

Christopher Allen Varnon

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University of North Texas
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EDUCATION

- 2017 Ph.D. Psychology
Oklahoma State University, Stillwater, OK
Advisor: Charles I. Abramson
- 2013 M.S. Psychology
Oklahoma State University, Stillwater, OK
Advisor: Charles I. Abramson
- 2011 M.S. Behavior Analysis
University of North Texas, Denton, TX
Advisor: Jesús Rosales-Ruiz
- 2007 B.S. Biology and Psychology
Jacksonville State University, Jacksonville, AL
Advisors: George R. Cline and William L. Palya

PROFESSIONAL APPOINTMENTS

- 2023 – Present Assistant Professor
Department of Behavior Analysis
University of North Texas, Denton, TX
- 2017 – 2023 Assistant Professor
Department of Psychology
Converse University, Spartanburg, SC

GRANTS, FELLOWSHIPS & AWARDS

- 2022 Dukes Family Award for Faculty Scholarly and Creative Achievement,
Converse University
- 2019 – 2022 SC INBRE Developmental Research Project Program, NIH P20GM103499
“Cockroach Model of Alcoholism”
- 2017 – 2019 SC INBRE Start-up Grant, NIH P20GM103499, “Invertebrate Models of
Substance Abuse”

- 2012 International Development Grant, Society for the Advancement of Behavior Analysis, “The Parallax Propeller Microcontroller as a Device for Research, Teaching, and Application of Behavior Analysis in Brasil”
- 2012 Marian Breland-Bailey Award, Applied Animal Behavior Special Interest Group of the Association for Behavior Analysis International
- 2012 Sigma Xi Grants in Aid of Research, “Transforming Fear to Friendly Behaviors in Young Quail”

PUBLICATIONS

- Varnon, C. A., Barrera¹, I. E., & Wilkes¹, I. N. (2022)** Learning and memory in the orange head cockroach (*Eublabeus posticus*). *PLoS ONE*, *17*(8), e0272598.
<https://doi.org/10.1371/journal.pone.0272598>
- Varnon, C. A., Adams¹, A. T. (2021).** Habituation of the light-startle response (LSR) of orange head cockroaches (*Eublabeus posticus*): Effects of acclimation, stimulus duration, presence of food, and intertrial interval. *Insects*, *12*(4), 1-15.
<https://doi.org/10.3390/insects12040339>
- Varnon, C. A., Valley¹, N. V., Beheler¹, C. R., & Coffin¹, C. A. (2021).** The disturbance leg-lift response (DLR): An undescribed behavior in bumble bees. *PeerJ*, *9*, 1-22.
<http://doi.org/10.7717/peerj.10997>
- Varnon, C. A., Dinges², C. W., Vest¹, A. J., & Abramson, C. I. (2020).** Conspecific and interspecific stimuli reduce initial performance in an aversive learning task in honey bees (*Apis mellifera*). *PLoS ONE*, *15*(2), e0228161.
<https://doi.org/10.1371/journal.pone.0228161>.
- Bergren², S., Latino, C. D, **Varnon, C. A., & Abramson, C. I. (2019).** A portable system for detecting infrasound using the propeller microcontroller. *International Journal of Comparative Psychology*, *32*, 1–13. <https://escholarship.org/uc/item/49j4h509>
- Varnon, C. A., & Abramson, C. I. (2018).** The propeller experiment controller: Automation for the comparative analysis of behavior in research and teaching. *The Journal of Mind and Behavior*, *39*(1-2), 1–153.
- Varnon, C. A., Dinges², C. W., Black², T. E., Wells, H., & Abramson, C. I. (2018).** Failure to find ethanol-induced conditioned taste aversion in honey bees (*Apis mellifera* L.). *Alcoholism: Clinical and Experimental Research*, *42*(7), 1260–1270.
<https://doi.org/10.1111/acer.13761>
- Varnon, C. A., Lang, H., & Abramson, C. I. (2018).** Automated research in comparative psychology: Limitations and new directions. *International Journal of Comparative Psychology*, *31*, 1–17. <https://escholarship.org/uc/item/8gf4d5tx>
- Varnon, C. A., Lang, H., & Abramson, C. I. (2018).** Автоматизированные исследования в области сравнительной психологии: ограничения и новые направления [Automated research in comparative psychology: Limitations and new directions]. *Ярославский педагогический вестник*, *5*, 243–255. <https://doi.org/10.24411/1813-145X-2018-10173>

- Dinges, C. W., **Varnon, C. A.**, Cota, L. D., Slykerman¹, S. C., & Abramson, C. I. (2017). Studies of learned helplessness in honey bees (*Apis mellifera* L.). *Journal of Experimental Psychology: Animal Learning and Cognition*, 43(2), 147–158. <https://doi.org/10.1037/xan0000133>
- Place, A. J., **Varnon, C. A.**, Craig, D. P. A., & Abramson, C. I. (2017). Exploratory investigations in operant thermoregulation in western diamond-backed rattlesnakes (*Crotalus atrox*). In M. J. Dreslik, W. K. Hayes, S. J. Beaupre, & S. P. Mackessy (Eds.), *The Biology of Rattlesnakes II* (pp. 213-227). ECO Herpetological Publishing and Distribution.
- Craig, D. P. A., **Varnon, C. A.**, Pollock¹, K. L., & Abramson, C. I. (2015). An assessment of horse (*Equus ferus caballus*) responding on fixed interval schedules of reinforcement: An individual analysis. *Behavioural Processes*, 120, 1–13. <https://doi.org/10.1016/j.beproc.2015.08.006>
- Abramson, C. A., Craig, D. P. A., **Varnon, C. A.**, & Wells, H. (2015). The effect of ethanol on reversal learning in honey bees (*Apis mellifera anatolica*): Response inhibition in a social insect model. *Alcohol*, 49(3), 245–258. <https://doi.org/10.1016/j.alcohol.2015.02.005>
- Craig, D. P. A., **Varnon, C. A.**, Sokolowski, M. B. C., Wells, H., & Abramson, C. I. (2014). An assessment of fixed interval timing in free-flying honey bees (*Apis mellifera ligustica*): An analysis of individual performance. *PLoS ONE*, 9(7), e101262. <https://doi.org/10.1371/journal.pone.0101262>
- Dinges, C. W., Avalos, A., Abramson, C. I., Craig, D. P. A., Austin¹, Z. M., **Varnon, C. A.**, Dal¹, F. N., Giray, T., & Wells, H. (2013). Aversive conditioning in honey bees (*Apis mellifera anatolica*): A comparison of drones and workers. *Journal of Experimental Biology*, 216, 4124–4134. <https://doi.org/10.1242/jeb.090100>
- Varnon, C. A.**, & Abramson, C. I. (2013). The propeller experiment controller: Low-cost automation for classroom experiments in learning and behavior. *Comprehensive Psychology*, 2, 1–18. <https://doi.org/10.2466/07.08.IT.2.2>
- Abramson, C. I., Lay¹, A., Bowser, T. J., & **Varnon, C. A.** (2012). The use of silver vine (*Actindia polygama* maxim, family Actindiaceae) as an enrichment aid for felines: Issues and prospects. *American Journal of Animal and Veterinary Sciences*, 7(1), 21-27. <https://doi.org/10.3844/ajavsp.2012.21.27>
- Craig, D. P. A., Grice, J. W., **Varnon, C. A.**, Gibson¹, B., Sokolowski, M. B. C., & Abramson, C. I. (2012). Social reinforcement delays in free-flying honey bees (*Apis mellifera* L.). *PLoS ONE*, 7(10), e46729. <https://doi.org/10.1371/journal.pone.0046729>
- Varnon, C. A.**, Martin¹, A. L., & Abramson, C. I. (2012). Conditioning methods for farm animals: A mini review. *Uludağ University Journal of the Faculty of Veterinary Medicine*, 2, 1–10.

¹ Undergraduate student coauthor.

² Graduate student coauthor.

INVITED PRESENTATIONS AND EVENTS

- Varnon, C. A.** (2021, March). *Insects as model organisms of behavior and biology* [Guest lecture]. Winthrop University, Department of Biology, Rock Hill, SC.
- Cartlidge, R. (Executive Producer). (2021, February, 2). Dr. Chris Varnon – learning with bumble bees, snakes, rats, pigeons and more! (No. 138) [Audio podcast episode]. In *Training Tidbits*. Animal Training Academy.
<https://www.animaltrainingacademy.com/podcast/training-tidbits/chris-varnon/>
- Cartlidge, R. (Executive Producer). (2021, February, 16). Chris Varnon; Assistant Professor of Psychology at Converse College ... Part 2 (No. 139) [Audio podcast episode]. In *Training Tidbits*. Animal Training Academy.
<https://www.animaltrainingacademy.com/podcast/training-tidbits/chris-varnon-2/>
- Varnon, C. A.** (2020, February). *Comparative psychology: From honey bees to horses* [Guest lecture]. Chicago Professional School of Psychology, Chicago, IL.
- Varnon, C. A.** (2019, August). *Comparative psychology: From honey bees to horses* [Invited presentation]. Clemson University, Greenville, SC.
- Varnon, C. A., & Abramson, C. I.** (2013, August). *The propeller experiment controller: Low-cost automation for research and classroom experiments in learning and behavior* [Invited presentation]. Instituto Federal de Educação, Ciência e Tecnologia da Paraíba Campus Cajazeiras, Cajazeiras, PB, Brazil.
- Varnon, C. A., & Abramson, C. I.** (2013, August). *The propeller experiment controller: Low-cost automation for research and classroom experiments in learning and behavior* [Invited presentation]. Invited presentation for the Instituto Federal de Educação, Ciência e Tecnologia da Paraíba Campus João Pessoa, João Pessoa, PB, Brazil.
- Varnon, C. A., & Abramson, C. I.** (2013, August). *The propeller experiment controller: Low-cost automation for research and classroom experiments in learning and behavior* [Invited presentation]. Instituto Federal de Educação, Ciência e Tecnologia da Paraíba Campus Sousa, Sousa, PB, Brazil.
- Varnon, C. A., & Abramson, C. I.** (2013, March). *Affordable automation: The propeller experiment controller for research, teaching, and application of behavior analysis* [Invited presentation]. University of North Texas, Department of Behavior Analysis, Denton, TX.

PRESENTATIONS

- Lonon, J., Etha, H., Begum, H., & Varnon, C. A. (2023, July). Development and Simulation of a Mathematical Model of Habituation Learning. [Poster session]. 2023 NSF RET Virtual Poster Session, Online.
- Brown¹, K., Erturk, N., Bohler, M., & **Varnon, C. A.** (2023, February). *Optimization of nucleic acid isolation in Eublaberus posticus*. [Poster session]. Carolina IDEa Networks of Biomedical Research Excellence 2023 Science Symposium, Columbia, SC.

- Knickerbocker¹, E., Sajid¹, A., Cox¹, A., & **Varnon, C. A.** (2023, February). *Exploratory investigations of spatial learning and behavior in orange head cockroaches (Eublabeus posticus)* [Poster session]. Carolina IDeA Networks of Biomedical Research Excellence 2023 Science Symposium, Columbia, SC.
- Knickerbocker¹, E., Sajid¹, A., Cox¹, A., & **Varnon, C. A.** (2022, October). *Exploratory investigations of spatial learning and behavior in orange head cockroaches (Eublabeus posticus)* [Poster session]. 38th Annual Meeting of the Southeastern Association for Behavior Analysis, Columbia, SC. <https://www.sebaonline.org/>
- Varnon, C. A.** (2022, May). *Cockroaches as model organisms for behavior analysis* [Conference session]. 48th Annual Convention of the Association for Behavior Analysis International, Boston, MA. <https://www.abainternational.org/>
- Edge¹, K., Disco¹, H., Avakian¹, R., & **Varnon, C. A.** (2022, March). *The effect of alcohol on startle response in orange head cockroaches* [Poster session]. 68th Annual Meeting of the Southeastern Psychological Association, Hilton Head Island, SC. <https://www.sepaonline.com/>
- Varnon, C. A.**, (2021, November). *Developing a new invertebrate model of alcoholism* [Poster session]. 2021 Southeast Regional IDeA Conference, San Juan, PR.
- Barrera¹, E., Wilkes¹, I., & **Varnon, C. A.** (2021, May). *Appetitive conditioning in the orange head cockroach (Eublabeus posticus)* [Poster session]. 47th Annual Convention of the Association for Behavior Analysis International, Online. <https://www.abainternational.org/>
- Varnon, C. A.**, & Adams¹, A. T. (2021, May). *Habituation of the light-startle response of orange head cockroaches (Eublabeus posticus)* [Poster session]. 47th Annual Convention of the Association for Behavior Analysis International, Online. <https://www.abainternational.org/>
- Varnon, C. A.**, Barrera¹, E., & Wilkes¹, I. (2021, April). *Appetitive conditioning in the orange head cockroach (Eublabeus posticus)* [Conference session]. 28th Annual International Conference on Comparative Cognition, Online. <https://www.comparativecognition.org/>
- Varnon, C. A.** (2021, January). *Developing a new invertebrate model of alcoholism* [Conference session]. South Carolina IDeA Networks of Biomedical Research Excellence 2021 Science Symposium, Online.
- Wilkes¹, I., Barrera¹, E., & **Varnon, C. A.** (2021, January). *Learning and memory in the orange head cockroach (Eublabeus posticus)* [Poster session]. South Carolina IDeA Networks of Biomedical Research Excellence 2021 Science Symposium, Online.
- Varnon, C. A.** (2020, May). *Bumble bees as model organisms for behavior analysis and comparative psychology* [Conference session]. 46th Annual Convention of the Association for Behavior Analysis International, Online. <https://www.abainternational.org/>

- Vallely¹, N., Beheler¹, C., & **Varnon, C. A.** (2020, January). *Development of an invertebrate model of substance use: Challenges and novel methods with bumble bees* [Poster session]. South Carolina IDeA Networks of Biomedical Research Excellence 2019 Science Symposium, Columbia, SC.
- Adams¹, A. T., & **Varnon, C. A.** (2019, April). *Habituation and appetitive conditioning in cockroaches (*Gromphadorhina portentosa* and *Eublabeus posticus*)* [Poster session]. 26th Annual International Conference on Comparative Cognition, Melbourne, Beach, FL. <https://www.comparativecognition.org/>
- Vallely¹, N., Coffin¹, C., & **Varnon, C. A.** (2019, April). *A novel method to study learning in wild and captive bumble bees: The defensive leg-lift response (DLR)* [Poster session]. Poster presented at the 26th Annual International Conference on Comparative Cognition, Melbourne Beach, FL.
- Adams¹, A. T., & **Varnon, C. A.** (2018, August). *Ethanol consumption and in learning hissing cockroaches (*Gromphadorhina portentosa*) and orange head cockroaches (*Eublabeus posticus*)* [Poster session]. South Carolina IDeA Networks of Biomedical Research Excellence 2018 Science Symposium, Columbia, SC.
- Vallely¹, N., Coffin¹, C., & **Varnon, C. A.** (2018, August). *Ethanol consumption and learning in bumble bees (*Bombus impatiens*)* [Poster session]. South Carolina IDeA Networks of Biomedical Research Excellence 2018 Science Symposium, Columbia, SC.
- Varnon, C. A.**, Abramson, C. I., Craig, D. P. A., Black², T. E., Dinges², C. W., & Wells, H. (2018, May). *Honey bees as a behavioral and biological model of ethanol consumption: Research on proboscis extension conditioning* [Conference session]. 44th Annual Convention of the Association for Behavior Analysis International, San Diego, CA. <https://www.abainternational.org/>
- Lang, H., **Varnon, C. A.**, McKerchar, T. L., & Witts, B. N. (2018, May). *A review of affordable custom-built devices for contemporary operant research* [Poster session]. 2018 Annual Conference of the Society for the Quantitative Analyses of Behavior, San Diego, CA. <https://www.sqab.org/>
- Varnon, C. A.**, Dinges, C. W., & Abramson, C. I. (2016, May). *Social discriminative stimuli in aversive conditioning in honey bees* [Conference session]. 42nd Annual Convention of the Association for Behavior Analysis International, Chicago, IL. <https://www.abainternational.org/>
- Dinges, C., **Varnon, C. A.**, Craig, D. P. A., Abramson, C. I., Avalos, A., & Tugrul, G. (2015, May). *Aversive conditioning in honey bees: Influence of master/yoked role reversal in place preference conditioning* [Conference session]. 41st Annual Convention of the Association for Behavior Analysis International, San Antonio, TX. <https://www.abainternational.org/>
- Phelps, B. J., & **Varnon, C. A.** (2015, May). *Using a microprocessor-controller for measures of foraging behavior by free roaming eastern fox squirrels *Sciurus niger** [Poster session]. 41st Annual Convention of the Association for Behavior Analysis International, San Antonio, TX. <https://www.abainternational.org/>

- Varnon, C. A.**, Craig, D. P. A., Place, A. J., & Abramson, C. I. (2015, May). *Operant conditioning in snakes: Temperature change as a reinforcer* [Conference session]. 41st Annual Convention of the Association for Behavior Analysis International, San Antonio, TX. <https://www.abainternational.org/>
- Varnon, C. A.**, Dinges, C. W., & Abramson, C. I. (2015, May). *Affordable custom research equipment using 3D printers and the propeller experiment controller* [Poster session]. 41st Annual Convention of the Association for Behavior Analysis International, San Antonio, TX. <https://www.abainternational.org/>
- Place, A. J., **Varnon, C. A.**, Craig, D. P. A., & Abramson, C. I. (2014, June). *Investigations in learning arbitrary behaviors to thermoregulate in rattlesnakes (*Crotalus atrox* and *Crotalus horridus*)* [Poster session]. Biology of Pitvipers Symposium 2, Tulsa, OK.
- Craig, D. P. A., Grice, J., **Varnon, C. A.**, Sokolowski, M., & Abramson, C. I. (2014, May). *The impact of reinforcement delays on honey bee (*Apis mellifera* L.) operant responding* [Conference session]. 40th Annual Convention of the Association for Behavior Analysis International, Chicago, IL. <https://www.abainternational.org/>
- Dinges, C., Abramson, C. I., Craig, D. P. A., Austin¹, Z. M., **Varnon, C. A.**, Nur Dal¹, F., Giray, T., & Wells, H. (2014, May). *Aversive conditioning in honey bees (*Apis mellifera antolica*): A comparison of drones and workers* [Conference session]. 40th Annual Convention of the Association for Behavior Analysis International, Chicago, IL. <https://www.abainternational.org/>
- Varnon, C. A.**, & Abramson, C. I. (2014, May). *Issues in the study of invertebrate learning* [Conference session]. 40th Annual Convention of the Association for Behavior Analysis International, Chicago, IL. <https://www.abainternational.org/>
- Varnon, C. A.**, & Abramson, C. I. (2014, May). *Stimulating research in comparative psychology with the affordable propeller experiment controller* [Conference session]. 40th Annual Convention of the Association for Behavior Analysis International, Chicago, IL. <https://www.abainternational.org/>
- Craig, D. P. A., **Varnon, C. A.**, & Abramson, C. I. (2013, May). *Fixed interval performance in free-flying honey bees (*Apis mellifera* L.): An analysis of individual performance* [Poster session]. 39th Annual Convention of the Association for Behavior Analysis International, Minneapolis, MN. <https://www.abainternational.org/>
- Varnon, C. A.**, & Abramson, C. I. (2013, May). *Affordable automation: The parallax propeller microcontroller as device for research, teaching, and application of behavior analysis* [Conference session]. 39th Annual Convention of the Association for Behavior Analysis International, Minneapolis, MN. <https://www.abainternational.org/>
- Varnon, C. A.**, Craig, D. P. A., Place, A. J., & Abramson, C. I. (2012, May). *Issues in operant learning in rattlesnakes* [Poster session]. 38th Annual Convention of the Association for Behavior Analysis International, Seattle, WA. <https://www.abainternational.org/>

- Varnon, C. A.**, Rosales-Ruiz, J., Abramson, C. I., & Long², S. (2012, May). *Operant analysis of imprinting in human-reared pigeons* [Conference session]. 38th Annual Convention of the Association for Behavior Analysis International, Seattle, WA. <https://www.abainternational.org/>
- Chicas-Mosier¹, A., **Varnon, C. A.**, & Abramson, C. I. (2012, April). *A new training technique to study learning in planarians* [Conference session]. Oklahoma Psychological Society Spring Research Conference 2012, Edmund, OK.
- Dinges¹, C., **Varnon, C. A.**, & Abramson, C. I. (2012, April). *Cued avoidance in honey bees (*Apis mellifera*): An active avoidance assay proposal* [Conference session]. Oklahoma Psychological Society Spring Research Conference 2012, Edmund, OK.
- Varnon, C. A.**, & Abramson, C. I. (2012, April). *Sexual conditioning in human-imprinted pigeons* [Conference session]. Oklahoma Psychological Society Spring Research Conference 2012, Edmund, OK.
- Varnon, C. A.**, Craig, D. P. A., Place, A. J., & Abramson, C. I. (2012, April). *Issues in operant learning in rattlesnakes* [Conference session]. Oklahoma Psychological Society Spring Research Conference 2012, Edmund, OK.
- Varnon, C. A.**, & Rosales-Ruiz, J. (2011, May). *Operant control of imprinting* [Poster session]. 37th Annual Convention of the Association for Behavior Analysis International, Denver, CO. <https://www.abainternational.org/>

¹ Undergraduate student coauthor.

² Graduate student coauthor.

PROFESSIONAL AFFILIATIONS

- | | |
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| 2022 – Present | Southeastern Association for Behavior Analysis |
| 2019 – Present | Comparative Cognition Society |
| 2019 – Present | Southeastern Psychological Association |
| 2011 – Present | Association for Behavior Analysis International |

TEACHING EXPERIENCE

Converse University

- General Psychology (2017 – 2020, 4 sections)
- Psychology of Learning (2017 – 2023, 12 sections)
- Statistics and Experimental Design II (2017 – 2021, 10 sections)
- Sensation and Perception (2017 – 2019, 2 sections)
- Human Growth and Development (2022 – 2023, 3 sections)
- Graduate Human Growth and Development (2022, 1 section)
- Research in Substance Abuse Honors Directed Independent Study (2019, 1 section)
- Neuroscience (2023, 1 section)

Oklahoma State University

- Introductory Psychology (2012 – 2015, 12 sections)
- Neurobiological Psychology (2015 – 2017, 4 sections)
- Comparative Psychology (2015, 1 section)
- Quantitative Methods in Psychology Lecture (2015, 1 section)
- Quantitative Methods in Psychology Laboratory (2013, 1 section)

PROFESSIONAL SERVICE

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| 2022 | Reviewer for National Science Center Poland |
| 2022 | Reviewer for SC INBRE Developmental Research Project proposals |
| 2021 – Present | Editorial Board – <i>International Journal of Comparative Psychology</i> |
| 2020 – 2023 | Dorman High School STEM Advisory Board |
| 2020 – 2023 | Reviewer Board – <i>Insects</i> |
| 2019 – Present | Board of Editors – <i>Journal of the Experimental Analysis of Behavior</i> |
| Ad hoc reviewer | <i>Alcoholism: Clinical & Experimental Research</i>
<i>Animals</i>
<i>Biology Letters</i>
<i>Journal of Social Sciences</i>
<i>Agronomy</i>
<i>Current Psychology</i> |