Shawn T. Schwartz

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Education

2021-   **Ph.D. in Psychology (Neuroscience), Stanford University**
Advisor: Anthony Wagner

2019-2021   **M.S. in Biology, University of California, Los Angeles**
Thesis: *A novel quantitative workflow for high-throughput organismal color pattern analysis*
Advisor: Michael Alfaro
Thesis Committee: Greg Grether, Felipe Zapata, Michael Alfaro (Chair)

2015-2019   **B.S. in Cognitive Science, University of California, Los Angeles**
Specialization in Computing, Highest Departmental Honors
Honors Thesis: *Choosing risks and rewards: Memory for positive and negative item-location associations*
Advisor: Alan Castel

2015-2019   **B.S. in Biology, University of California, Los Angeles**
Specialization in Computing, Departmental Honors
Honors Thesis: *The role of big data and machine learning: Methods for assessing macroevolutionary dynamics of color pattern diversity in coral reef fishes*
Advisor: Michael Alfaro

Experience

2018-2021   **Research Assistant, Alfaro Macroevolution Laboratory, UCLA**
– Comparative phylogenetics and macroevolution of phenotypically diverse vertebrates
– Developed novel R package for studying organismal color pattern evolution
– Developed high-throughput deep learning pipeline for phenomic-scale image preprocessing

2018-2021   **Research Assistant, Memory and Lifespan Cognition Laboratory, UCLA**
– Programmed behavioral experiments of visuospatial memory selectivity and value-directed memory
– Classroom studies of metacognition and test anxiety to develop evidence-based teaching strategies

2020   **Freelance Front-End Web Developer, Associated Students UCLA (ASUCLA)**
– Designed, programmed, and maintained the Virtual UCLA New Student Orientation website

2019   **New Student Advisor, UCLA New Student & Transition Programs**
– Provided one-on-one counseling and academic advising to >150 new undergraduate students
– Supported new students with curriculum planning and transitioning to college
– Facilitated group discussions on sensitive topics (Title IX, substance abuse, sexual health)

2016-2019	**Full-Stack Web Developer/Technical Assistant, ASUCLA** – Redesigned entire ASUCLA institutional website and implemented backend – Managed weekly mass email promotions for 12 UCLA campus stores
2017-2019	**Freelance Designer & Web Developer, Kidz Dental Care** – Designed, built, and maintained pediatric dentistry's responsive websites – Created HIPAA-compliant secure patient information transmission pipeline
2016-2018	**Full-Stack Web Developer, LanguageBird®, LLC** – Developed and managed dynamic user experience for an accredited online language school
2017-2019	**Care Extender Intern, Department Coordinator Assistant, UCLA Health – Santa Monica** – Shadowed medical staff in radiology, outpatient surgery, and emergency department – Audited Care Extender Interns throughout their assigned departments for quality control
2017-2018	**Data Analyst Intern, UCLA Health Faculty Practice Group** – Generated statistical reports for hospice referral using UCLA patients' Electronic Medical Records

Publications

PEER-REVIEWED JOURNAL ARTICLES

7. 2021   Snedden, C. E.*, Makanani, S. K.*, **Schwartz, S. T.**, Gamble, A., Blakey, R. V., Borremans, B., Helman, S. K., Espericueta, L., Valencia, A., Endo, A., Alfaro, M. E., & Lloyd-Smith, J. O. (2021). SARS-CoV-2: Cross-scale insights from ecology and evolution. *Trends in Microbiology*. doi.org/10.1016/j.tim.2021.03.013
*Equal Contribution

6. 2021   Siegel, A. L. M., **Schwartz, S. T.**, & Castel, A. D. (2021). Selective memory disrupted in intra-modal dual-task encoding conditions. *Memory & Cognition*. doi.org/10.3758/s13421-021-01166-1

5. 2021   Silaj, K. M., **Schwartz, S. T.**, Siegel, A. L. M., & Castel, A. D. (2021). Test anxiety and metacognitive performance in the classroom. *Educational Psychology Review*. doi.org/10.1007/s10648-021-09598-6

4. 2020   Whatley, M. C., Siegel, A. L. M., **Schwartz, S. T.**, Silaj, K. M., & Castel, A. D. (2020). Younger and older adults' mood and expectations regarding aging during COVID-19. *Gerontology and Geriatric Medicine, 6*, 1-9. doi.org/10.1177/2333721420960259

3. 2020   **Schwartz, S. T.**, Siegel, A. L. M., & Castel, A. D. (2020). Strategic encoding and enhanced memory for positive value-location associations. *Memory & Cognition, 48*, 1015-1031. doi.org/10.3758/s13421-020-01034-4

2. 2019   Alfaro, M. E., Karan, E. A., **Schwartz, S. T.**, & Shultz, A. J. (2019). The evolution of color pattern in butterflyfishes (Chaetodontidae). *Integrative and Comparative Biology, 59*(3), 604-615. doi.org/10.1093/icb/icz119

1. 2018   Dang, J., Lin, B., Yuan, J., **Schwartz, S. T.**, Shah, R. M., & Garg, N. K. (2018). Smart access to 3D structures. *Nature Reviews Chemistry, 2*(7), 95-96. doi.org/10.1038/s41570-018-0021-y

Schwartz, S. T., & Alfaro, M. E. (under review). *Sashimi*: Automatic high-throughput pipeline for organismal image segmentation using deep learning. Manuscript under review.

Siegel, A. L. M., Schwartz, S. T., & Castel, A. D. (under review). Metacognitive monitoring and prioritization in visuospatial memory. Manuscript under review.

Murphy, D. H., Silaj, K. M., Schwartz, S. T., Rhodes, M. G., & Castel, A. D. (under review). An own-race bias in the recall of associative information. Manuscript under review.

Richmond, L. L., Kearley, J., Schwartz, S. T., & Hargis, M. B. (under review). Take a load off: Examining partial and complete cognitive offloading of medication information. Stage 1 Registered Report under review.

Murphy, D. H., Schwartz, S. T., & Castel, A. D. (under review). Responsible retrieval: The dynamics of free recall when responsibly remembering. Manuscript under review.

Siegel, A. L. M., Schwartz, S. T., Eich, T. S., & Castel, A. D. (under review). The role of encoding and retrieval strategies on prioritization in memory in younger and older adults. Manuscript under review.

Silaj, K. M., Schwartz, S. T., Castel, A. D., & McDonough, I. M. (under review). Is the future bright or bleak? Assessing past and future outlooks across the adult lifespan. Manuscript under review.

MANUSCRIPTS IN PREPARATION

Schwartz, S. T., Tsai, W. L. E., Karan, E. A., & Alfaro, M. E. (in prep). *Charisma*: an R tool to automatically determine discrete color classes for high-throughput color pattern analysis. Manuscript in preparation.

Schwartz, S. T., Silaj, K. M., Brar, N. K., & Castel, A. D. (in prep). College students anxiety, preparedness, and perceptions of remote learning effectiveness during COVID-19: A classroom study. Manuscript in preparation.

Schwartz, S. T., Siegel, A. L. M., & Castel, A. D. (in prep). Burgers over broccoli: Better spatial memory for high-calorie over low-calorie food items. Manuscript in preparation.

Siegel, A. L. M., Schwartz, S. T., & Eich, T. S. (in prep). Knowledge of health-related information across the adult lifespan: Is error correction dependent on confidence? Manuscript in preparation.

Whatley, M. C., Schwartz, S. T., Block, J. B., & Castel, A. D. (in prep). One bad apple: Visual memory and misinformation for the Apple logo. Manuscript in preparation.

Conference Presentations and Talks

*Presenting Author, **Supervised Undergraduate Student, † Equal Contribution

24. 2021   Perillo, M.*,**,†, Schwartz, S. T. †, & Alfaro, M. E. (2021, May). *Geographical relationships of coral reef fish color pattern geometry and speciation rates.* **Poster** presented at the 24th Annual UCLA Biology Research Symposium in Los Angeles, CA, USA. May 26. ***Awarded 2nd Place for Best Poster****

23. 2021   Brar, N. K.*,**, **Schwartz, S. T.**, Silaj, K. M., & Castel, A. D. (2021, May). *A classroom study: Student attitudes and anxiety during a pandemic.* **Talk** presented at the UCLA Undergraduate Research & Creativity Showcase in Los Angeles, CA, USA. May 25.

22. 2021   Brar, N. K.*,**, **Schwartz, S. T.**, Silaj, K. M., & Castel, A. D. (2021, May). *A classroom study: Student attitudes and anxiety during a pandemic.* **Talk** presented at the 30th Annual UCLA Psychology Undergraduate Research Conference in Los Angeles, CA, USA. May 14.

21. 2021   **Schwartz, S. T.*** (2021, April). *College students anxiety, preparedness, and perceptions of remote learning effectiveness during COVID-19: A classroom study.* **Talk** presented at the National Center for the Integration of Research, Teaching and Learning Network Teaching-as-Research Conference. April 15.

20. 2021   Karan, E. A.* †, **Schwartz, S. T. †**, Perillo, M.**, & Alfaro, M. E. (2021, January). *Evolutionary and functional consequences of sexually dimorphic color pattern diversity in Labrid fishes.* **Talk** presented at the UCLA Department of Ecology & Evolutionary Biology EcoEvoPub Seminar Series. January 14.

19. 2021   **Schwartz, S. T.***, Tsai, W. L. E., Karan, E. A., & Alfaro, M. E. (2021, January). *Charisma: An R tool to automatically determine discrete color classes for high-throughput color pattern analysis.* **Talk** presented at the Society for Integrative and Comparative Biology (SICB) Virtual Annual Meeting. January 3.

18. 2021   **Schwartz, S. T.***, & Alfaro, M. E., (2021, January). *Sashimi: Automatic high-throughput pipeline for organismal image segmentation using deep learning.* **Poster** presented at the Society for Integrative and Comparative Biology (SICB) Virtual Annual Meeting. January 3.

17. 2021   Karan, E. A.* †, **Schwartz, S. T. †**, Perillo, M.**, & Alfaro, M. E. (2021, January). *Its not just a phase: Evolutionary and functional consequences of sexually dimorphic color pattern diversity in Labrid fishes.* **Talk** presented at the Society for Integrative and Comparative Biology (SICB) Virtual Annual Meeting. January 3.

16. 2021   Weller, H. I.*, **Schwartz, S. T.**, Karan, E. A., & Lord, N. P. (2021, January). *Recolorize: a flexible R package for color classification.* **Talk** presented at the Society for Integrative and Comparative Biology (SICB) Virtual Annual Meeting. January 3.

15. 2020   **Schwartz, S. T.* †**, Silaj, K. M.* †, Brar, N. K.**, & Castel, A. D. (2020, December). *Anxiety, preparedness, and students perceptions of remote learning effectiveness during COVID-19.* **Talk** presented at CogFog, Bjork Learning and Forgetting Lab. December 11.

14. 2020   **Schwartz, S. T.* †**, Silaj, K. M.* †, Siegel, A. L. M., & Castel, A. D. (2020, November). *Examining the effects of test anxiety on metacognitive performance.* **Poster** presented at the Psychonomic Society's 61st Annual Meeting online. November 21. ***J. Frank Yates Student Conference Award recipient for supporting diversity & inclusion in cognitive psychology***

13. 2020   Siegel, A. L. M.* †, **Schwartz, S. T.* †**, & Castel, A. D. (2020, November). *Selective memory disrupted in intra-modal dual-task encoding conditions.* **Poster** presented at the Psychonomic Society's 61st Annual Meeting online. November 19.

12. 2020   **Schwartz, S. T.* †**, Siegel, A. L. M.†, & Castel, A. D. (2020, November). *Selective memory disrupted in intra-modal dual-task encoding conditions.* **Talk** presented live at the Virtual Bay Area Memory Meeting (BAMM!). November 12.

11. 2020   Silaj, K. M.* †, **Schwartz, S. T.* †**, Siegel, A. L. M., & Castel, A. D. (2020, September). *Test anxiety and metacognitive performance in the classroom.* **Poster** presented at the 2020 UC Psychology Teaching & Learn-

ing Virtual Conference online. September 18.

10. 2020   Siegel, A. L. M.*, **Schwartz, S. T.**, & Castel, A. D. (2020, April). *Age-related differences in local and global metacognitive accuracy in a visuospatial selectivity task.* <u>**Poster**</u> selected to be presented at the Cognitive Aging Conference in Atlanta, GA, USA. April 16. **Cancelled due to COVID-19**

9. 2019   **Schwartz, S. T.***, & Alfaro, M. E. (2019, November). *High-throughput phenoscaping using deep learning for accurate automatic instance segmentation of fish images.* <u>**Poster**</u> presented at the UCLA Institute for Digital Research & Education Early Career Researcher Day in Los Angeles, CA, USA. November 20. ***Awarded 1 of 4 Best Poster Awards of 40 posters****

8. 2019   Siegel, A. L. M.* †, **Schwartz, S. T.* †**, & Castel, A. D. (2019, November). *Memory and metamemory for the location of items: The effects of information importance and encoding difficulty.* <u>**Poster**</u> presented at the Psychonomic Society's 60th Annual Meeting in Montréal, Quebec, Canada. November 16.

7. 2019   Whatley, M. C.* †, **Schwartz, S. T.* †**, Block, J. B., Siegel, A. L. M., & Castel, A. D. (2019, November). *One bad apple: Visual memory and misinformation for the Apple logo.* <u>**Poster**</u> presented at the Psychonomic Society's 60th Annual Meeting in Montréal, Quebec, Canada. November 15.

6. 2019   **Schwartz, S. T.***, Karan, E. A., & Alfaro, M. E. (2019, May). *Using machine learning to quantify color pattern diversity in Butterflyfishes* (*Chaetodontidae*)*.* <u>**Poster**</u> presented at the 22nd Annual UCLA Biology Research Symposium in Los Angeles, CA, USA. May 22.

5. 2019   **Schwartz, S. T.***, Siegel, A. L. M., & Castel, A. D. (2019, May). *Risks and rewards: Memory for positive and negative item-location associations.* <u>**Poster**</u> presented at the 22nd Annual UCLA Undergraduate Research Poster Day in Los Angeles, CA, USA. May 21. ***UCLA Dean's Research Prize Nominee****

4. 2019   **Schwartz, S. T.***, Siegel, A. L. M., & Castel, A. D. (2019, May). *Risks and rewards: Memory for positive and negative item-location associations.* <u>**Poster**</u> presented at the 28th Annual UCLA Psychology Undergraduate Research Conference in Los Angeles, CA, USA. May 10.

3. 2019   **Schwartz, S. T.***, Siegel, A. L. M., & Castel, A. D. (2019, May). *Memory for positive and negative item-location associations.* <u>**Poster**</u> presented at Whittier College's 17th Annual Psi Chi Psychology Undergraduate Research Conference in Whittier, CA, USA. May 4.

2. 2019   Karan, E. A.* †, & **Schwartz, S. T.* †** (2019, May). *Quantitative approaches to studying color pattern evolution.* <u>**Invited Guest Lecture**</u> given at Claremont McKenna College, W. M. Keck Science Center Department of Biology in Claremont, CA, USA. May 2.

1. 2019   **Schwartz, S. T.*** (2019, May). *Risks and rewards: Memory for positive and negative item-location associations.* <u>**Talk**</u> for Highest Departmental Honors Thesis Seminar given at the UCLA Department of Psychology in Los Angeles, CA, USA. May 1.

Press Coverage of Research

3. 2021   "High-Stakes testing vs. anxiety and metacognition." *Teacher Toolkit.* (https://www.teachertoolkit.co.uk/2021/03/30/test-anxiety/) by McGill, R. M. (2021, March 30).

2. 2020   "Early Career Research Day winner improves neural network training for biological research." *UCLA Institute for Digital Research & Education.* (https://idre.ucla.edu/featured/early-career-research-day-winner-

[improves-neural-network-training-for-biological-research](#)) by Ventura, K. (2020, July 1).

1. 2018   "Student-developed tool brings 3D molecular models to smartphone screen." *The Daily Bruin*. (https://dailybruin.com/2018/07/30/student-developed-tool-brings-3d-molecular-models-to-smartphone-screen) by Nakahara, E. (2018, July 30).

Awards and Honors

2021   Sigma Xi Scientific Honor Society
2021   CIRTL Scholar Certification, UCLA Center for the Integration of Research, Teaching, & Learning
2021   2nd Place, UCLA Ecology and Evolutionary Biology 24th Annual Research Symposium
2021   Honorable Mention, National Science Foundation Graduate Research Fellowship (NSF GRFP)
2020   J. Frank Yates Student Conference Diversity & Inclusion Award, Psychonomic Society ($1,000)
2020   IDRE Early Career Research Day Best Poster Award, UCLA
2020   Chancellor's Service Award, UCLA
2020   Timothy Chheang Memorial Scholarship Award, Department of Psychology, UCLA ($1,000)
2020   Highest Departmental Honors, Psychology, UCLA
2020   Departmental Honors, Ecology and Evolutionary Biology, UCLA
2020   Dean's Prize Nominee for Excellence in Undergraduate Faculty-Mentored Research, UCLA

Teaching Experience

Lab Sections

Research Methods in Psychology (PSYCH 100B), UCLA
– *Teaching Associate*, Summer 2021, 18 Undergraduates
– *Teaching Associate*, Fall 2020, 20 Undergraduates
– *Teaching Associate*, Summer 2020, 20 Undergraduates

Laboratory in Cognitive Psychology (PSYCH 121), UCLA
– *Teaching Associate*, Summer 2021, 24 Undergraduates

Practical Computing for Evolutionary Biologists and Ecologists (EE BIOL C177/C234), UCLA
– *Teaching Assistant*, Winter 2020, 14 Undergraduates & 5 Graduate Students

Seminar Courses

Biology and Social Justice (EE BIOL 156), UCLA
– *Teaching Associate*, Winter 2021, 42 Undergraduates
– *Teaching Associate*, Summer 2020, 38 Undergraduates
– *Teaching Assistant*, Fall 2019, 41 Undergraduates

Lecture Sections

Evolutionary Medicine (EE BIOL 185), UCLA – *Teaching Associate*, Spring 2021, 24 Undergraduates
– *Teaching Assistant*, Spring 2020, 36 Undergraduates

Workshops

Introduction to R for Ecology and Evolutionary Biology (EE BIOL 201), UCLA
– *Assistant*, Fall 2019, 21 Graduate Students

Technical Skills

PROGRAMMING (12 YEARS EXPERIENCE)

– *Languages*: Python, R, MATLAB, C++, PHP, JavaScript, HTML5, CSS3, SQL
– *Machine Learning*: TensorFlow, Keras, AlexNet, Mask R-CNN, deep learning
– *Imaging Analyses in R*: image adjacency analysis, boundary strength analysis, color spaces
– *Other Tools*: regular expressions, Jekyll, jsPsych, Psychtoolbox, Collector, Jmol

STATISTICS

– *Statistical Analyses:* analysis of variance, correlation, chi-square, regression, hierarchical linear (multi-level) modeling (HLM), principal component analysis (PCA), exploratory and confirmatory factor analysis, Bayesian inference, multidimensional scaling, t-SNE, partitional K-means & hierarchical agglomerative clustering, dendrogram analysis
– *Phylogenetic Comparative Methods:* phylogenetic generalized least squares (PGLS), phylogenetic independent contrasts, ancestral state reconstruction, Bayesian Analysis of Macroevolutionary Mixtures (BAMM), Markov chain Monte Carlo (MCMC)

Leadership and Service

Reviewing: Association for Psychological Science (APS) 2020, 2021 Student Research Award

2020	Mathematics & Computer Sciences Judge, LA County Science and Engineering Fair
2020	Volunteer High School Teacher, Splash@UCLA
2019	Volunteer Tour Guide, UCLA Undergraduate Admission Academic Excellence Tour
2017-2019	Volunteer Notetaker, UCLA Center for Accessible Education
2016-2019	Volunteer, UCLA Bruin Day for Newly Admitted Students

Undergraduates Mentored

**Supervised undergraduate honors thesis project*, ***Supervised undergraduate senior capstone project*

UCLA Ecology and Evolutionary Biology:
Jonathan Chau, May 2021 – Present
Kevin Wang, April 2021 – Present
Austyn Adams, April 2021 – Present
Trevor Brokowski, January 2021 – Present
Mackenzie Perillo*, May 2020 – Present
Maya Chari, September 2019 – November 2020
Sean Webster**, February 2020 – June 2020
Bruce Zhang, February 2020 – June 2020
Aubrey Butler, October 2019 – January 2020
Charles Wang, April 2019 – September 2019

UCLA Psychology:
Nimrat Brar*, May 2020 – Present
Connie Chen, October 2020 – March 2021
Kyle Xu, January 2020 – June 2020

Professional Development

2019-2021 **CIRTL Scholar, UCLA Center for the Integration of Research, Teaching, and Learning**
– Systematically use evidence-based teaching methods to advance teaching and learning practice
– Designed and implemented a "Teaching-as-Research" project investigating the benefits of retrieval practice in remote learning contexts during the COVID-19 pandemic

Professional Membership

2021 – Sigma Xi Scientific Honor Society
2020 – Society for Integrative and Comparative Biology (SICB)
2019 – Psychonomic Society
2019 – Society for the Study of Evolution (SSE)
2019 – American Society of Naturalists (ASN)
2019 – Society of Systematic Biologists
2018 – American Psychological Association (APA)
2018 – Association for Psychological Science (APS)

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