

Emily S. Kappenman

Curriculum vitae
December 2016

Department of Psychology
San Diego State University
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EDUCATION

- Ph.D. 2012 University of California, Davis, Psychology
Advisor: Steven J. Luck
- M.A. 2008 University of California, Davis, Psychology
Advisor: Steven J. Luck
- B.S. 2005 Indiana University, Bloomington, Psychology, with Honors
Advisors: William P. Hetrick & John K. Kruschke

PROFESSIONAL APPOINTMENTS

- 2016- Assistant Professor, Department of Psychology, San Diego State University
- 2014-2016 Co-Director, ASPIRE Undergraduate Research Program, University of California, Davis
- 2014-2016 Assistant Project Scientist, University of California, Davis, Center for Mind & Brain
- 2012-2014 Postdoctoral Scholar, University of California, Davis, Center for Mind & Brain

AWARDS AND HONORS

- 2016 Chancellor's Award for Excellence in Mentoring Undergraduate Research
- 2015 NARSAD Young Investigator Award
- 2011 Research Training Fellowship Award, Society for Psychophysiological Research, \$3250

- 2011 Social Sciences Dean's Doctoral Fellowship for Excellence Award, \$1000
- 2006-2009 National Science Foundation Graduate Research Fellowship
- 2005-2006 Learning Science Institute Graduate Fellowship, Vanderbilt University
- 2005 J.R. Kantor Award for Most Outstanding Graduating Psychology Major, Indiana University, Bloomington
- 2002-2005 Science, Technology, & Research Scholars (STARS) Program, Indiana University, Bloomington
- 2003 Howard Hughes Medical Institute Capstone Award, \$3000
- 2003 Honors College Research Grant, \$1750
- 2003 Undergraduate Research & Creative Activity Partnership Award, \$1500
- 2002 National Science Foundation Research Experience for Undergraduates Program, Kent State University
- 2002 President's Summer Research Initiative, Indiana University, Bloomington

GRANTS

- 2016-2019 National Science Foundation (DUE 1625521)
Collaborative Proposal: Preparing Undergraduates for Research in STEM-related fields Using Electrophysiology (PURSUE)
Role: Consultant (PIs: Cindy Bukach, Catherine Reed, & Jane Couperus)
Total costs: \$600,000
- 2016-2018 Brain & Behavior Research Foundation NARSAD Young Investigator Grant
Toward the Use of Transcranial Direct Current Stimulation (tDCS) as a Treatment in Anxiety
Role: Principal Investigator
Total costs: \$63,726
- 2015-2018 Laura and John Arnold Foundation and Center for Open Science
Reproducibility Project: Transcranial Direct Current Stimulation
Role: Principal Investigator
Total costs: \$77,310
- 2015-2016 National Institute of Mental Health (R01 MH098454-S1)
A Randomized Control Trial of PCIT-ED for Preschool Depression
Role: Consultant (PIs: Deanna Barch & Joan Luby)
Total costs: \$375,990

2013-2015 National Institute of Mental Health (R03 MH098119)
 Anxiety and Attention: Electrophysiological Measurement of Enhancement
 and Suppression
 Role: Co-Investigator (PI: Steve Luck)
 Total costs: \$76,750

PUBLICATIONS

See Google Scholar listing at <https://scholar.google.com/citations?user=PScsj6AAAAAJ>

Books

Luck, S. J. & **Kappenman, E. S.** (Eds.) (2012). *The Oxford handbook of event-related potential components*. New York, NY: Oxford University Press.

Journal Articles

Belden, A., Irvin, K., Hajcak, G., **Kappenman, E.**, Kelly, D., Karlow, S., Luby, J., & Barch, D. (in press). Neural correlates of reward processing in depressed and healthy young children. *Journal of the American Academy of Child and Adolescent Psychiatry*.

Kappenman, E. S. & Keil, A. (2017). Introduction to the special issue on *Re-centering science: Replication, Robustness, and Reproducibility in Psychophysiology*. *Psychophysiology*, 54, 3-5.

Thigpen, N., **Kappenman, E. S.**, & Keil, A. (2017). How reproducible is the event-related potential? Effects of signal-to-noise and measurement technique on internal consistency and effect size. *Psychophysiology*, 54, 123-138.

Kappenman, E. S. & Luck, S. J. (2016). Best practices for event-related potential research in clinical populations. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 1, 110-115.

Woods, A. J., Antal, A., Bikson, M., Boggio, P. S., Brunoni, A. R., Celnik, P., Cohen, L. G., Fregni, F., Hermann, C. S., **Kappenman, E. S.**, Knotkova, H., Liebetanz, D., Miniussi, C., Miranda, P. C., Paulus, W., Priori, A., Reato, D., Stagg, C., Wenderoth, N., & Nitsche, M. A. (2016). A technical guide to tDCS, and related non-invasive brain stimulation tools. *Clinical Neurophysiology*, 127, 1031-1048.

Kappenman, E. S., Luck, S. J., Kring, A. M., Lesh, T. A., Mangun, G. R., Niendam, T., Ragland, J. D., Ranganath, C., Solomon, M., Swaab, T. Y., & Carter, C. S. (2016). Electrophysiological evidence for impaired control of motor output in schizophrenia. *Cerebral Cortex*, 26, 1891-1899.

Strauss, G. P., **Kappenman, E. S.**, Culbreth, A. J., Catalano, L. T., Lee, B. G., & Gold, J. M. (2015). Emotion regulation abnormalities in schizophrenia: Directed attention strategies fail

to decrease the neurophysiological response to unpleasant stimuli. *Journal of Abnormal Psychology, 124*, 288-301.

Kappenman, E. S., MacNamara, A., & Hajcak Proudfit, G. (2015). Electrocortical evidence for rapid allocation of attention to threat in the dot-probe task. *Social, Cognitive & Affective Neuroscience, 10*, 577-583.

Kappenman, E. S., Farrens, J. L., Luck, S. J., & Hajcak Proudfit, G. (2014). Behavioral and ERP measures of attentional bias to threat in the dot-probe task: Poor reliability and lack of correlation with anxiety. *Frontiers in Psychology, 5*, 1368.

Bikson, M., Edwards, D., & **Kappenman, E. S.** (2014). The outlook for non-invasive electrical brain stimulation [Letter to the editor]. *Brain Stimulation, 7*, 771-772.

Keil, A., Debener, S., Gratton, G., Junghofer, M., **Kappenman, E. S.**, Luck, S. J., Luu, P., Miller, G. A., & Yee Bradbury, C. M. (2014). Committee report: Publication guidelines and recommendations for studies using electroencephalography and magnetoencephalography. *Psychophysiology, 51*, 1-21.

Strauss, G. P., **Kappenman, E. S.**, Culbreth, A. J., Catalano, L. T., Lee, B. G., & Gold, J. M. (2013). Emotion regulation abnormalities in schizophrenia: Cognitive change strategies fail to decrease the neural response to unpleasant stimuli. *Schizophrenia Bulletin, 39*, 872-883.

Leonard, C. J., Kaiser, S. T., Robinson, B. M., **Kappenman, E. S.**, Hahn, B., Gold, J. M., & Luck, S. J. (2012). Toward the neural mechanisms of reduced working memory capacity in schizophrenia. *Cerebral Cortex, 23*, 1582-1592.

Hahn, B., Hollingworth, A., Robinson, B. M., Kaiser, S. T., Leonard, C. J., Beck, V. M., **Kappenman, E. S.**, Luck, S. J., & Gold, J. M. (2012). Control of working memory content in schizophrenia. *Schizophrenia Research, 134*, 70-75.

Kappenman, E. S., Kaiser, S., Robinson, B., Morris, S., Hahn, B., Beck, V., Leonard, C., Gold, J., & Luck, S. J. (2012). Response activation impairments in schizophrenia: Evidence from the lateralized readiness potential. *Psychophysiology, 49*, 73-84.

Kappenman, E. S. & Luck, S. J. (2012). Manipulation of orthogonal neural systems together in electrophysiological recordings: The MONSTER approach to simultaneous assessment of multiple neurocognitive processes. *Schizophrenia Bulletin, 38*, 92-102.

Hahn, B., **Kappenman, E. S.**, Robinson, B. M., Fuller, R. L., Luck, S. J., & Gold, J. M. (2011). Iconic decay in schizophrenia. *Schizophrenia Bulletin, 37*, 950-957.

Hahn, B., Robinson, B. M., Kaiser, S. T., Harvey, A. N., Beck, V. M., Leonard, C. J., **Kappenman, E. S.**, Luck, S. J., & Gold, J. M. (2010). Failure of schizophrenia patients to overcome salient distractors during working memory encoding. *Biological Psychiatry, 68*, 603-609.

Gold, J. M., Hahn, B., Zhang, W., Robinson, B. M., **Kappenman, E. S.**, Beck, V. M., & Luck, S. J. (2010). Reduced capacity but spared precision and maintenance of working memory representations in schizophrenia. *Archives of General Psychiatry*, *67*, 570-577.

Kappenman, E. S., & Luck, S. J. (2010). The effects of electrode impedance on data quality and statistical significance in ERP recordings. *Psychophysiology*, *47*, 888-904.

Luck, S. J., **Kappenman, E. S.**, Fuller, R. L., Robinson, B., Summerfelt, A., & Gold, J. M. (2009). Impaired response selection in schizophrenia: Evidence from the P3 wave and the lateralized readiness potential. *Psychophysiology*, *46*, 776-786.

Kieffaber, P. D., **Kappenman, E. S.**, O'Donnell, B. F., Shekhar, A., Bodkins, M., & Hetrick, W. P. (2006). Shifting and maintenance of task set in schizophrenia. *Schizophrenia Research*, *84*, 345-358.

Kruschke, J. K., **Kappenman, E. S.**, & Hetrick, W. P. (2005). Eye gaze and individual differences consistent with learned attention in associative blocking and highlighting. *Journal of Experimental Psychology: Learning, Memory and Cognition*, *31*, 830-845.

Book Chapters

Luck, S. J. & **Kappenman, E. S.** (in press). Electroencephalography and event-related brain potentials. To appear in J. T. Cacioppo, L. G. Tassinary, & G. G. Berntson (Eds.), *Handbook of Psychophysiology* (4th ed). New York, NY: Cambridge University Press.

MacNamara, A., **Kappenman, E. S.**, Black, S. R., Bress, J. N., & Hajcak, G. (2013). Integrating behavioral and electrocortical measures of attentional bias toward threat. In K. C. Barrett, N. A. Fox, G. A. Morgan, D. J. Fidler & L. A. Daunhauer (Eds.), *Handbook of self-regulatory processes in development: New directions and international perspectives* (pp. 215-243). New York, NY: Psychology Press.

Kappenman, E. S., & Luck, S. J. (2012). ERP components: The ups and downs of brainwave recordings. In S. J. Luck & E. S. Kappenman (Eds.), *The Oxford handbook of event-related potential components* (pp. 3–30). New York, NY: Oxford University Press.

Luck, S. J., & **Kappenman, E. S.** (2012). ERP components and selective attention. In S. J. Luck & E. S. Kappenman (Eds.), *The Oxford handbook of event-related potential components* (pp. 295–327). New York, NY: Oxford University Press.

Manuscripts Under Review

Amir, N., Carmona, A., Suway, J., **Kappenman, E. S.** & Hajcak, G. (under review). The independent contribution of general anxiety and social anxiety to error monitoring.

Manuscripts in Preparation

Kappenman, E. S., Hajcak, G., Bikson, M., Farrens, J. L., & Luck, S. J. (in preparation). Modulations in error-related brain processing with transcranial direct current stimulation.

Kappenman, E. S., Horan, W. P., Hajcak, G., & Strauss, G. P., (in preparation). Emotion reactivity and regulation in schizophrenia. An invited paper for *Frontiers in Human Neuroscience*.

Kappenman, E. S., Luck, S. J., & Bikson, M. (in preparation). Transcranial direct current stimulation artifacts in electroencephalographic recordings.

Kappenman, E. S., Farrens, J. L., Hajcak, G., & Luck, S. J. (in preparation). The event-related potential reference experiments.

Kappenman, E. S., & Luck, S. J. (in preparation). Isolating the contribution of correct and incorrect response activation in the lateralized readiness potential.

PROFESSIONAL PRESENTATIONS

Symposia Organized

Luck, S. J. & **Kappenman, E. S.** (2009, April). The lateralized readiness potential: A powerful tool for studying action. Symposium presentation at the 15th International Congress on Event-Related Potentials of the Brain, Bloomington, IN.

Invited Talks

Kappenman, E. S., (2016, September). Establishing reproducibility and openness in tES research. Presented at the workshop on Transcranial Electrical Stimulation (tES): Mechanisms, Technology and Therapeutic Applications, National Institutes of Health, Bethesda, MD.

Kappenman, E. S., (2016, August). Mini ERP boot camp. Five-day workshop presented at University of Birmingham, UK.

Kappenman, E. S., (2016, March). Mini ERP boot camp. Three-day workshop presented at Texas A&M, Kingsville, TX (sole organizer and presenter).

Kappenman, E. S., (2015, July). Practical considerations in combining tDCS with EEG and ERPs. Presented at the Air Force Planning Meeting: Dosimetry and Mechanisms Mediating Responses to tDCS, University of Massachusetts, Amherst, MA.

Kappenman, E. S., (2015, April). Mini ERP boot camp. Three-day workshop presented at Washington State University, Pullman, WA (sole organizer and presenter).

Kappenman, E. S., (2015, March). Mini ERP boot camp. Two-day workshop presented at the University of Alabama, Tuscaloosa, AL (sole organizer and presenter).

Kappenman, E. S., (2015, March). Mini ERP boot camp. Two-day workshop presented at the University of South Carolina, Aiken, SC (sole organizer and presenter).

Bikson, M., Edwards, D., & **Kappenman, E. S.**, (2015, January). The prospects for tES. Presented at the 2nd Annual NYC Neuromodulation meeting, New York City, NY.

Kappenman, E. S., (2014, December). Practical issues in conducting EEG/ERP research. Presented at the Emerging Technologies EEG Workshop, University of Minnesota, Minnesota, MN.

Kappenman, E. S., (2014, January). Mini ERP boot camp. Three-day workshop presented at Washington University, St. Louis, MO (sole organizer and presenter).

Kappenman, E. S. (2013, November). HD-tDCS and EEG. Presented at the 1st Annual NYC Neuromodulation meeting, New York City, NY.

Kappenman, E. S., (2012, October). Mini ERP boot camp. Three-day workshop presented at University of New Mexico, Albuquerque, NM (sole organizer and presenter).

Kappenman, E. S., (2011, October). Mini ERP boot camp. Three-day workshop presented at State University of New York, Binghamton, NY (sole organizer and presenter).

Other Talks

Kappenman, E. S. & Luck, S. J. (2010, May). The role of inhibitory processes in overcoming response competition: Evidence from event-related potentials. Presented to the University of California, Davis, Psychology Department Research Day, Davis, CA.

Kappenman, E. S. & Luck, S. J. (2009, April). Extending the lateralized readiness potential: Response activation and inhibition in real time. Presented at the 15th International Congress on Event-Related Potentials of the Brain in Bloomington, IN.

Kappenman, E. S., Kruschke, J. K., & Hetrick, W. P. (2005, April). Associative learning in schizotypal personality disorder. Presented at the annual IU-STARS research conference, Indiana University, Bloomington, IN.

Kappenman, E. S., Kieffaber, P. D., & Hetrick, W. P. (2003, August). Event related potential correlates of task switching. Presented at the Howard Hughes Medical Institute Capstone Award Program, Indiana University, Bloomington, IN.

Poster Presentations

+ = Mentored student

+Kapulkin, D., +Farrens, J. L., Luck S. J., & **Kappenman E. S.** (2014, April). Integrating transcranial direct current stimulation with electroencephalography. Poster presented at the 25th Annual University of California, Davis Undergraduate Research Conference, Davis, CA.

+Farrens, J. L., +Symons, A. E., Luck, S. J., & **Kappenman, E. S.** (2013, April). Electrophysiological indices of attention and suppression of attention to threat in anxiety. Presented at the 24th Annual University of California, Davis Undergraduate Research Conference, Davis, CA.

+Symons, A. E., +Farrens, J. L., Luck, S. J., & **Kappenman, E. S.** (2013, April). Improvements in attentional control with transcranial direct current stimulation (tDCS)? Presented at the 24th Annual University of California, Davis Undergraduate Research Conference, Davis, CA.

Kappenman, E. S. & Luck, S. J. (2011, September). Manipulation of orthogonal neural systems together in electrophysiological recordings: The MONSTER approach to simultaneous assessment of multiple neurocognitive processes. Presented at the Annual Meeting of the Society for Psychophysiological Research, Boston, MA.

Kappenman, E. S., Luck, S. J., Rafael, S., Niendam, T., Solomon, M., Kring, A., Ragland, J. D., Ranganath, C., Swaab, T., & Carter, C. (2010, October). Impaired response activation and inhibition in schizophrenia patients: Evidence from event-related potentials. Presented at the Annual Meeting of the Society for Research in Psychopathology, Seattle, WA.

Kappenman, E. S., Luck, S. J., Rafael, S., Niendam, T., Solomon, M., Kring, A., Ragland, J. D., Ranganath, C., Swaab, T., & Carter, C. (2010, September). Impaired response activation and inhibition in schizophrenia patients: Evidence from event-related potentials. Presented at the Annual Meeting of the Society for Psychophysiological Research, Portland, OR.

Kappenman, E. S. & Luck, S. J. (2009, October). Isolating the contribution of correct and incorrect response activation in the lateralized readiness potential. Presented at the Annual Meeting of the Society for Psychophysiological Research, Berlin, Germany.

Kappenman, E. S. & Luck, S. J. (2008, October). Isolating the contribution of correct and incorrect response activation in the lateralized readiness potential. Presented at the Annual Meeting of the Society for Psychophysiological Research, Austin, TX.

Kappenman, E. S. & Luck, S. J. (2008, April). High impedance ERP recordings: Will you need more trials to get the same p-value? Presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Kappenman, E. S. & Luck, S. J. (2007, October). Do high impedance ERP recording systems really save time? Presented at the Annual Meeting of the Society for Psychophysiological Research, Savannah, GA.

Kappenman, E. S. & Luck, S. J. (2007, October). Reduced lateralized readiness potential (LRP) amplitude in schizophrenia patients. Presented at the Annual Meeting of the Society for Psychophysiological Research, Savannah, GA.

Kieffaber, P. D., **Kappenman, E. S.**, & Hetrick, W. P. (2005, October). Maintenance and shifting of task set in schizophrenia. Presented at the Annual Meeting of the Society for Research in Psychopathology, Coral Gables, FL.

Kappenman, E. S., Kieffaber, P. D. & Hetrick, W. P. (2004, April). Electrophysiological measures of preparation in a task switching paradigm. Presented at the annual IU-STARS research conference, Indiana University, Bloomington, IN.

Kappenman, E. S., Kruschke, J. K. & Hetrick, W. P. (2003, October). Inverse base-rates and illusory correlations in schizotypal personality disorder. Presented at the Seventeenth Annual Meeting of the Society for Research in Psychopathology, Toronto, Canada.

Kappenman, E. S., Kruschke, J. K. & Hetrick, W. P. (2003, April). Highlighting and illusory correlation in schizotypal personality disorder. Presented at the annual IU-STARS research conference, Indiana University, Bloomington, IN.

WORKSHOP TEACHING AND ORGANIZATION

2016 Co-Instructor/Co-Organizer, The Mini ERP Boot Camp, 5-day workshop at the University of Birmingham, UK

2016 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis

2016 Instructor/Organizer, Mini ERP Boot Camp, Texas A&M, Kingsville

2015 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis

2015 Instructor/Organizer, Mini ERP Boot Camp, Washington State University

2015 Instructor/Organizer, Mini ERP Boot Camp, University of Alabama, Tuscaloosa

2015 Instructor/Organizer, Mini ERP Boot Camp, University of South Carolina, Aiken

2014 Instructor, Emerging Technologies Workshop on EEG and ERPs, Center for Cognitive Sciences, University of Minnesota

2014 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis

- 2014 Instructor/Organizer, Mini ERP Boot Camp, Washington University in St. Louis
- 2013 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis
- 2012 Instructor/Organizer, Mini ERP Boot Camp, University of New Mexico
- 2012 Co-Instructor/Co-Organizer, ERPLAB Toolbox Workshop, Society for Psychophysiological Research
- 2011 Instructor/Organizer, Mini ERP Boot Camp, State University of New York, Binghamton
- 2011 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis
- 2010 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis
- 2009 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis
- 2008 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis
- 2007 Co-Instructor/Co-Organizer, The ERP Boot Camp, 10-day workshop at the University of California, Davis

PROFESSIONAL SERVICE

Editorial Work

- 2015- Guest Associate Editor, *Psychophysiology*, special issue “Re-Centering Science: Reliability, Robustness, and Reproducibility in Psychophysiological Research”

Committees and Positions

- 2015-2018 Public Relations Committee, Society for Psychophysiological Research
- 2015 Chair/Moderator, Air Force Planning Meeting: Dosimetry and Mechanisms Mediating Responses to tDCS, held at the University of Massachusetts, Amherst

- 2014-2015 Director of Scientific Program, NYC Neuromodulation 2015
- 2014 Student Poster Award Committee, Society for Psychophysiological Research
- 2013 Organizer, Summit on Transcranial Direct Current Stimulation (tDCS), Center for Mind & Brain, University of California, Davis. Featured in *WIRED* magazine.
- 2013 Ad Hoc Committee on EEG/ERP/MEG Measures, Society for Psychophysiological Research
- 2012 Program Committee (student representative), Society for Psychophysiological Research

Journal Reviewing

Biological Psychiatry
Biological Psychology
Brain Stimulation
Clinical Neurophysiology
Cognitive, Affective, and Behavioral Neuroscience
Cognition & Emotion
Cortex
Current Biology
Emotion
Journal of Neuroscience
Journal of Neuroscience Methods
NeuroImage
Neuropsychologia
NeuroReport
Psychiatry Research: Neuroimaging
Psychopharmacology
Psychophysiology
Schizophrenia Bulletin
Social, Cognitive, and Affective Neuroscience
Vision Research

MEMBERSHIPS

Society for Psychophysiological Research
Cognitive Neuroscience Society
American Psychological Society

TEACHING

Program Development

2014 Co-Founder, ASPIRE Undergraduate Research Program, University of California, Davis

Undergraduate Research Mentorship

2015-2016 Erika Arnold, Mark Cubillan, Raphael Geddert, Adam Govani

2014-2015 Erika Arnold, Raphael Geddert, Adam Govani, Daniel Kapulkin, Alejandro Lopez, Garrett O'Day, Brian Trinh, Krystal Wulf

2013-2014 Dylan Cheng, Connie Choi, Noel Elrod, Mercy Huang, Colette Kohanim, Alexandra Luong, Sasha Mikhailova, Brian Trinh, Jennifer Windus

2012-2013 Shaun Capaul, Sheila Fakurnejad, Jaclyn Farrens, Livon Ghermezi, Adam Govani, Celeste Hackenberg, Colette Kohanim, Scott Phillips, Anthony Rosefeld, Ashley Symons, Jennifer Windus, Zane Xie

2011-2012 Jaclyn Farrens

Honors Thesis Supervision

2016- Raphael Geddert, Psychology

2015-2016 Daniel Kapulkin, Biomedical Engineering

Course Instruction

2010 Associate Instructor, General Psychology, University of California, Davis

2004-2005 Teaching Assistant, Introductory Statistics, Indiana University, Bloomington