non-native apple snail, *Pomacea maculata*, in a restored wetland of an urban lake. *Ecology* (in preparation).

- Cassill DL. Tool use in the fire ant, *Solenopsis Invicta* (in preparation, acknowledge Ford, Krista., Devon Swick, Lauren Dellert).
- Cassill D.L. Ant wars: a multi-factor study of cooperation and aggression in the fire ant, *Solenopsis invicta*. *Animal Behaviour* In preparation, acknowledge undergraduates Laura Sehault, Lindsey Flynn and Devon Singh).
- Cassill DL. What can ants tell us about excavating and constructing domiciles to protect the queen mother and her altricial young? (in preparation; acknowledge Michael Lagarde, Rongrong Qi, Fan Yang).
- \*\*Snyder, Lee, D. L. \*Cassill. Variation in maternal investments based on food proximity in of an urban colony of boat-tailed grackles. *Auk and Condor* (in preparation).
- Cassill, DL. Ants at war: a study of cooperation and aggression among workers in the fire ant, *Solenopsis invicta*. *Animal Behaviour* (in preparation; acknowledge .,\* Laura Sehault, \*Lindsey Flynn and \*Devon Singh).
- Cassill, D.L. and E. Asano. The myth of worker inefficiency in the fire ant. *Journal of Theoretical Biology* (in preparation)
- \*\*Smith-Beltran, J, and Cassill DL. Distribution and diversity of bat species across regions of Fort De Soto Park, Florida, USA. *Urban Naturalist* (in preparation).

### **In preparation (book)**

- Cassill, D.L. *Females on Top, Males Rising: On the evolution of fertility phenotypes in multicellular animals by means of natural selection* (48 chapters drafted in 2008, revised to 23 chapters in 2012; I will return to this after retirement).

### **Non-refereed publications**

- Cassill DL 2023. Published Review: On the origin of aging by means of natural selection. *Qeios*, <https://www.qeios.com/read/THF19Y> IF 0.0
- Doody, J.S., Sullivan, S. Cassill, D.L. 2019. Plasticity in hatching of anoles. *Anolis Newsletter VII*. Washington University Open Scholarship. 67.
- \*Gross, Kaitlyn, D.L. Cassill. 2014. Why nutrition labels should contain an “added sugar” category. *USFSP Student Research Journal*.
- \*Krista Ford, L. Hardy and D. Cassill. 2012. Geometric Probability of Mating Success for the Greater Short-nosed Fruit Bat, *Cynopterus sphinx*. *USFSP Student Research Journal*.
- \*Gurule, Sundra, L. Hardy and D.L. Cassill. 2012. Geometric Probability of Mating Success for the Bottlenose Dolphin, *Bottlenose dolphin*. *USFSP Student Research Journal*.
- \*Jeffers, Mason, L. Hardy and D.L. Cassill. 2012. Geometric Probability of Mating Success for the Common Dog, *Canis lupus familiaris*. *USFSP Student Research Journal*.
- \*King, Katrina, L. Hardy and D.L. Cassill. 2012. Geometric Probability of Mating Success for the Horse, *Equus ferus caballus*. *USFSP Student Research Journal*.
- \*Ruekberg J, Kiriopoulos D, Moore K, Cassill DL, and Hardy, L. 2011. Modeling a Molecular Dynamic Simulation of the STAT3 Monomer. *USFSP Student Research Journal*.

### **Books reviewed**

- Cassill, D.L. 2010. Book Review. Richard Dawkins 2006. The God Delusion, Bantam Press, UK, Journal of Bioeconomics 10:315-316.
- Cassill, D.L. 2006. Book Review. Geerat J. Vermeij. 2004. Nature: An Economic History, Princeton University Press, Princeton, N.J. USA, Journal of Bioeconomics 8:283-285.

### **Research conferences**

- 2024 Entomological Society of America, On the evolution of phenotypic diversity in the fire ant by means of natural selection. November 10, Phoenix, AZ US
- 2024 Animal Behavior Society. On the evolution of altruism by means of natural selection, Virtual Presentation, July 8.
- 2022 Animal Behavior Society, On the origin of hierarchies by means of natural selection. August 5<sup>th</sup> virtual presentation.
- 2021 Animal Behavior Society, On the origin of altruism by means of natural selection. August 5<sup>th</sup> virtual presentation.
- 2021 Society of Mammalogy, Advances in models of altruism by natural selection. June 15 virtual presentation.
- 2019 Animal Behavior Society, Chicago, IL The role of oxytocin in brood care among fertility phenotypes in the fire ant, *Solenopsis invicta*. Alexis Masnjak, graduate student poster.
- 2019 Animal Behavior Society, Chicago, IL. A maternal risk management model replaces kin selection to explain the evolution of social behavior.
- 2019 Entomological Society of America, St. Louis, MO. A maternal risk management model replaces kin selection to explain the evolution of social behavior.
- 2016 Institute for a Humane Society, Portland Oregon, Solving the evolution of cooperation with a risk management classification system (*Expenses paid by the Institute*).
- 2015 European Association for Evolutionary Political Economy, Genoa, Italy (*Invited speaker*)
- 2013 International Society for the Study of Social Insects Conference, Maternal investments in animals from insects to primates. Tallahassee, FL (*Invited speaker, expenses paid by ISSSI*).
- 2013 International Chemical Ecology Conference, Multiple communication modalities in the fire ant. Melbourne, Australia. *Invited speaker*.
- 2012 Ringberg Conference, Bioeconomics, Self-organizing systems. Munich, Germany *Invited speaker, expenses paid by Plank Institute*.
- 2012 Public Choice Society International Conference. Quantifying the survival benefits of social networks and social capital. Miami, FL
- 2009 Microbes to Metazons: Regulation, Dynamic and Evolution of Social Behavior, Georgia Tech, Atlanta, GA. *Invited speaker*.
- 2009 Entomological Society of America. Why fire ants play dead. Indianapolis, IN.
- 2009 International Union of Studies on Social Insects. Behavioral diversity among individuals in ants. San Juan, Puerto Rico.
- 2007 Annual Fire Ant Conference 2007. The opposable “thumbs” of fire ants. UF, Gainesville, FL



- 2006 Why skew selection trumps kin selection in explaining the evolution of altruism. International Union for the Study of Social Insects. Washington DC.
- 2006 Bio-Bots: Mining biological architecture for designing robots. SSR\_RC USF Tampa
- 2005 The Fire Ant's Opposable Thumbs, Florida Electron Microscopy, Orlando, FL
- 2004 The Evolution of Inequities. Association for Practical and Professional Ethics, San Antonio, TX
- 2004 Mogul Games: An evolutionary strategy of resource acquisition and redistribution strategies. Southern Economic Association. New Orleans, LA, USA.
- 2004 Cooperative breeding in the fire ant: A test of reproductive skew theory. International Union for the Study of Social Insects. Phoenix, AZ, USA
- 2004 Why are corporations philanthropic? Western Economic Association's International Meeting. Vancouver, British Columbia, Canada
- 2004 Mogul Games: The evolution of inequality. Public Choice Society Conference, Baltimore, MD
- 2003 The Economics of Skew Selection. Public Choice Society and Economic Science Meetings. Nashville, TN
- 2002 Distributed intelligence: International Congress for the Study of Social Insects Sapporo, Japan
- 2002 Distributed intelligence: Animal Behaviour Society, IU, Bloomington, IN
- 2002 Altruism: An ideal myth: Public Choice Society, San Diego
- 2001 Distributed intelligence: Department of Biology, UT San Antonio
- 2001 Distributed intelligence: Center for Advanced Studies in Space Life Science. Woods Hole, MA, USA
- 2001 Distributed intelligence: Ecology and Evolution, UT Austin
- 2001 Distributed intelligence: Entomology, TAMU. College Station, TX, USA
- 2001 A Risk Aversion Strategy for a Perennial Insect Society Southeast Regional ESA Meeting, San Antonio
- 2000 Distributed intelligence: Department of Neuroscience, UA. Tucson, AZ, USA
- 2000 Distributed intelligence: Post Doc Data Blitz UA
- 2000 Distributed intelligence: Center for Insect Science Hexapodium. UA.
- 1999 Investment strategies of a perennial insect society. Arizona State University
- 1999 Ant colony as neural network. Neurobiology, UA
- 1999 Colony fitness in a variable world. ESA Congress

### **Invited seminar speaker**

- 2024 USF Seminar, Models of altruism
- 2022 USF Seminar, Models of maternal investment.
- 2021 USF Seminar, Why sea turtles do not put all their egg into one basket.
- 2016 Darwin Day, Guest Speaker along with Frans de Waal, International Primatologist Emery University.
- 2012 Survival strategies of the fire ant. UF, Department of Entomology and Nematology, Gainesville, FL
- 2004 Skew Selection: A bioeconomic model for social behavior. Dept. of Entomology. Texas A & M University. College Station, TX

- 2004 The evolution of inequality and love. Psychology Colloquium. USF St. Petersburg. St. Petersburg, FL, USA
- 2004 Skew Selection: A bioeconomic model for social behavior. Dept. of Economics. University of West Virginia. Morgantown, WV.
- 2004 Skew Selection: A bioeconomic model for social behavior. Dept. of Economics. Virginia Polytechnic Institute and State University. Roanoke, VA
- 2004 Skew Selection: A bioeconomic model for social behavior. USDA. University of Florida, Gainesville
- 2003 Skew Selection: A bioeconomic model for cooperation. Dept. of Biology. USF, Tampa

### **Local research talks**

- 2025 OLLI USF. Ants reveal that cooperation, not competition, is what makes us human.
- 2025 Trailblazers, USF, Guest speaker. Competition versus cooperation: What ants reveal about our contradictory nature..
- 2024 USF Entomology Club, Guest speaker. Evidence for inotocin, an analog of oxytocin, as a social bonding hormone between mature workers and immature siblings in the fire ant, *Solenopsis invicta*.
- 2024 Elevator talk USFSP.
- 2021 USF St. Pete Stem Club. Guest speaker. The life and times of ants.
- 2021 USF Tampa Biology Club. Guest speaker. Advances in models of altruism.
- 2021 Leadership course. Guest speaker. The emergence of leaders in ants.
- 2021 Tampa Bay Times. Interview of ant research. Sunday addition. July 25<sup>th</sup>
- 2016 Darwin Day. Guest Speaker along with international primatologist, Frans de Waal, Emory University.
- 2013 Economics Club USF Tampa, Mogul Games
- 2012 USFSP Poynter Library SAPL group. Dali's Ant Dalience. With Peter Tush, Curator of the Dali Museum.
- 2011 USF Foundation Board, Guest Speaker. Eat, Prey, Love: What our two-legged students have learned from our six-legged neighbors, the fire ants.
- 2011 USFSP Town and Gown Guest Speaker: Eat, Prey, Love: What our two-legged students have learned from our six-legged neighbors, the fire ants.
- 2011 Northeast Garden Club, Guest Speaker: Eat, Prey, Love: What are our six-legged fire ant neighbors doing in our gardens?
- 2010 USFSP ESPG Seminar. Eat, prey, love. Stories by our two-legged students about our six-legged fire ant neighbors.
- 2009 USFSP Panel member for the readiness for graduate school forum. Director, Dr. Thomas Smith
- 2009 Why most sperm are duds and other tales of diversity. Poynter Library, Science Series, USF St. Petersburg
- 2009 Survival of the Misfits. Pathways to Literacy Conference. COE Michael Sampson. USF St. Petersburg
- 2005 Experiments in Cooperation. Program in ESPG. USF St. Petersburg. St. Pt. FL
- 2003 Advertising and salesmanship in an ant society. ESPG Research Seminar. USF St. Petersburg

- 2003 The evolution of goodness. Hidden Curriculum Luncheon, Program for Ethics in Education and Community. USF St. Petersburg
- 2003 Rules of Supply and Demand in Ant Societies. KUDOS. Science Journalism Center. USF St. Petersburg
- 2003 The Biology of Skew Selection. ESP&G Series. USF St. Petersburg

### **Grant proposals**

- 2025 NSF 24-546: Division of Integrative Organismal Systems Core Programs [Behavioral Systems | PD 11-7659](#). On the evolution of phenotypic diversity in social systems as an adaptation to ecological/environmental risk factors. Due November 30, 2025. Principal Investigators are encouraged to apply systems approaches that will lead to conceptual and theoretical insights and predictions about emergent organismal properties.
- 2022 NSF (URoL:EN 22-532): On the emergence of hierarchical systems from quanta to galaxies. \$1,900,000. Not funded. (1 excellent; 1 good; 1 poor).
- 2022 USFSP**: From trash to treasure: Extracting DNA from feces to study the population. Awarded \$9,851.
- 2021 Federal Fish and Wildlife Foundation (FFWF). Conservation of marine turtles in San Francisco, Nayarit, México by Grupo Ecológico de la Costa Verde, A.C. Three-year funding for study-abroad students to work with former graduate of USFSP who is taking over the turtle program in Mexico. April 14th, \$185,897. Rejected.
- 2020 Radcliffe Fellowship Proposal. Submitted 10/01/2020. Not funded.
- 2020 IHS Institute for Humane Studies and the Mercatus Center at George Mason University. What can ants tell us about the dissonance between the democratic values of equality and diversity within human societies? \$10,000. Not funded.
- 2020 Whitehall Foundation Letter of Intent. Linking Inotocin/Vasopressin to Love-of-Labor in Eusocial Ants, \$250,000. Rejected.
- 2019 USFSP** Internal Research Funding. Connecting the “social” hormone, inotocin, to egg-laying and maternal care of brood in the fire ant, *Solenopsis invicta*. \$8,320. Awarded May 1, 2020-April 30, 2021.
- 2018 NFWF (Federal Fish and Wildlife Fund). Modeling the growth or extinction of local populations of the killer whale, *Orcinus orca*. \$65,700. Declined
- 2018 Tampa Bay Environmental Restoration Fund, Community Grant Application \$138,112.48. Denied.
- 2018 Biological Distributed Algorithms Workshop at Oxford. Not awarded.
- 2017 PI. NSF 17-508 IOS Integrated organismal biology. Distributed intelligence as a metaphor for modeling self-organizing systems (preliminary grant proposal; no budget required. Preproposal not accepted.
- 2016 USFSP** Internal Grant Proposal: Distributed intelligence as a metaphor for modeling self-organizing systems. \$5,043. Awarded
- 2016 Institute for Humane Studies and the Mercatus Center at George Mason University. Risk Analysis Seminar. Portland, OR. \$2K. Awarded.
- 2016 Fellows-in-Residence Program 201702018. The Edmond J. Safra Center for Ethics. Not approved.
- 2016 LOI. Nathan Cummings Foundation. \$80,000. Not approved.

2016 PI. NSF 11-8031. What can a society of ants, a clutch of snail hatchlings and simulated wealth-builders tell us about the persistence of income inequality in human institutions? \$269,833. Rejected with encouragement to rewrite and resubmit.

**2016 USF System Women's Leadership and Philanthropy Research Award Program.** \$5,000. Not awarded.

2015 CoPI FFWC Marine Permit. A study of maternal investments in offspring quantity, quality and diversity by females of the loggerhead sea turtle, *Caretta caretta*. PI: Justin Perault.

2015 CoPI. NSF 16-508 Letter of Intent: Information processing associated with left and right bi-lateral organs in ant, human and engineering systems: robust characterization of robust algorithms. PI: Juan Gomez-Molina. Dr. Gomez-Molina was unable to submit a full proposal by the deadline.

2011 PI. NSF. BREAD: Toward biological control of insect okra pests. \$125,777. Submitted 11/18/2011. Rejected.

2008 PI. NSF Behavioral Cluster. Ant Hierarchies and Distributed Intelligence. **\$55,000.** Submitted 07/11/2008. Rejected.

2007 PI. NSF Economics. Integrating Economic Principles with Natural Selection to Explain the Evolution of Cooperative Hierarchies. **\$62,823.** Submitted 1/15/2007

2006 PI. NSF Behavioral Cluster. Experiments in the survival benefits to ant queens by skewing offspring quality, quantity and diversity. **\$383,499.** Rewrite, resubmit.

**2005 USFSP ESP&G POD.** Equipment Grant Proposal to convert from VHS to DVD. **\$4,200.** Awarded.

2005 PI. NSF Behavior Experiments in Cooperation: When does it pay to be nice rather than hostile to neighbors? **\$453,343** Rejected. Rewrite, resubmit.

2004 NSF. REU. A state-university partnership to provide research experiences for undergraduates in marine invertebrate taxonomy and systematics. **\$259,359.** Withdrawn at the request of FWRI until it completes its reorganization.

**2004. USFSP ESPG SPACE.** Undergraduate research experiences investigating an invasive species in Florida. **\$99,840** (Rejected).

**2004 ESPG** Program of Distinction. The fire ant's opposable thumbs. **\$900.** Awarded.

2004 USDA Rate and pathflow of fluids to polygyne queens in the fire ant, *Solenopsis invicta*. **\$327,192** (Rejected)

2004 NSF MRI Acquisition of state-of-the-art instruments for integrated research/education studios in biorobotics design and technology for undergraduates. **\$491,635** (returned, resubmit next year)

2004 NSF CISE. Biorobotics Design and Technology for Undergraduates. **\$527,202** (Rejected)

**2004 USF** Center for 21<sup>st</sup> Century Teaching Excellence award **\$10,000.** Awarded.

2003 NSF REU. Biorobotics site for undergraduates: A 12-month REU site for synergistic research experiences in biological robotic systems. **\$412,253.** Rejected but encouraged to rewrite and resubmit next year

2003 NSF Career. Competition and cooperation among queens of the fire ant, *Solenopsis invicta*. **\$611,445.** Rejected. It was a long shot. I am ineligible to apply again.

2002 PI. NSF 02-111 Career: **\$499,995.** Adopting Accounting Principles for Calculating Reproductive Fitness. Rejected.

**2002 USFSP** New Researcher Grant: **\$6,059**. Dominance hierarchies: A strategy for survival or reproduction? Awarded.

**2002 USF** New Researcher Grant: **\$7,290**. Evolution of cooperative breeding among newly-mated queens in an ant society. Awarded.

2002 USDA 51.2 Entomology Nematology: **\$114,865**. The emergence of scouting behavior and the flexibility of recruitment behavior in the fire ant, *Solenopsis invicta*. Rejected. Reviewer comments: “In general, the panel found this proposal to be meritorious and likely to yield significant insight into fire ant scouting behavior. However, the panel was not convinced that this research was relevant to reducing impact of the fire ant in agricultural systems in the future. Better justification is needed to be competitive for USDA funding.”

## **TEACHING ASSIGNMENTS**

### **Current courses**

ZOO 4512 Sociobiology

ZOO 4513 Animal Behavior

BSC 4910 Undergraduate Research

BSC 4940 Internships for Undergraduates

BSC 6971 Thesis

BSC 6910 Directed Research

BSC 6933 Advances in Models of Altruism

### **Former courses**

PCB 4674 Organic Evolution

BSC 2010 Cell Biology (Bio I)

BSC 2011 Organism Diversity (Bio II)

BSC 2025 Food: Personal and Global Perspectives

BSC 2035 Sex and Today’s World

BSC 3402L Experimental Biology Lab

### **Graduate students**

#### **Current**

Kamarri Davis, Advisor, MS Conservation Biology, Fall 2024 -

Frank Jesse DeJohn, Advisor, MS Conservation Biology, Spring 2024 -

Rachamim Yair Bistro, Advisor, MS Conservation Biology, Spring 2024 -

Anne Sawl, Advisor, MS Conservation Biology, Fall 2023 -

Ashley Ramirez, Advisor, MS Conservation Biology, Spring 2023 -

Jessica Aretz, Advisor, MS, Conservation Bio, Fall 2022 – Spring 2024

Tara Pedersen, Advisor, MS Conservation Biology Spring 2020, parttime

Maria Ceron, Committee Member, PhD, Ecology & Evolution, NA Fall 2022 -

Blake Blaskowski, Committee Member, PhD, EEV Tampa, Fall 2023 -

#### **Former**

Alex Seigel, Advisor, MS Conservation Bio, Spring 2022 – Fall 2024  
Jessalyn Aretz, Advisor, MS Conservation Biology, Fall 2022 – Spring 2024  
Emily Birdsall-Woodard, Advisor, MS Conservation Bio, Fall 2021 – Did not defend thesis.  
Haley Deptner, Advisor, MS Conservation Bio, Graduated Summer 2022  
Dennis Deeken, Advisor, MS Conservation Bio, Graduated Fall 2022  
Alexis Masnjak, Advisor, MS Conservation Bio, Graduated Summer 2022  
John Foster, Advisor, Conservation Bio, Spring, Graduated 2021  
Christopher Klein, Advisor, Conservation Bio, Graduated Summer 2021  
Meghan Craft, Reader, Conservation Bio, Graduated Spring 2021  
Sean Sullivan, Reader, MS Conservation Bio, Graduated 2021  
Aleah Atamen, Reader, MS Conservation Bio, Graduated 2021  
Lynsee Chrichton, Advisor, MS Conservation Bio, Graduated Spring 2020  
Kelsey Fleming, Reader, MS College of Marine Science, Graduated 2020  
Hunter Hajaistron, Advisor, MS Conservation Bio, Graduated Fall 2020  
Jordan Miller, Advisor, MS Conservation Bio, Graduated Summer 2020  
Lindsey Flynn, Reader, College Marine Sci, Reader, Graduate 2012  
Jason Clayborn, Advisor, MS Environmental Sci Pol, Graduate 2009  
Benjamin Hardisty, Advisor, MS Environmental Sci Pol, Graduate 2009  
Jennifer Smith, Advisor, MS Environmental Sci Pol, Graduate 2008  
Lee Snider, Advisor, MS Environmental Sci Pol, Graduate 2008

#### **Honor's thesis advisor or reader**

2022 Lily Turner Advisor, (tool use in chimpanzees)  
2018 Tatsiana Wilson (reader)  
2018 Kelly O'Neil, Advisor, (morality)  
2017 Kristine Zikmanis, Advisor (sharks)  
2017 Christine Leonard, Reader (gall wasps)  
2017 Jasmine De Dios, Advisor  
2016 Ilesia Llobano, Advisor, (crocodilian)  
2016 Brett Defeuw, Reader  
2014 Kaitlyn Gross  
2014 Alexandra Dubinina  
2013 Alexander Casella, Advisor, published paper

#### **Teaching awards**

2015 Excellence in Teaching, CAS  
2015 Excellence in Teaching USFSP  
2008 USF Ambassador Apple Polishing Award for Outstanding Faculty  
2007 USF Ambassador Apple Polishing Award for Outstanding Faculty  
2006 Friend of Student Affairs Award, USF St. Petersburg  
2005 Weekly Planet, Best of the Bay, Best Professor (09/21/05)  
1993 Graduate Student Forum Award, Florida State University  
1991 Excellence in Teaching Award, Florida State University

## **Professional organizations**

Animal Behavior Society  
International Union for the Study of Social Insects (IUSSI)  
Public Choice Society  
National Geographic Society  
American Society of Mammologists  
Sigma Xi

## **SERVICE**

### **National (book reviews and grant proposal reviews)**

2016 NSF Grant Application Review  
2010 - 2016: Book Review Editor for the Journal of Bioeconomics  
2013 NSF Grant Proposal Review, 1354749, PI Jennifer Fewell, Arizona State University  
2012 Edited William Fredricks book, *Natural Corporate Management*, published by John Stuart, Editor, Greenleaf Publishing, Aizlewood's Mill, Nursery St, Sheffield S3 8GG, UK. The cover has a byline by me.  
2012 Edited and contributed a Forward, Lunatic Asylums of Kentucky. Alma Wynelle Deese, 2013.  
2010 Reviewed chapter for new text from W. H. Freeman Publishers for non-majors biology students.  
2009 Edited and contributed a Forward: Exercising the Penis: How to make your most prized organ bigger, harder and healthier. By Aaron Kemmer (former student).

### **National (manuscripts reviewed or edited)**

2024 Tendency towards clonality: deviations of meiosis in parthenogenetic Caucasian rock lizards. Victor Spangenberg, Marine Arakelyan, Sergey Simanovsky, Yana Dombrovskaya, Emma Khachatrian, and Oxana Kolomiets. *Biology or Reproduction*  
2024 Ant Foraging: Optimizing Self-36 Organization as a Solution to a Travelling Salesman Problem. Natasha Paago, Wilson Zheng, Peter Nonacs. *Oecologia*  
2024 Plant Defenses Turn Over and Response After Simulated Herbivory. Danilo F. B. dos Santos 1, Eduardo S. Calixto 2, Helena M. Torezan-Silingardi 3 and Kleber Del-Claro. *Plants* (MDPI).  
2024 Sexual offspring production by acorn ant *Temnothorax crassispinus* colonies is dependent on the colony size but not on the volume of the nest cavity – an experimental study. Mateusz Rolski , Anna Gruszka , Mariia Marczak , Sławomir Mitrus. *Animals*, (MDPI).  
2024 Socio-spatial Relationships in an *Ex Situ* White Rhino (*Cera-2 totherium simum simum*) Bachelor Group. Lara C. Metrione, Terri L. Roth, Yaraila Rodriguez, and Elizabeth W. Freeman. *Animal Behaviors* (MDPI).  
2024 The Hole Truth: Why Do Bumble Bees Rob a Flower's Nectar More Than Once? Judith L. Bronstein, Goggy Davidowitz, Elinor M. Lichtenberg and Rebecca E. Irwin *Plants* (MDPI).

- 2024 How the pubescence and wax coverage on stems to the greasy pole syndrome in *Alliaria petiolata* (Brassicaceae) prevents attacks by ants Elena V. Gorb \*, Stanislav N. Gorb. *Plants* (MDPI)
- 2024 How schooling fish may confuse the lateral line and electro-sensory systems of predators, Marz Larsson. *Animals* (MDPI)
- 2024 Manuscript ID SRES-24-0102 The Biased Interaction Game: A system theoretic approach to the emergence of inequality, hierarchy, and the implications for the likelihood of cooperation." for Systems Research and Behavioral Science.
- 2023 Toxicity and Behavioral Effects of amending Soils with Biochar on Red Imported Fire Ants, *Solenopsis invicta*. Jiantao Fu *et al Insects* (MDPI)
- 2023 On the Origin of Aging by Means of natural selection. Richard Walker. *Qeios* (MDPI).
- 2023 The effect of turbidity on the behavior of bleak *Alburnus alburnus*. Petra Horka \*, Monika Vlachova *Fishes* (MDPI).
- 2023 Impact of long-term floods on spatial dynamics of *Myrmica scabrinodis*, a host ant of a highly threatened Scarce large blue (*Phengaris teleius*). Mitja Močilara, Klemen Jerinab, Rudi Verovnikc. *Insects* (MDPI)
- 2023 Foraging Behaviors of Red Imported Fire Ants (Hymenoptera Formicidae) in Response to Bait Containing Different Concentrations of Active Ingredient Authors: Chengju Du, Hailong Lyu, Lanfeng Wang, Lei Mao, Lin Li, Xinya Yang, Cai Wang *Insects* (MDPI)
- 2023 The influences of self-introspection and credit evaluation on self-organized flocking. Qiang Zhao et al. *Applied Sciences* (MDPI)
- 2023 Allometry of defense: predator shift alters ontogenetic growth patterns in an antipredator trait Authors: Bin Jiang \*, Yu Yao, Rüdiger Mauersberger, Dirk J. Mikolajewski *Insect Physiology, Reproduction and Development*
- 2022 Quantifying the Influence of Pollen Ageing on the Adhesive Properties of *Hypochoeris Radicata* Pollen, Authors Huth, Schwarz, and Gorb. *Insect*
- 2022 Resilient Eggs: Highly Successful Loggerhead Sea Turtle Nesting Sites Vary in Their Characteristics. Jessica Gravelle and Jeanette Wyneken; *Frontiers in Ecology and Evolution*.
- 2021 Combined Effect of Different Flower Stem Features on the Visiting Frequency of the Generalist Ant *Lasius niger*: An Experimental Study. Elena Gorb and Stanislav Gorb, *Insects*.
- 2021 The post-exploitation areas as a place of rare kleptoparasitic and parasitic species of Aculeata in south-eastern Poland. Grzegorz Król, Agnieszka Tomaszewska and Grzegorz Wróbel. *Insects*
- 2021 Sustainability. The effects of landscape elements on the breeding sites of bloodsucking midge. Kaowen Grace Chang and Hungju Chien
- 2021 Allogrooming, self-grooming and touching behavior as a mechanism of dispersion of insecticides into colonies of leaf-cutting ants. Tarcísio Marcos Macedo Mota Filho Ramon De Marchi Garcia , Roberto da Silva Camargo , Luis Eduardo. Pontes Stefanelli , Carlos Alberto Oliveira de Matos , Luiz Carlos Forti. *Insects*
- 2017 Potential limitations of behavioral plasticity and the role of egg relocation in climate change mitigation for a thermally-sensitive endangered species Michael J. Liles *et al*.



- 2017 Journal of Insect Behavior. Division of labor and food retrieval during the out-nest activities of the Mediterranean harvest ant *Messor wasmanni* (Hymenoptera, Formicidae). D'Eustacchio et al. *Global Change Biology*.
- 2017 Ecology and Evolution. Sea turtles do not trade offspring quantity against quality: environmental maintenance of alternative life histories. By Hideo Hatase, Kazuyoshi Omuta and Teruhisa Komatsu.
- 2017 Royal Society Open Science. Fire ants perpetually rebuild sinking towers. David Hu et al. Georgia Tech.
- 2016 Journal of Insect Behavior. Review of: Behavioral responses of formicine ants (Hymenoptera) to smells from different coffee brands and formulations: a coffee based bait development prospect by By: A.H. Ab Majid, H. Dieng, S.S. Elliassa, H. Ahmad.
- 2016 Journal of Insect Behavior. Resubmitted. Sex Ratios in a Socially Parasitic Bee and implications for host parasite interactions. Nahid Shokri Bousjein, Morgan Staines, Cathy Vo, Natalie Puiu, Carmen RB, Silva, Jack Harrington, Sara Wilkinson, Kelly Pratt, & Michael P Schwarz.
- 2016 Journal of Insect Behavior. First submission; rewrite resubmit. Sex Ratios in a Socially Parasitic Bee and implications for host parasite interactions.
- 2016 Journal of Insect Behavior. Local Resource Competition and Sex Ratios in a Socially Parasitic Bee
- 2016 Behavioural Processes. How to recognize your enemies? Role of cuticular compounds in intraspecific recognition of ants.
- 2016 Animal Behaviour. Short but rough, or long and smooth? Route selection and trail clearing in the meat ant (*Iridomyrmex purpureus*)
- Acta Zoologica (1)
- American Naturalist (3)
- Animal Behaviour (British) (5)
- Annals of the Entomological Society of America (5)
- Behavioral Ecology (5)
- Behavioral Ecology and Sociobiology (5)
- Behavioural Processes (5)
- Biological Letters (1)
- Ecological Modeling (1)
- Environmental Entomology (3)
- Ethology (4)
- Florida Entomologist (1)
- Insect Science (China) (1)
- Insectes Sociaux (French) (13)
- Journal of Bioeconomics (4)
- Journal of Insect Behavior (23)
- Journal of Insect Physiology (2)
- Journal of Insect Science (4)
- Journal of Theoretical Biology (1)
- Naturwissenschaften (German) (2)
- Oecologia (German) (8)
- PLOS ONE (1)

Proceedings of the Royal Society B (British) (3)  
Psyche (1)

### **USFSP Committees**

2024 USF SP campus SOCAT Faculty representative  
2024 Integrative Biology, Member, Seminar Series Committee  
2024 Integrative Biology, Member, Medical Biology Search Committee  
2024 Integrative Biology, Member, Tampa Graduate Application Committee  
2023 USF SP campus SOCAT Faculty representative  
2023 Integrative Biology, Tampa campus, Graduate Committee  
2022 USF SP campus VAW Global Health Veterinary chapter  
2022 USF SP campus SOCAT Faculty representative  
2022 Integrative Biology, Tampa campus, Graduate Committee  
2022 USF Visibility and Safety Committee, member, SP campus  
2021 USF SP campus SOCAT Faculty representative  
2021 Integrative Biology, Tampa campus, Graduate Committee  
2021 USF Visibility and Safety Committee, member, SP campus  
2021 USF Search Committee, member, Evolutionary Biologist, Tenure-track  
2020 USF SP campus SOCAT Faculty representative  
2020 Integrative Biology, Tampa campus, Graduate Committee  
2020 USF Visibility and Safety Committee, member, SP campus  
2020 USFSP CAS Faculty Council, Member at large, Terminated 07-01-2020  
2020 Departmental T&P Committee, Chair, Terminated 07-01-2020  
2020 USFSP University Graduate Council, member, Terminated 07-01-2020  
2020 Departmental Annual Review Committee, Chair, Terminated 07-01-2020  
2020 USFSP Graduate Council, member, Terminated 07-01-2020  
2019 Biological Sciences, Associate Chair  
2019 CAS Faculty Council, Member at large.  
2019 Departmental T&P Committee, Chair,  
2019 USFSP Civic Engagement Task Force, member  
2019 USFSP University Graduate Council, member  
2019 Departmental Annual Review Committee, Chair, 21 faculty reports  
2019 USF System Student Success Consortium, member  
2019 USFSP Graduate Council, member  
2019 Data Literacy Initiative, USFSP Science Librarian, Theresa Burress  
2019 SOCAT Faculty representative  
2019 Biological Sciences, Associate Chair, “titular” position  
2018 CAS Faculty Council, Member at large.  
2018 2017 Departmental T&P Committee, Chair, 3 faculty reports (Judkins, Leite,  
Ashour  
2018 USFSP Civic Engagement Task Force, member  
2018 USFSP University Graduate Council, member  
2018 Departmental Search Committee, Chair, 2 Tenure track, 1 Instructor  
2018 Departmental Annual Review Committee, Chair, 19 faculty reports  
2018 USF System Student Success Consortium, member  
2018 USFSP Graduate Council, member

2018 Search committees (4); 3 as Chair, 1 as a member  
 2018 Chair, Departmental instructor promotion committee (Madu Pandey, Joan Herrera)  
 2017 Chair, Departmental mid-tenure review committee (Hossam Ashour)  
 2017 USFSP Graduate Council, member  
 2017 CAS Student Video Competition on Major, Judge  
 2017 Departmental T&P Guidelines Committee, Chair  
 2017 Departmental T&P Committee, Chair  
 2017 USFSP Civic Engagement Task Force, member  
 2017 USFSP Member, University Graduate Council  
 2017 Departmental Search Committee, Visiting Instructor, Member  
 2017 Chair, Departmental Annual Review Committee  
 2016 Departmental Annual Review Committee, Chair  
 2016 USFSP Student Orientation, Classroom experience  
 2016 USFSP Chair, Mid-Tenure and Promotion Committee for Heather Judkins  
 2016 USFSP Chair, Mid-Tenure and Promotion Committee for Maria Leite  
 2016 USFSP Mid-Tenure and Promotion Committee for Aparna Telang  
 2016 USFSP Chair, Search Committee for Instructor position  
 2016 USFSP Chair, Search Committee for Cell Biology position  
 2016 USFSP Student Orientation, Tour and Talk  
 2016 USFSP Open House for incoming students, Biology booth  
 2016 Associate Chair, Department of Biological Sciences  
 2016 USF System STEM Committee  
 2016 Student Fees Committee  
 2016 USFSP SOCAT Committee  
 2015 Reading Festival, Host for two authors  
 2015 USFSP Student Orientation, Tour and Talk (6 times)  
 2015 USFSP Open House for incoming students, Biology booth (3 times)  
 2015 Associate Chair, Department of Biological Sciences  
 2015 Student Fees Committee  
 2015 USFSP SOCAT Committee  
 2015 Outside Chair of the Defense for Monica Cook dissertation (CMS),  
 entitled Endocrine-Disrupting Compounds: Measurement in Tampa Bay, Removal  
 from Sewage and Development of an Estrogen Receptor Model.  
 2015 USF System STEM Committee  
 2014 USFSP Search Committee, Students of Concern Case Manager  
 2014 USFSP University T&P Committee  
 2014 USFSP Search Committee, Dean of Students\Director of Housing  
 2014 USFSP Editor, Student Research Journal  
 2014 USFSP SOCAT Committee member  
 2013-2014 USFSP CAS Associate Chair, Department of Biological Sciences  
 2013-2014 USFSP Student Academic Review Committee  
 2013-2014 USFSP Student Fees Committee  
 2012-2014 USFSP Faculty Research Council  
 2012-2014 USFSP Open House, Biology booth (3 times)  
 2013 Search Committee Chair, Tenure-track position for Marine Biology  
 2013 USF System ACE Committee, USFSP faculty liaison

2012 Search Committee member for Instructor, Cell Biology  
 2012 Chair, Search Committee for Assistant Professor, Limnology  
 2012 USFSP Chair, University T&P Committee  
 2012 CITF Capital Improvement Trust Fund Committee  
 2012 USFSP Student Fees Committee  
 2012 Chair, Biology Curricula Committee  
 2012 USFSP Faculty Research Council  
 2012 USF System ACE Committee, USFSP faculty liaison  
 2012 GE (General Education) Committee  
 2012 University T & P Task Force  
 2011 New Program Development: Biology  
 2011 New Program Development: Health Sciences  
 2011 T & P Task Force  
 2011 USFSP Open House for incoming students, ESP-Biology booth (twice)  
 2011 USF System ACE Committee, USFSP faculty liaison  
 2011 USFSP Faculty Research Council  
 2011 Biology curricula committee  
 2011 ESPG Chair, T&P Committee  
 2010 USFSP Faculty Research Council  
 2010 USFSP Student activity and service, athletic and health fees committee  
 2010 ESPG T&P committee  
 2010 CAS Chair, Biology curricula committee  
 2010 CAS Chair, Health Sciences curricula committee  
 2010 Open House for incoming students, ESP-Biology booth  
 2010 Chair, ESPG Curricula Committee  
 2010 ESPG Ballot Committee to elect Annual Review Committee members  
 2010 Debate Judge, USFSP Regional Debate  
 2010 Judge, History Fair at USFSP  
 2010 Science Judge, Spoonbill Oceanic Regional Bowl, Marine Science, USF  
 2010 Eight Annual Senior Wellness Fair. Healthy Home Environment. The Masonic  
 Home of Florida  
 2009 Guest speaker, Journalism class with Monica Postelnicu Ancu  
 2009 Volunteer for GIS Day with Barnali Dixon  
 2009 Open House for incoming students, Manned the pre-med and ESP booths  
 2009 Judge, USFSP Ethics Debate October  
 2009 Volunteer, Oceanography Camp for Girls, Career Day  
 2009 Chair, ESP Curricula Committee  
 2009 CAS Health Sciences curricula committee  
 2009 USFSP ESP Tenure and Promotion committee  
 2009 USFSP CAS Tenure and Promotion committee alternate  
 2009 Guest speaker, Poynter Library Science Café, Survival of the Misfits  
 2008 USFSP Exhibition: USFSP Faculty Research Expo, poster  
 2008 USFSP Discussion: Women Scholars Speak; panel member  
 2008 USFSP Forum: Promoting an Undergraduate Culture at USFSP; panel member  
 2008 USFSP Faculty Senate, CAS member of Faculty Committee on Student Admissions  
 2008 USFSP Chair, Nomination Committee for Chair of ESPG, Donny Smoak elected

2008 USFSP, Chair, Nomination Committee for Associate Chair of ESPG, Henry Alegria elected  
 2008 ESPG By-Laws Committee, for revisions  
 2008 ESPG Annual Review Committee  
 2008 USFSP CAS Tenure and Promotion committee alternate  
 2007 USF SP, Ethics Bowl team  
 2007 USFSP GIS Day mentor, Barnali Dixon  
 2007 USFSP CAS Tenure and Promotion committee alternate  
 2007 NSF grant proposal reviewer, DEB Population Biology  
 2007 USFSP summer student orientation presentations (7)  
 2007 Advised Wayne Hackett on a movie script, Eradicator.  
 2007 Edited a book by Aaron Kemmer, Exercising Your Penis.  
 2007 USFSP Student-Professor grievance committee  
 2007 Seminar Organizer, Franco Lodato, Bionics and Bio-Design  
 2007 Thesis Director, Honors Program USF, Juliet Summers  
 2007 USFSP Chair, Darwin Day Organizational Committee  
 2007 USFSP Chair, Search Committee, ESPG applied statistics assistant professor  
 2006 Thesis Chair, Honors Program USFSP, Ryan Campbell  
 2006 Thesis Director, Honors Program USF, Juliet Summers  
 2006 USF Chair, Honor's Committee, Juliet Summers.  
 2006 USFSP Chair, Search Committee, ESPG, applied mathematician assistant professor  
 2006 USFSP Chair, Search committee, ESPG applied statistics assistant professor  
 2006 Search Committee, COE, Science Education, assistant professor  
 2005 Consulted with local pest control company to help refine their ant bait.  
 2005 USF SP Poynter Library Video Collection Survey, Analyzed data, wrote report  
 2005 NSF Reviewer: Grant Proposal, DEB, Population and Evolution Program Cluster  
 2005 USF Reviewer, Travel Grant Proposals  
 2005 USF Reviewer, SRG and NRG proposals  
 2005 Student Orientation Committee  
 2005 USFSP Research Council  
 2005 USF Tampa Research Council  
 2005 Search Committee member, CAS, ESPG, mathematics assistant professor  
 2005 ESPG Colloquium Search Committee  
 2004 ESPG Colloquium Search Committee  
 2004 Ballot committee to elect ESPG Chair (Jim Gore elected)  
 2004 Search Committee for ESPG Office Manager (Doris Dixon hired)  
 2004 Annual Review Committee  
 2004 Mid-Tenure Review Committee  
 2004 USFSP Research Council  
 2004 USF Tampa Research Council  
 2004 CAS Faculty Governance Committee  
 2004 ESPG Budget Committee  
 2004 ESP Senior Scientist Search Committee. James Gore hired  
 2004 Candidate Application Committee for Joani Spadaro-Tenure and Promotion  
 2003 ESP Chemist Search Committee. Kathy Carvalho hired  
 2003 ESP Hydrologist Search Committee. Jim Krest hired

2003 ESP Ecologist Search Committee. Melanie Reidinger-Whitmore hired  
2003 ESP Senior Scientist Search Committee. Failed search  
2003 ESP Policy Search Committee. Andrew Price-Smith hired  
2003 Science Journalism Search Committee. Mark Walters hired  
2002 Science Journalism Search Committee. Kristy Swain hired  
2002 Food Vendor Review Committee.

### **Local Guest Lecturer, National and Local News Media**

2000-present. I answer several emails or calls a month on questions, from the identification and life history of spider and insect species to methods of pest control.  
2024 Cited in news article, [The Tourist's Guide to Famous Tampa Bay Animals](#). By Emily Smith.  
2024 Cited in article, The Nature Lover's Guide to Tampa Bay Wildlife by Joni West  
2025 Trail Blazers, *Competition versus cooperation: What ants reveal about our contradictory nature* (postponed by Hurricane Helene)  
2024 Florida Icon, Trend Magazine, 12/11/23 (clueless on who recommended me for this article).  
2024 ABC News, In Florida, expert says, fire ants prevent the transmission of Lyme disease by hunting ticks and their eggs.  
2024 Ze Frank on an episode of his [True Facts](#) YouTube series. This episode is all about animals that feign death.  
2024 ABC News, Expert says there are several possible reasons why whales end up beached  
<https://www.abcactionnews.com/news/region-sarasota-manatee/expert-says-there-are-several-possible-reasons-whales-end-up-beached>  
2024 Fox 13 News 11pm, Lower manatee deaths in 2024 since \$50 million allocated to manatee rescue and habitat restoration. <https://www.fox13news.com/video/1415028>  
2024 USF IB Seminar  
2024 Tampa Bay Times, Sunday issue, News article, Missing flamingos in Carolwood neighborhood.  
2024 How do ants crawl on walls. Non-profit CommonLit Program to ensure that all students, especially students in Title I schools, graduate with the reading, writing, communication, and problem-solving skills they need to be successful in college and beyond.  
2024 Tampa Bay Times, Peacocks Missing from Tampa Neighborhood. Sunday, Local Feature Article (quoted).  
2023 News article on flamingo in Clearwater after Hurricane Idalia. Quoted.  
2023 17 news articles on widow spider paper, including New York Times and National Geographic. [www.nytimes.com](http://www.nytimes.com) › 2023/03/13 › science [Brown Widows Are Winning the Fight for Your Attic and Garage](#)  
2022 ABC News, Invasion of the fruit fly  
2020 Paradise News: article on research  
2019 Nerd Night, Iberian Rooster Bar, Sex lives of animals  
2019 The Villages Birding Club, The lives of birds  
2019 Crow's Nest on Consolidation <https://crowsteststpete.com/2019/09/02/senior-professors-to-currall-dont-give-st-pete-the-shaft-again-in-consolidation/>

2019 Tampa Bay Times, article on alligator intrusion into Clearwater condo

2019 Article on love bugs in Mississippi, why the late mating swarm?  
<https://www.hattiesburgamerican.com/story/news/local/2019/05/20/lovebugs-facts-when-will-they-appear-late-mississippi-cars-stick-together/3708817002/>

2019 Fox 13 TV Amazon wildfires,  
<http://www.fox13news.com/news/usf-professor-calls-amazon-wildfires-a-catastrophe-of-huge-proportions->

2019 Fox 13 TV news, loss of insect species.

2019 Fox 13 TV news, kissing bugs, blood meals.

2019 Fox 13 TV news, love bugs, detritus feeders.

2018 ABC TV news, a cure of declining honeybee colonies? The jury is still out...says Cassill  
<http://www.wtsp.com/news/local/can-local-mans-product-save-bees-from-sting-of-extinction-he-says-yes/514071780> This is the link to the bee story you helped us with, you made it so much better and less of a commercial!

2018 Peace Corp fund raiser. Guest speaker, The sex lives of animals.

2017 Honor's stipend (\$600) donated to register 10 students and faculty to attend the Clearwater Marine Aquarium Workshop on Rescue and Rehabilitate Dolphins

2017 Advisor for a suspense novel by Dana Summers involving attacks by alligators.

2017 Channel 11 News. Lyme Disease. Ticks and fire ant interactions.

2016 Channel 8 News. Alligators <http://wfla.com/2016/06/15/expert-cautions-florida-residents-after-recent-alligator-run-ins/>

2016 WUSF TV: University Beat, Fire ants are people too.  
<https://www.youtube.com/watch?v=THr8CN3EjU&feature=youtu.be>

2016 National Weather Channel, Termites

2016 Channel 8 News; april 5, Termites in Florida  
<http://www.wtsp.com/money/consumer/termite-population-explosion-in-tampa-bay/121814464>

2016 St. Petersburg SciCafe at the Dali Museum. Guest speaker with Dr. Dae Sheridan, sexologist. Title: Monogamy versus polygamy among humans and other animals.

2015 Florida Teen SciCafe, Guest speaker, Survival of the Misfits

2015 USFSP Summer Grant: classroom experiences for high school students

2015 USFSP Mock Lecture for Student Recruitment (4)

2015 USFSP Teach-in for new students, Ocean Room USC

2015 Tampa Bay Times, June 22, BBC films documentary with Cassill at USFSP

2015 Channel 10 News; May 29<sup>th</sup>, 11pm; recluse spider expert

2015 TEDxUSF  
<https://www.dropbox.com/sh/rwd7ferr2irv9II/AADfXSIUMb5m1rUGUMYKRucZa?dl=0>

2014 Pint of Science Guest Speaker; Tampa Bay Times May 17, 2014, Page 2B.

2014 Commentary on Medical issues for elderly, Carol Gentry, WUSF Radio 89.7 FM >  
<http://health.wusf.usf.edu/post/which-medicare-path-do-i-take?nopop=1>

2014 Interview by Michael Butler for WUSF Radio 89.7 FM (11/19/2014)  
<http://wusfnews.wusf.usf.edu/post/usf-professor-finds-ants-ceos-not-different>

2014 Harborview News, JMP Statistics Software a must for data analysis

2014 Harborview News, [New USFSP Grad Publishes Research in National Journal](#)

2014 You Tube. The Ant Shrink (and others)

<http://dspace.nelson.usf.edu/xmlui/handle/10806/9990/browse?type=title>

2014 Pint of Science Guest Speaker

2014 USFSP Mock Lecture for Student Recruitment

2014 USFSP Faculty Research Lightening Talks

2013 Tampa Theatre Science Night; I introduced Empire of the Ants.

2013 Pier-Dali SciCafe Series, Panel Member, Orgasm

2013 Channel 28 News, Crazy Ants

2013 Channel 9 News, Crazy Ants

2013 USF Magazine, Volume 55, page 9.

2013 Today Show about the giant mosquito  
<http://www.today.com/video/today/52165917#52165917>

2013 Lightening Talk, Research Month, USFSP  
<http://decade.it.usf.edu/stpete/campus/DebySherry/DebySherry.html>

2013 USF News Online interview; <http://news.usf.edu/article/templates/?a=5333&z=210>

2013 CNN Online interview  
[http://www.cnn.com/video/?hpt=hp\\_t2#/video/us/2013/03/13/pkg-giant-mosquitos-florida.bay-news-9](http://www.cnn.com/video/?hpt=hp_t2#/video/us/2013/03/13/pkg-giant-mosquitos-florida.bay-news-9)

2013 WLS-TV Chicago;  
[http://abclocal.go.com/wls/story?section=news/national\\_world&id=9025764](http://abclocal.go.com/wls/story?section=news/national_world&id=9025764)

2013 Bay News 9 interview on Giant American Mosquito  
[http://www.cnn.com/video/?hpt=hp\\_t2#/video/us/2013/03/13/pkg-giant-mosquitos-florida.bay-news-9](http://www.cnn.com/video/?hpt=hp_t2#/video/us/2013/03/13/pkg-giant-mosquitos-florida.bay-news-9)

2012 USFSP Orientation, Guest Speaker: Undergraduate Research (twice)

2012 Dali Science Series, Guest Speaker: Dali as Comidean

2012 Dali Science Series, Guest Speaker: Dali and DNA

2012 Dali Science Series, Guest Speaker: Dali and Paranoia

2011 Dali Science Series, Guest Speaker: Dali and Masturbation

2011 Dali Science Series, Guest Speaker: Dali and Ants

2011 Dali Docent Dinner, Guest Speaker

2011 Mr. Media: Three Youtube interviews posted in July

2011 WFSU Morning talk show with Ted and Jack, Love Bugs

2010 Bay News 9, August 10, Interview on African honey bees

2010 Channel 8 News, May 2010, Interview on love bugs

2010 USF Magazine, Course-community project integration.

2008 USF SP, ESPG Seminar course, Eric Steimle

2008 BBC United Kingdom, “Swarm: Nature’s Incredible Invasions” TV documentary with Davis Tennant as narrator.

2008 Discovery Channel Canada, Living Planet Video

2007 USF SP, Frances Auld, writing course

2007 USF SP, Malcolm Butler, science education course

2007 USF SP, ESPG graduate seminar

2007 Creative Loafing Magazine 20:8-9, Ant wars

2007 USF Oracle, interview on love bugs by Emma Sylvester

2007 Channel 10 News, July 20, 2007 (see clip [www.stpt.usf.edu/cassill](http://www.stpt.usf.edu/cassill) ant-lady)

2007 Pinellas News, June 15, 2007, Front page: USF students publish year long research on fire ants



2007 eBlog <http://strangebehaviors.wordpress.com/cassill>  
 2006 eNews USFSP 1/4/06 Ant Behavior Draws National Spotlight  
 2006 Tampa Tribune 01/03/06 USF Ant Research Creates a Buzz  
 2006 USF SP, Chris Meindl's environmental policy class, evolution of morality  
 2006 USF SP, COE, 3-hr science ed. lecture, Malcolm Butler's undergrad class  
 2006 USF SP, COE, 7-hr science ed. workshop, Malcolm Butler's graduate class  
 2006 USF SP, Student Orientation Presenter (12 sessions)  
 2006 USF SP, Open House for High School Students (02/27/06)  
 2006 USF SP, Dr. Steven Geis's class on Environmental Ethics  
 2006 USF SP, Dr. James Krest's class for Honor's students  
 2005 Science News 12/24/05 Ant Iron Chefs. 168:405  
 2005 USF The Oracle 02/04/05. Ants go marching one-by-one  
 2005 Weekly Planet. 9/21/05 Best of the Bay, Best Professor  
 2005 Crow's Nest 04/08/05 Campus Critters  
 2005 USF The Oracle. 10/05/05 USF Professor named Best of the Bay  
 2005 Student Orientation Presenter (12 sessions)  
 2005 USF SP, Dr. Partan's class on Behavioral Robotics  
 2005 USF SP, Dr. Walter's class on Science Journalism  
 2005 USF SP, Dr. Rebecca John's class on Global Environmentalism  
 2005 USF SP, Dr. Toni Criss's class on Corporate Social Responsibility  
 2005 Suncoast Elementary School, Hernando Cty. Mrs. Sue Garter.  
 2005 USF SP Open House March 7<sup>th</sup>, 2005  
 2005 USF SP Student Orientations (12 of them during 2005).  
 2005 College Fair October 9<sup>th</sup>, 2005  
 2005 Booker High School. January 28<sup>th</sup>, 2005  
 2005 Sickles High School, Pat Frey, February 1, 2005

### **Local Community Service**

2019 Science Festival, Marine Quest, Fire ants on parade  
 2018 Science Festival, Marine Quest, Fire ants on parade  
 2017 Science Festival, Marine Quest, Fire ants on parade  
 2016 Science Festival, Marine Quest, Fire ants on parade  
 2015 Science Festival, Marine Quest, Fire ants on parade  
 2014 Science Festival, Marine Quest  
 2013 Science Festival, Marine Quest  
 2012 Science Festival, Marine Quest  
 2011 Marine Quest, Terrestrial Invertebrates (ants, roaches, spiders)  
 2009 Installed and cared for a living fire ant farm for the museum at Boyd Hill Nature Preserve.  
 2009 Water Detective USF Florida HIGH TECH  
 2008 Supervised five students working in the invertebrate collection for the Florida Fish and Wildlife Commission  
 2007 Supervised eight students working in the invertebrate collection for the Florida Fish and Wildlife Commission  
 2006 Supervised four students working in the invertebrate collection for the Florida Fish and Wildlife Commission

- 2005 Consulted with Mr. Stanley Baker's local pest control company (Baker's + 18 Corporation) to help refine their fire ant bait.
- 2004 Wrote a report for Herman Blumenthal III, Attorney at Law, on the bite wounds of brown recluse spiders. The case was settled favorably for their client out of court.
- 2004 Wrote a report of the same attorney regarding the nest-building habits of mud dauber wasps. The case was settled favorably for their client out of court.