Sarah R. Allred

Contact Information

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Academic Positions

2009- **Rutgers, The State University of New Jersey**

Camden College of Arts and Sciences
Associate professor with tenure, Psychology (2016-)
Assistant professor, Psychology (2009-2016)
Faculty Affiliate, Center for Computational and Integrative Biology (2010-)
Faculty Affiliate, Health Sciences (2020-)
Faculty Affiliate, Prevention Science (2022-)

Institute for Health, Health Care Policy and Aging Research
Faculty Affiliate (2019-)

2006-2009 **University of Pennsylvania**
Postdoctoral Researcher, computational modeling and psychophysics, lab of David Brainard.

Administrative Positions

2018-2022 *South Jersey Institute for Population Health (SJIPH)*
Role: Inaugural Co-Lead (with Nicole A. Vaughn, PhD). Co-leads proposed and launched SJIPH with funding from Rowan University, Rutgers–Camden Joint Board of Governors. SJIPH supports academic-community research partnerships to improve health and well-being in southern New Jersey.

2017-2021 *Senator Walter Rand Institute for Public Affairs (WRI)* at Rutgers–Camden
Roles: Director (2021) and **Faculty Director** (2017-2020). WRI is an applied research and public service center at Rutgers–Camden working to address issues impacting residents and communities in southern New Jersey.

2020 Co-Director, MA program, Department of Psychology, Rutgers–Camden

2016-2019 Associate Chair, Department of Psychology, Rutgers–Camden

Education

2006 Ph.D., Neurobiology and Behavior, University of Washington. Dissertation: *The neural basis of visual object perception.* Lab of Bharathi Jagadeesh.

1999 B.S., Applied Physics: Neuroscience Emphasis, Minors: Mathematics, Philosophy, Brigham Young University.

Funding - Traditional Research Grants

2023	*(under review: Equity motivated modeling for pandemics: Integrating local sociodemographic data with SIR models and Markov Chains for COVID-19. Grant submitted to National Science Foundation's call for Integrating Human Behavior into Epidemiological Models. co-Principal Investigators Benedetto Piccoli, Grace Brannigan, and **Sarah Allred**, $1,000,000. The application is a revision of an unfunded but competitive 2022 submission.)*
2023	*(under review for National Academy of Medicine Healthy Longevity Catalyst Award Competition). The Age-Friendly Partnerships Platform: Strengthening the Social Fabric of Communities for Healthy Longevity. Principal Investigator: Emily Greenfield; co-Investigator: **Sarah Allred**. $50,000.*
2020-2023	Managing Epidemics by Managing Mobility. National Science Foundation grant to co-PIs Samitha Samaranayake (Cornell), Benedetto Piccoli (Rutgers), Daniel Work (Vanderbilt). Role for **Sarah Allred**, Senior Project Personnel, 4% effort. NSF-CMMI 2033580 Total award: *$771,695*
2020	Democratizing Joint Multiscale Modeling of Movement, Policy, and Spread of Infectious Diseases, Principal Investigator: Mubbasir Kapadia, co-Investigators: Benedetto Piccoli, **Sarah Allred**, The Rutgers Center for COVID-19 Response and Pandemic Preparedness. *$10,000*
2020	A Population Health Perspective on Risk and Resilience at the Municipal Level in Response to COVID-19, co-Principal Investigators Emily Greenfield and **Sarah Allred**. Rutgers' Center for COVID-19 Response and Pandemic Preparedness. *$18,425*
2020-2021	Family Presence on Patient Care Rounds in the ICU, co-PI's Brigitte Cypress, School of Nursing, and **Sarah Allred**. Multidisciplinary Grant from the Provost's Fund for Research, Rutgers–Camden. *$10,000.*
2019-2020	Peer-County Bayesian Estimation for Health Rankings. Research grant from County Health Rankings & Roadmaps, a collaboration of the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation. Award to **Sarah Allred**, Principal Investigator *$50,000*.
2010-2018	NSF CAREER Award: Novel Approaches to Integrating Color Perception and Color Memory. Award to **Sarah Allred**, Principal Investigator. NSF-BCS 0954749. Total award: *$ 487,155.*

Funding - Training Grants and Administrative Initiatives

2021-2025	Rutgers Equity Alliance for Community Health (REACH) Four-year grant from Robert Wood Johnson Foundation to co-Principal Investigators Denise Rodgers and Anna Branch, role for **Sarah Allred**, Senior Project Personnel, 5% effort. Total award: *$10 million*
2022-2027	NRT-AI: Codes For Life - Artificial Intelligence and Sustainable Software for Biomolecular Interactions. National Science Foundation Award to Principal Investigator Grace Brannigan, Role for **Sarah Allred**, Senior Project Personnel, 3% effort. NSF-NRT 2152059. Total award: *1,999,999.*

2020-2023	[South Jersey Institute for Population Health (SJIPH)]. With co-Lead Nicole Vaughn, developed a novel "Sandbox Model" that provides an iterative, capacity-building grant application and administration process that will award a total of $740,000 from the Rowan University, Rutgers–Camden Joint Board of Governors to research projects that include partners from Rowan, Rutgers–Camden, and community organizations. Initiative included two additional contracts ($23,00) to Principal Investigator **Sarah Allred** for leadership and institute launch.
2018-2022	[Community Design for Health and Wellness (CDHW)] Interdisciplinary Research Group grant from the Office of Research and Economic Development at Rutgers. Co-Directors (**Sarah Allred** and Mark Aakhus, School of Communication & Information) secured funding, developed design-centered RFP, awarded funding to interdisciplinary academic-community partner pilot projects, and provided administrative support. *$200,000*
2018-2019	*Conference and Symposium Grant* from Provost's Research Fund at Rutgers–Camden to organize symposium *Leveraging Data for Population Health* that connected regional stakeholders, private citizens, and academics for two days of panels, hands-on workshops, and research talks. Grant to **Sarah Allred**, Principal Investigator, with Jeannie Garmon, Research Coordinator. *$8,000*

Funding - Contracts

2022	*Community Health Needs Assessment* in Atlantic County, New Jersey for AtlantiCare Health. Contract through WRI to Principal Investigator Kristin Curtis, Role for **Sarah Allred**: quantitative data analysis. Total contract: *$97,350*.
2021	*Community Health Needs Assessment* in Gloucester, Cumberland and Salem Counties (New Jersey) for Inspira Health Network. Contract to Principal Investigator Kristin Curtis, role for **Sarah Allred**: quantitative data analysis. Total contract: *$99,000*
2019-2020	*Small Communities Forging Hyperlocal Data Collaboratives* Grant from Robert Wood Johnson Foundation to New Jersey Health Initiatives, with associated grant through WRI to **Sarah Allred**, Project Director. *$99,349*
2018-2019	*Community Health Needs Assessments* in Burlington, Camden and Gloucester Counties. Contracts through South Jersey Health Collaborative, including Virtua, Lourdes, Jefferson-New Jersey, and Cooper Health. Contract through WRI with **Sarah Allred** as Principal Investigator. *$174,168*.
2018	Community Health Needs Assessment in Gloucester, Cumberland and Salem Counties for Inspira Health Network. Contract through WRI, with Sarah Allred as Principal Investigator. *$75,000*

Honors and Awards

2021	Recipient, annual Spirit of Civic Engagement Award Rutgers–Camden to Senator Walter Rand institute for Public Affairs
2020-21	Sponsored participant (by Rutgers–Camden Chancellor) *HERS Leadership Institute*

2021	Faculty fellowship, Engaged Civic Learning *Rutgers–Camden Office of Civic Engagement*
2021-	Invited member, Research Advisory Committee for the integrated Population Health Database (iPhD). *New Jersey Department of Health and Rutgers Center for Health Care Policy*
2020-	Selected member, 9-member advisory committee *New Jersey Behavioral Risk Factor Survey*, New Jersey Department of Health
2019 -	Invited member, steering committee, Robert Wood Johnson Foundation funded NJ Cohort Study *Rutgers Institute for Health, Health Care Policy and Aging Research*
2017	Recipient, Open and Affordable Textbook Grant Award *Rutgers University Libraries*
2016	Presidential Award for Excellence in Teaching *Rutgers University Academic Affairs*
2015	Chancellor's Teaching Award *Rutgers–Camden*
2014	Recipient, Digital Teaching Fellowship *Rutgers–Camden*
2001-2004	Trainee, Vision Training Grant. *National Eye Institute, to University of Washington*
1999-2001	Graduate fellow *ARCS Foundation, Seattle chapter*
1995-1999	Howard W. Hunter Presidential Scholar *Brigham Young University*
1995-1999	Thomas J. Watson Scholarship *IBM*

Peer-Reviewed Publications

1. Cypress, B., and **Allred, S.R.** (2023). Building Family Resilience: Qualitative Perspectives from a Multisite Experimental Study in an ICU. *Family Relations*, 1-17, doi.org/10.1111/fare.12893. URL

2. Li, Y., Meng, Q., Li, M., Fang, J. **Allred, S.R.**, Fu, M. R. (2023). Exercises in activating lymphatic system on fluid overload symptoms, abnormal weight gains, and physical functions among patients with heart failure: A randomized controlled trial. *Frontiers in Cardiovascular Medicine Heart Failure and Transplantation*, 10:1094805. doi: 10.3389/fcvm.2023.1094805. URL

3. Wang, Y., Reyes, L., Greenfield, E. A., and **Allred, S. R.** (2022). Municipal ethnic composition and disparities in COVID-19 infections in New Jersey: A BlinderOaxaca decomposition analysis. *International Journal of Environmental Research and Public Health*, 19, 13963. URL

4. McQuade, S. T., Weightman, R., Merrill, N. J., Yadav, A., Trelat, E., **Allred, S. R.**, and Piccoli, B. (2021). Control of COVID-19 outbreak using an extended SEIR model. *Mathematical Models and*

Methods in Applied Sciences, 31(12), pp.2399-2424. PDF

5. Wang, Y., **Allred, S. R.**, Greenfield, E. A., Yadav, A., Pletcher, R., Arthur, G., Saxena, S., Harig, T., Rankin, E., Rudolph B., Sameha, U., Sharma, S., Yan, S. (2021). New Jersey COVID-19 municipal dataset. *Data in Brief*, 38, 107426. URL

6. Hart, D., Atkins, R., and **Allred, S.R.** (2020). Stability and change in partisan political identification: Implications for lowering the voting age. *Journal of Applied Developmental Psychology*, 71:101210. PDF

7. Olkkonen, M., Saarela, T.P. and **Allred, S. R.** (2016). Perception-memory interactions reveal a computational strategy for perceptual constancy. *Journal of Vision, 16*(3):38. doi: 10.1167/16.3.38. PDF

8. **Allred, S.R**, Duffy, E.S., and Smith, J. (2016). Cognitive load and strategic sophistication. *Journal of Economic Behavior & Organization, 125*, 162-178. PDF

9. **Allred, S.R**, Crawford, L. E., Duffy, E.S., and Smith, J. (2016). Working memory and spatial judgments: Cognitive load increases the central tendency bias. *Psychonomic Bulletin & Review* doi:10.3758/s13423-016-1039-0 PDF

10. Bae, G. Y., Olkkonen, M., **Allred, S.R.** and Flombaum, J. I. (2015). Why some colors appear more memorable than others: A model combining categories and particulars in color working memory. *Journal of Experimental Psychology: General*. doi:10.1037/xge0000076. PDF

11. **Allred, S. R.** and Olkkonen, M. (2015). The effect of memory and context changes on color matches to real objects. *Attention, Perception & Psychophysics*. doi:10.3758/s13414-014-0810-4. PDF

12. **Allred, S. R.** and Flombaum, J. I. (2014). Relating color working memory and color perception. *Trends in Cognitive Science*, 18, 562-5. doi:10.1016/j.tics.2014.06.002. PDF

13. Olkkonen, M., McCarthy, P. and **Allred, S.R.** (2014). The central tendency bias in color perception: effects of internal and external noise. *Journal of Vision, 14*(11):5. doi:10.1167/14.11.5. PDF

14. Bae, G. Y., Olkkonen, M., **Allred, S. R.**, Wilson, C., and Flombaum, J. I. (2014). Stimulus specific variability in color working memory with delayed estimation. *Journal of Vision, 14*(4):7. doi:10.1167/14.4.7 PDF

15. Olkkonen, M. and **Allred, S. R.** (2014). Short-term memory affects color perception in context. *PLoS ONE 9*(1): e86488. PDF

16. **Allred, S. R.** and Olkkonen, M. (2013). The effect of background and illumination on color identification of real, 3D objects. *Frontiers in Psychology, 4*:821. doi:10.3389/fpsyg.00821 PDF

17. **Allred, S. R.**, and Brainard, D.H. (2013). A Bayesian model of lightness perception that incorporates spatial variation in the illumination. *Journal of Vision, 13*(7):18. doi:10.1167/13.7.18 PDF

18. **Allred, S.R.**, Radonjić, A., Gilchrist, A., and Brainard, D.H. (2012). Lightness perception in high-dynamic range images: local and remote luminance effects. *Journal of Vision, 12*(2):17. doi:10.1167/12.2.7 PDF

19. Radonjić, A., **Allred, S.R.**, Gilchrist, A., and Brainard, D.H. (2011). The dynamic range of human lightness perception. *Current Biology, 21*(22), 1931-6. doi:10.1016/j.cub.2011.10.013. PDF

20. **Allred, S.R.**, Brainard, D.H. (2009). Contrast, constancy, and measurements of perceived lightness under parametric manipulation of surface slant and surface reflectance. *Journal of the Optical Society of America A, 26*(4), 949-961. doi: 102157 PDF

21. **Allred, S. R.**, Jagadeesh, B. (2007). Quantitative comparison between neural response in macaque inferotemporal cortex and behavioral discrimination of photographic images. *Journal of Neurophysiology*, 98: 1263-1277. doi:10.1152/jn.00016.2007. PDF

May 25, 2023

22. **Allred, S.R.**, Liu, Y., and Jagadeesh, B. (2005). Selectivity of inferior temporal neurons for realistic pictures predicted by algorithms for image database navigation. *Journal of Neurophysiology*, 94:4068-4081. doi:10.1152/jn.00130.2005. PDF

Manuscripts in review or preparation

1. *Yadav, A. and **Allred, S.R.** (in preparation) Better than expected: predicting county-level health outcomes from social and physical environments.*

2. ***Allred, S.R.** and Aakhus, M. (in preparation). Equity-attuned grant-making: Community design for health and wellness. Planning submission to the journal Progress in Community Health Partnerships after consulting with editorial staff*

3. ***Allred, S.R.** and Vaughn, N.A. (in preparation). The sandbox model: improving health equity through capacity-building grantmaking.*

4. ***Allred, S.R.** (in preparation). Public scholarship and the burden-of-proof-of-quality: What's a tenure committee to do?*

Books and Chapters

1. **Allred, S.R.**, Chyba, M., Hyman, J.M., Mileyko, Y., Piccoli, B. (2022). The COVID-19 pandemic evolution in Hawaii and New Jersey: A lesson on infection transmissibility and the role of human behavior. In: Bellomo, N., Chaplain, M.A.J. (eds) *Predicting Pandemics in a Globally Connected World, Volume 1.* Modeling and Simulation in Science, Engineering and Technology. Birkhuser, Cham. URL

2. Hatfield, G. and **Allred, S. R.** (Eds.) (2012). *Visual experience: Sensation, cognition and constancy*. Oxford, UK: Oxford University Press.

3. **Allred, S. R**. (2012). Approaching color with Bayesian algorithms. In G. Hatfield & **S. R. Allred** (Eds.), *Visual experience: Sensation, cognition, and constancy* (pp. 212-231). Oxford: UK, Oxford University Press.

4. Hatfield, G. and **Allred, S. R**. (2012). Introduction: Visual experience. In G. Hatfield & **S. R. Allred** (Eds.), *Visual experience: Sensation, cognition, and constancy* (pp. 1-10). Oxford: UK, Oxford University Press.

Magazine Publications

1. Atkins, R., **Allred, S.R.** and Hart, D. (2021). Philanthropy's rural blind spot. *Stanford Social Innovation Review*, 19(2), 26-33. PDF

Electronic Publications and Datasets: Original Research

1. Aakhus, M., & **Allred, S.R.** (2023). *Community Design For Health and Wellness: Final Report and Reflections*. PDF.

2. **Allred, S.R** (2020-2021). *Senator Walter Rand Institute for Public Affairs COVID-19 Tracker.* Rutgers–Camden. URL *Tracker provided daily (and then weekly) analysis and visualization of county-level COVID-19 cases and deaths. Tracker had more than 39,000 page views in 2020.*

3. **Allred, S.R.**, Wang, Y., Yadav, A., Pletcher, R., Harig, T., Rudolph, B., Sharma, S., Rankin, E., Sameha, U., Arthur, G., Saxena, S., & Greenfield, E.A. (2021). *Municipal variation in COVID-19 case rates in New Jersey.* Senator Walter Rand Institute for Public Affairs, Rutgers University. DOI

4. **Allred, S.R.**, Yadav, A., Wang, Y., Pletcher, R., Harig, T., Rudolph, B., Sharma, S., Rankin, E., Sameha, U., Arthur, G., Saxena, S., & Greenfield, E.A. (2021). *Municipal variation in COVID-19 case rates in New Jersey: Technical documentation.* Senator Walter Rand Institute for Public Affairs, Rutgers University. URL

5. Wang, Y., **Allred, S.R.** & Greenfield, E.A. (2021). [Dataset] New Jersey COVID-19 municipal data set (version 3). Mendeley Data. DOI

6. **Allred, S.R.**, Spielman, D., Curtis, K., Kelly, K., McQuade, S. T., Merrill, N. J., Piccoli, B., Pletcher, R., Sharma, S., Villacis, C., Whiting, R., Yadav, A., Zacher, D., & Ziminski, D. (2020). *COVID-19 research brief 2: When county hospital bed demand will first surpass capacity.* Senator Walter Rand Institute for Public Affairs, Rutgers University. DOI

7. **Allred, S.R.**, McQuade, S. T., Merrill, N. J., Piccoli, B., Spielman, D., Villacis, C., Whiting, R., Yadav, A., Zacher, D., & Ziminski, D. (2020). *Regional health system shortfalls with a novel COVID-19 model.* Senator Walter Rand Institute for Public Affairs, Rutgers University. DOI *Brief was cited by New Jersey Governor Phil Murphy in a letter to the White House*.

8. **Allred, S.R.**, McQuade, S. T., Merrill, N. J., Piccoli, B., Spielman, D., Villacis, C., Whiting, R., Yadav, A., Zacher, D., & Ziminski, D. (2020). *Regional health system shortfalls with a novel COVID-19 model: Technical Documentation.* Senator Walter Rand Institute for Public Affairs, Rutgers University. PDF

9. **Allred, S.R.** (2019). *South Jersey health needs: Connections, community, and care*. Senator Walter Rand Institute for Public Affairs, Rutgers University. DOI *Report published independent, regionally-relevant findings from novel analysis of primary quantitative and qualitative data collected in five southern New Jersey counties.*

Electronic Publications: Contracted Reports

1. **Allred, S.R.,** and staff of Senator Walter Rand Institute for Public Affairs (2019). *Community Health Needs Assessment (2019-2021): South Jersey Health Collaborative (Cooper University Health Care, Jefferson Health, Lourdes Health System, Virtual Health, Burlington County Health Department, Camden County Department of Health and Human Services, and Gloucester County Department of Health and Human Services).* CHNA | | Executive Summary

2. **Allred, S.R.,** and staff of Senator Walter Rand Institute for Public Affairs (2018). *Inspira Health Community Health Needs Assessment: 2019-2020-2021.* Prepared for Inspira Health Network and Gloucester, Cumberland, and Salem Counties (NJ).

Keynote Addresses

1. **Allred, S. R.** (2019, October). South Jersey health needs: Connections, community, and care. Keynote address for two-day symposium *Leveraging Data for Population Health: Academic and Community Partnerships* at Rutgers University - Camden.

2. **Allred, S.R.** (2017, May). Prior knowledge in color perception and memory. Invited keynote speaker for *11th Annual Perceptual Science Forum*, sponsored by Rutgers University Center for Cognitive Science, Rutgers University - New Brunswick.

Invited Presentations

Type of expertise: [1]research, [2]teaching or mentorship, [3]administrative
Audience: [4]academic, [5]community, government, or state partner

1. **Allred, S.R.** (2022). *COVID-19 disparities in New Jersey.* Guest presentation Rutgers–Camden graduate course Readings in Psychology. (online due to sabbatical.) [1,2,4]

2. **Allred, S.R.** (2022) *South Jersey health needs: Connections, community and care*. Invited presentation to the New Jersey Behavioral Risk Factors Surveillance Advisory Committee (NJBRFSAC) at the New Jersey Department of Health. (online due to COVID-19)[1,4,5].

3. **Allred, S.R.**, & Greenfield, E.A. (2021). *Population health and social dimensions of COVID-19 in New Jersey at the municipal level*. Rutgers COVID-19 Research-in-Progress seminar series. (online due to COVID-19)[1,4]

4. **Allred, S.R.** (2021). *How geographical lens affects conclusions about COVID-19*. Rutgers IQB Communication (Mis)information Working Group. (online due to COVID-19)[1,4]

5. **Allred, S.R.** (2021). *Professional presentations and data visualization*. Invited presentation for Graduate School Boot Camp at Rutgers University. (online due to COVID-19).[2,3,4]

6. **Allred, S.R.** (2020). Invited private presentation to New Jersey State Senate President Steven Sweeney about public policy impacts of modeling regional differences in COVID-19 progression. (online due to COVID-19). [1,5]

7. **Allred, S.R.** (2020). Invited panelist for *Rutgers in action: Insights on driving change with communities on policy, systems, and the social determinants of health*. At Robert Wood Johnson Foundation funded convening *Breaking Down Barriers to Health Equity through Community Engagement* at Rutgers University-New Brunswick. (online due to COVID-19).[1,3,4,5]

8. **Allred, S.R.** (2020) *South Jersey health needs*. Invited by Camden Coalition of Health Care Providers to speak at the Camden Care Management meeting. *presentation cancelled due to COVID-19*[1,5]

9. **Allred, S.R.** (2020) *South Jersey health needs*. Invited by Cumberland County Positive Youth Development Coalition to discuss regional findings about social determinants of health and their intersection with positive youth development. Vineland, NJ.[1,5]

10. **Allred, S.R.** (2019). *Health, isolation, and socioeconomic status*. Invited presentation at the 2019 Rutgers–Camden Faculty Research & Creative Activities Symposium, Camden, NJ.[1,4]

11. **Allred, S.R.** (2018). Invited presenter at Rutgers' *Research Bites* to discuss the work of Senator Walter Rand Institute for Public Affairs. Camden, NJ.[1,2,3,4]

12. **Allred, S.R.**, Curtis, K. and Garmon, J. (2018). Invited by Live Healthy Salem to present results of community health needs assessments and discuss implementation plans. Salem County Health Department, Salem, NJ.[1,5]

13. **Allred, S.R.**, Curtis, K. and Garmon, J. (2018). Invited by Live Healthy Cumberland to present results of contractd community health needs assessments and discuss implementation plans. Vineland, NJ.[1,5]

14. **Allred, S.R.**, Curtis, K. and Garmon, J. (2018). Invited by Live Healthy Gloucester to present results of contracted community health needs assessments and discuss implementation plans. Mullica Hill, NJ.[1,5]

15. **Allred, S.R.** (2019). *Uncovering a community's perspective on health*. Invited presentation at the 2018 Rutgers–Camden Faculty Research & Creative Activities Symposium, Camden, NJ.[1,4]

16. **Allred, S.R.** (2017). Invited panelist for *Can your students afford their textbooks? Moving toward OER* for the Rutgers–Camden e-Learning Conference. Camden, NJ.[2,4]

17. **Allred, S.R.** (2017). *Prior knowledge in color perception and memory*. (With honorarium.) CUNY Graduate Center Cognitive Sciences speaker series. New York City.[1,4]

18. **Allred, S.R.** (2016) *The (partially) flipped classroom*. Invited presenter at the the Rutgers Digital Teaching Fellowship workshop. Camden, NJ.[2,4]

19. **Allred, S.R.** (2015). *Empowering students with iPads for team-based learning* Invited presentation for Rutgers e-Learning conference. Camden, NJ.[2,4]

20. **Allred, S.R.** (2013). *Remembering colors: Bias and variability*. Invited presentation for the Vision Sciences Colloquium at Johns Hopkins University. Baltimore, MD.[1,4]

21. **Allred, S.R.** (2012). *Remembering colors: Bias and variability*. Invited presentation for Seminar in Cognitive Psychology at the University of Washington. Seattle, WA.[1,4]

22. **Allred, S.R.** (2012). *Remembering colors: Bias and variability*. Invited presentation for the Color Research Group at University of Chicago. Chicago, IL.[1,4]

23. **Allred, S.R.** (2011). *Shades of gray in high-dynamic range images*, invited presentation for the IGERT Series in Perceptual Science at Rutgers. New Brunswick, NJ.[1,4]

24. **Allred, S.R.** (2011). *Color memory*. Invited speaker for the Quantitative STEM Talent Expansion Program (Q-STEP) at Rutgers–Camden. Camden, NJ.[1,4]

25. **Allred, S.R.** (2011). Invited presentation at Chancellor's Faculty Research Day, Rutgers–Camden. Camden, NJ.[1,4]

26. **Allred, S.R.** (2010). *Perception and computation*. Invited presentation for Center for Computational and Integrative Biology at Rutgers–Camden. Camden, NJ.[1,4]

27. **Allred, S.R.** (2008). Invited lecturer for the University of Pennsylvania Institute for Research in Cognitive Science undergraduate summer workshop in cognitive science and cognitive neuroscience. Philadelphia, PA.[1,2,4]

28. **Allred, S.R.** (2007). *Contrast, constancy and perceived lightness*. Invited presentation at Rutgers graduate seminar in psychology. Newark, NJ.[1,2,4]

29. **Allred, S.R.** (2007). *Visual perception*. Invited presentation for the psychology colloquium at Brigham Young University sychology colloquium. Provo, UT.[1,4]

30. **Allred, S.R.** (2007). *Perception and the visual world*. Invited presentation for the Penn Vision Seminar at University of Pennsylvania. Philadelphia, PA.[1,4]

31. **Allred, S.R** (2004). *Perceptual similarity and neural selectivity in extrastriate visual cortex*. Invited speaker at the Neurobiology and Behavior retreat at University of Washington. Seattle, WA [1,4]

Presentations at Professional Conferences

1. Atkins, R, **Allred, S.R.** and Scaccia, J. (2021). Making communities of greatest need visible: Tools to visualize and close the equity gap in your grantmaking. Grantmakers in Health Annual Conference, June 2021, Virtual conference.

2. **Allred, S.**, August, K. and Garmon, J. (*accepted for presentation 2020, unable to present due to COVID-19*). Neighborhood connection predicts physical and mental health in a diverse regional population. Society for Prevention Research 28th Annual Meeting, May 2020, Washington, D.C.

3. Garmon, J., Curtis, K. and **Allred, S.** (*accepted for presentation 2020, conference cancelled due to COVID-19*). Placing stakeholder communities at the center of community health needs assessments. National Network of Public Health Institutes, May 2020, New Orleans, LA.

4. **Allred, S.R.**, Collins, D., Curtis, C., Gomez, J., Jackson, J., Park, S., Rumer, J., and Wang, H. (2017). How robust are color-specific biases in memory? Vision Sciences Society, May 2017, St Pete's Beach, FL.

5. Sims, C.R., Ma, Z., **Allred, S.R.**, Lerch, R.A., and Flombaum, J.I. (2016). Exploring the Cost Function in Color Perception and Memory: An Information-Theoretic Model of Categorical Effects in Color Matching. Cognitive Sciences, August 11-13, Philadelphia, PA.

6. **Allred, S.R.**, Bae, G.Y, Olkkonen, M., and Flombaum, J.I. (2015). A new model for the contents of visual working memory, Vision Sciences Society, May 15-20, St Pete's Beach, FL.

7. Olkkonen, M., Saarela, T., and **Allred, S.R.** (2014). Probabilistic estimation of surface lightness. OSA Fall Vision Meeting, October 10-12, Philadelphia, PA.

8. Olkkonen, M., Saarela, T., and **Allred, S.R.** (2014). The role of memory in surface color perception. European Conference on Visual Perception, August 24-28, Belgrade, Serbia.

9. Bae, G. Y., Olkkonen, M., **Allred, S. R.**, Wilson, C., and Flombaum, J. I. (2014). Models of color working memory with color perception as a variable. Vision Sciences Society, May 16-21, St Pete's Beach, FL.

10. Olkkonen, M., McCarthy, P. and **Allred, S.R.** (2014). Biases in perceived color are related to threshold increases for external, but not internal noise manipulations. Vision Sciences Society, May 16-21, St Pete's Beach, FL.

11. McCarthy, P., Olkkonen, M. and **Allred, S.R.** (2013). Color constancy and palette complexity in real scenes. Vision Sciences Society, May 10-15, St Pete's Beach, FL.

12. Olkkonen, M. and **Allred, S.R.** (2013). Effect of short-term memory on perceived hue. Vision Sciences Society, May 10-15, Naples, FL.

13. Iannetti, N.A. and **Allred, S.R.** (2013). Comparing memory for colored patches, image textures, and photographs. Vision Science Society, May 10-15, Naples, FL.

14. McLaren, J., Bell, J.R. and **Allred, S.R**. (2013). Remembering colors: Bias and variability. Vision Science Society, May 10-15, Naples, FL.

15. Olkkonen, M. **Allred, S.R.** (2012). Relationship between constancy and memory for stimulus hue and lightness. 35th European Conference on Visual Perception Alghero, Italy, September 2-6, *Perception*, 41, 45-45.

16. Olkkonen, M., **Allred, S.R.** (2012). Bias and precision in the perception and memory for stimulus lightness. Vision Sciences Society, May 11-16, Naples, FL. *Journal of Vision, 12*(9), 1209.

17. Bell, J. R., **Allred, S.R.** (2012). Color memory and perception for real illuminated objects. Vision Sciences Society, May 11-16, Naples, FL. *Journal of Vision, 12*(9): 67.

18. **Allred, S. R.**, Wood, M., Gambino, A., and Brining, E. (2011). Color constancy in perception and memory for real illuminated objects. Vision Sciences Society, May 6-11, Naples, FL. *Journal of Vision, 11*(11): 381.

19. Radonjić, A., Gilchrist, A., **Allred, S.R.**, and Brainard, D.H. (2011). Lightness perception in high-dynamic range contexts. Vision Sciences Society, May 6-11, Naples, FL. *Journal of Vision, 11*(11): 375.

20. **Allred, S. R.**, Troiani, V., Lohnas, L. J., Jiang, L., Radonjic, A., Gilchrist, A., and Brainard, D. H. (2009). An ideal observer model predicts lightness matches. Vision Sciences Society, May 8-13, Naples, FL. *Journal of Vision, 9*(8):345.

21. **Allred, S. R.**, Lohnas, L. J., and Brainard, D. H. (2008). Bayesian model of lightness perception. GRC conference on sensory coding and the natural environment, July 28-Aug 1, 2008, Italy.

22. **Allred, S. R.**, Lohnas, L. J., and Brainard, D. H. (2008). Bayesian model of the staircase Gelb effect. Vision Sciences Society, May 9-14, Naples, FL. *Journal of Vision, 8*(6):283.

23. **Allred, S. R.** and Brainard, D. H. (2007). Scene complexity affects lightness constancy with respect to changes in object slant and surround reflectance. OSA Fall Vision Meeting, Sept 16-19, Berkeley, CA.

24. **Allred, S.R.** and Brainard, D. H. (2007). Parametric measurements of lightness in the context of real illuminated objects. Vision Sciences Society, May 11-16, Sarasota, FL.*Journal of Vision, 7*(9):234.

25. **Allred, S.R.** and Jagadeesh, B. (2005). Selectivity of inferotemporal neurons for realistic images predicts behavioral choice. Program No. 362.7. 2005 Abstract Viewer. Washington, DC: Society for Neuroscience.

26. **Allred, S.R.** and Jagadeesh, B. (2004). Discrimination performance with realistic images is correlated with selectivity of macaque inferior temporal (IT) neurons. Program No. 751.10. 2004 Abstract Viewer. Washington, DC: Society for Neuroscience.

27. Liu, Y., **Allred, S.R.**, and Jagadeesh, B. (2004). Dynamics of target selection in stimulus arrays by inferotemporal (IT) neurons during presentation of static choice stimuli. Program No. 751.9. 2004 Abstract Viewer. Washington, DC: Society for Neuroscience.

28. **Allred, S.R.**, Liu, Y., and Jagadeesh, B. (2004). Algorithms for image database navigation and tuning of object selective neurons in the non-human primate. In *Proceedings of the ACM SIGGRAPH 1st Symposium on Applied Graphics and Visualization*, Los Angeles, CA August 7-8.

29. **Allred, S.R.**, Thompson, J. Y. S., and Jagadeesh, B. (2003). Color-based estimates of stimulus similarity predict perceptual similarity of image pairs to monkeys. *Journal of Vision, 3*(9):511a. doi:10.1167/3.9.511.

30. **Allred, S.R.**, Erickson, C. A. and Jagadeesh, B. (2002). Characteristics of pictures that evoke equivalent neural responses in macaque perirhinal cortex. Program No. 160.8. 2002 Abstract Viewer. Washington, DC: Society for Neuroscience.

31. Chien, S. H. L. **Allred, S.R.**, Teller, D. Y., and Palmer, J. (2000). Young infants' perception of surface lightness. The XX Annual Meeting of Optical Society of America (OSA): Color and Vision Division. Providence, Rhode Island.

Course Instruction and Curricular Leadership
[1]Graduate, [2]Undergraduate

    2009-now   **Rutgers University - Camden**

New courses proposed, designed, and developed
Data-motivated storytelling. Using local data collected by WRI and community partners, students learn quantitative and qualitative data analysis and visualization skills to tell stories about the social determinants of health.[1,2]

How we decide. Students learn and apply the principles underlying perceptual, cognitive and moral judgments.[2]

Color: Psychology, philosophy, physics and art. Students learn basic the basic physics and physiology underlying human color vision, and how empirical observations of color perception in humans and animals informs philosophical debates and principles of visual art.[2]

Evolutionary Psychology. Students engage critically with evolutionary explanations for key problems in perceptual, cognitive, and social psychology.[1]

Courses taught
Sensation and Perception[2]
Teaching in Psychology[1]
Readings in Psychology[1]
Experimental Psychology[2]
Research Methods[2]
Method and Theory in Psychology[2]
Independent Study[1,2]

2008	**University of Pennsylvania**
	Courses taught
	Sensation and Perception[2]

2001-2003	**University of Washington**
	Teaching assistant
	Seminar in Psychophysics[1]
	Vision[2]

1997-1999	**Brigham Young University**
	Teaching assistant
	Course TA: Electricity and magnetism[2]
	General physics center TA: Mechanics, electricity and magnetism, thermodynamics.[2]

Mentorship and Advising: Rutgers University

Campus: [1]Rutgers–Camden, [2]Rutgers–New Brunswick, [3]Rutgers–Newark, [4]Rutgers Biomedical and Health Sciences
Publication:[†]indicates co-author on at least one publication or presentation
Funding: [^]Grant or contract to **Sarah Allred** as PI or co-PI contributed funding to student

Postdoctoral associates
2011-2013	Maria Olkkonen[1,†,^], fully grant-funded.

PhD students
Formal committee participation
2020-2021	Jeannie Garmon[3,4,†,^], Urban Systems

Collaborated with
2020-2022	Yuqi Wang[2,†,^], Social Work
2021-2022	Laurent Reyes[2,†], Social Work
2020-2022	Ryan Weightman[1,†], Computational and Integrative Biology
2020-2021	Nathaniel Merrill[1,†], Computational and Integrative Biology
2019-2021	Lili Razi[1,^], Public Affairs
2018-2021	Shibin Yan[1,†], Public Affairs

Master's students
Formal committee participation
2020-2021	Weiling Li[1], Psychology
2019-2021	Tory Masculli[1], Psychology
2019-2020	Ryan Pletcher[1,†,^], Psychology
2017-2018	Nicole Ferris[1], Psychology
2016- 2017	Dillon Miller[1], Psychology
2015-2016	Brianna Soreth[1], Psychology
2014-2015	Arturo Calderon[1], Psychology
2013-2014	Gianna Bowler[1], Psychology
2012-2013	Suyeon Noh[1], Psychology
2011-2013	Phillip Loatman[1], Psychology

Collaborated with or supervised independent study

2020	Sachin Saxena[1,†,^], Computer Science
2020	George Arthur[1,†,^], Mathematics
2019-2021	Aayush Yadav[1,†,^], Computer Science
2019-2020	Ethan Aaronson[1,^] Criminal Justice
2017	Cristhian Altamirano[1], Psychology
2017	Sehwan Park[1,†,^], Psychology
2017	Hechen Wang[1,†], Psychology
2014-2016	Daniel Markoff[1], Psychology
2012-2014	Patrice McCarthy[1,†,^], Psychology
2012-2014	Nickolas Iannetti[1,†], Psychology

Undergraduates

Supervised for course credit

2017	Gregory Ponce[1], Psychology
2017	Jacqueline Gomez[1,†], Psychology
2016	Jameira Jackson[1,†], Psychology
2016	Christina Curtis[1,†], Psychology
2016	Dajsha Collins[1,†], Psychology
2016	Jessica Rumer[1,†,^], Psychology
2016	Corey Williams[1,^], Psychology
2014	Jeremy Hausman[1], Psychology
2014	Diana Esparragoza[1], Psychology
2014	Nancy Essandoh[1], Psychology
2013	Jeremy Bell[1,†], Psychology. Dean's Undergraduate Travel Award.
2013	Constance Bienkowski[1], Psychology
2013	Patrice McCarthy[1,†,^], Psychology
2012	Katherine Quintero[1], Psychology
2012	Dana McNellis[1], Psychology
2012	Christina Ohlsen[1], Psychology
2012	Theresa Crisostomo[1], Psychology
2012	Jenna Cotton[1], Psychology
2011	Nickolas Iannetti[1,†,^], Psychology
2011	Salima Mostafa[1], Psychology
2011	Ashley McDonald[1], Psychology
2011	Jade Iannocone[1], Psychology
2011	Omayra Lambert[1], Psychology
2011	Christopher Taylor[1,^], Psychology
2011	Monica Bennett[1], Psychology
2010	Erin Brining[1,†], Psychology
2010	Anthony Gambino[1,†], Psychology, Dean's Undergraduate Travel Award.
2010	Yvonne Pynne-Bailey[1], Psychology
2010	Michael Wood[1,†], Psychology, Dean's Undergraduate Travel Award.
2010	Jenna Norton[1], Psychology

Professional Service: Rutgers, The State University of New Jersey

University-wide service

2022-now	member, Rutgers Population Health Consortium
2020	member, search committee, Executive Vice President for Academic Affairs

| 2020 | member, advisory committee for the Center for COVID-19 Response and Pandemic Preparedness call for proposals in the social sciences |
| 2020 | member, Emergency Operations Committee (EOC) Return-to-Research Committee |

Rutgers–Camden, service to college and campus

2021	chair, search committee, Director for Senator Walter Rand Institute for Public Affairs
2021	member, Diversity, Equity and Inclusion Strategic Planning Subcommittee on Sustainable Community Engagement
2021	member, Diversity, Equity and Inclusion Strategic Planning Subcommittee on Infrastructure
2021	member, undergraduate research committee
2019	member, committee for transition to Infosilem
2018-2019	member, campus - wide committee on evaluating teaching effectiveness
2018-2019	chair, research subcommittee of the Population Health Research Institute Committee for the Rutgers-Rowan Joint Board
2018	member, search committee for Dean of Arts & Sciences
2016	member, faculty council, Senator Walter Rand Institute for Public Affairs
2016-2018	member, Advancement and Promotions Committee, Social Sciences
2016-2017	member, faculty advisory council, 2017 eLearning conference
2016	participant, Open Textbook Network workshop
2013-2017	general education committee, experiential learning subcommittee

Rutgers–Camden, service to department

2021-2022	chair, search committee for faculty in Psychology and Prevention Science
2016-2019	associate chair (completed all course scheduling, including course assignments to full-time and part-time faculty)
2017	member, TT faculty search committee
2013-2020	graduate committee
2013-2016	curriculum committee
2011-2012	department committee
2009-2011	faculty senate
2010	search committee, faculty position in cognitive psychology
2010-2011	faculty advisor, Psi Chi Club
2009-2010	faculty advisor, Psychology Club

Professional Service: Societies, Journals, Conferences

Conference and symposium organization

| 2019 | Organized, secured funding for and implemented Leveraging Data for Population Health: Academic and Community Partnerships, a free symposium at Rutgers–Camden that connected regional stakeholders, private citizens, and academics for two days of panels, hands-on workshops, and research talks. *This item also mentioned in administrative funding section* |

| 2013 | Proposed, organized, and recruited nationally-recognized speakers for symposium session *Does appearance matter?*, during the competitive symposium portion of the annual meeting of the Vision Sciences Society in Naples, Florida. |

| 2009 | Proposed, organized, and secured funding (with co-organizer, Gary Hatfield) to bring 10+ philosophers and psychologists to University of Pennsylvania for a multi-day workshop to foster interdisciplinary collaboration in the area of perceptual constancy. Funding from University of Pennsylvania's Institute for Research on Cognitive Science. |

Editorial and conference participation

2016-2017	Abstract Review Board, Vision Sciences Society
2015	Guest Editor, Journal of Vision special issue on "the dress"
2010	Abstract committee for COSYNE (Computational and Systems Neuroscience)

| Ongoing | **Ad-hoc reviewing** |

Cengage Learning (textbook review)
Developmental Science
International Journal of Environmental Research and Public Health
IOVS
Israel Science Foundation
Journal of Applied Developmental Psychology
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning and Memory
Journal of the Optical Society of America, A
Journal of the Royal Society
Journal of Vision
National Science Foundation
Netherlands Organisation for Scientific Research
Oxford University Press
Philosophical Psychology
TOPOI: An International Review of Philosophy
Transactions on Graphics
Vision Research

Society Memberships

Psychonomics

Society for Neuroscience

ACM

Vision Sciences Society

Optical Society of America

Media Experiences Related to Public Health

References to Philanthropy's Rural Blind Spot

– July 15, 2022. Health Forward policy intern cites the research.

– 2022. National Center for Family Philanthropy cites research as a resource in their section on Rural Giving: Strategies for Philanthropic Families.

– October 25, 2021. FAHE cites research.

- July 20, 2021. Creative Placemaking Communities hosts Strategy Lab course to focus on research.
- March 29, 2021. Hargrove International writes blog post about research.

Interviews for COVID-19 expertise

- November, 2020. SJ Magazine, highlights Sarah Allred's COVID-19 work in southern New Jersey.
- May, 2020. South Jersey Magazine interviews Sarah Allred as regional expert.
- April 11, 2020. WNYC, New York City's NPR affiliate, interviews Sarah Allred.

Media encounters related to research brief on COVID-19 in NJ municipalities

- April 14, 2021. NJ.com interviews Sarah Allred in article covering the research.

Media encounters related to regional COVID-19 tracker.

- April 14, 2020. NJTV interviews Sarah Allred about new COVID-19 tracker.
- April 7, 2020. NJBIZ.com cites the COVID-19 tracker.
- April 6, 2020. Politico reports on the new COVID-19 tracker.

Media encounters related to research brief on county-specific timing for potential hospital bed shortfalls due to COVID-19 in New Jersey

- April 1, 2020. NJ.com cites the research.
- March 31st, 2020. Cape May County Herald reports on the research.
- March 29, 2020. KYW-AM (1060) reports on the research.
- March 29, 2020. WHYY-FM, Philadelphia's NPR affiliate, cites the research.
- March 28, 2020. NJ.com cites the research.
- March 27, 2020. NJSpotlight.com reports on the research.
- March 27, 2020. NorthJersey.com reports on the research.
- March 27, 2020. Philadelphia Tribune cites the research.
- March 26, 2020. NJ.com reports on the research.
- March 26, 2020. NJ101.5 reports on the research.

Media encounters related March 16, 2020 research brief on potential hospital bed shortfalls in New Jersey due to COVID-19.

- March 25,2020. Monmouth Daily Voice reports on the research.
- March 24, 2020. NJ.com cites the research.
- March 22, 2020. KYW-AM (1060) reports on the research.
- March 22, 2020. NJ.com cites the research in an editorial.
- March 22, 2020. Wall Street Journal reports on the research.
- March 20, 2020. NJ.com reports on the research.
- March 20, 2020. WHYY-FM, Philadelphia's NPR affiliate, reports on the research.

Media encounters related to our public-facing report on health consequences of social isolation in southern New Jersey.

- March 5, 2020. NorthJersey.com cites the research.
- October 14, 2019. Courier Post reports on the research.
- October 8, 2019. NJ101.5 FM, reports on the research.
- October 7, 2019. Philadelphia Business Journal reports on the research.