Nichole Rochelle Bouffard

nrbouffard@ucdavis.edu
707-771-0272

University of California, Davis
1544 Newton Ct., Davis, CA 95618

EDUCATION

June 2015	Bachelor of Science, Psychology University of California, Davis Overall GPA: 3.86/4.00 Major GPA: 3.87/4.00 Honors Thesis: *Temporal encoding strategies result in boosts to final free recall performance comparable to spatial ones*

HONORS AND AWARDS

2018	National Science Foundation Graduate Research Fellowship Recipient (*Award declined)*
2015	Graduated with Highest Honors With Citations for Outstanding Performance University of California, Davis
2011-2015	Letters and Science Dean's List University of California, Davis Received all eligible quarters in attendance

---

PUBLICATIONS

Bouffard, N., Stokes, J., Kramer, H. J., Ekstrom, A. D. (2018). Temporal encoding strategies result in boosts to final free recall performance comparable to spatial ones. *Memory & cognition, 46*(1), 17-31.

Mizrak, E., **Bouffard, N.,** Libby, L. A., Ranganath C. (in prep). Neural mechanisms of context-dependent decision-making

Inhoff, M. C., **Bouffard, N. R.**, Hsieh, L.-T., Ranganath, C. (in prep) Neural basis underlying the generalization of sequence structure

---

PRESENTATIONS AND TALKS

Mizrak, E.*, **Bouffard**, **N. R.***, Libby, L. A., Ranganath, C. Neural Mechanisms of context-dependent decision making. Co-presented as a poster at Society for Neuroscience Annual Meeting 2017.

Inhoff, M. C.*, **Bouffard, N. R.**, Hsieh, L.-T., Ranganath, C. Neural basis underlying the generalization of sequence structure. Co-author of poster at Society for Neuroscience Annual Meeting 2017.

Libby, L. A., **Bouffard, N. R.*,** Ranganath, C. Context-dependent decision-making: hippocampal-cortical interactions. Presented as a poster at the Bay Area Memory Meeting 2017.

Libby, L. A.*, **Bouffard, N. R.,** Ranganath, C. Context-dependent decision-making: hippocampal-cortical interactions. Co-author of poster at Society for Neuroscience Annual Meeting 2016.

Roberts, B. M.*, Wang, S. F., Montchal, M., Wade, A., **Bouffard, N.**, Ragland, J. D., Carter, C., Ranganath, C. Effects of transcranial direct current stimulation (tDCS) on neural oscillations during episodic memory encoding and retrieval. Co-author of poster at Society for Neuroscience Annual Meeting 2016.

Bouffard, N. R.*, Stokes, J., Kyle, C., Lieberman, J., Ekstrom, A. Temporal encoding strategies produce comparable boosts in free recall performance to spatial encoding strategies. Presented as a poster at Society for Neuroscience Annual Meeting 2015.

Bouffard, N. R.*, Stokes, J., Kyle, C., Lieberman, J., Ekstrom, A. Temporal encoding strategies produce comparable boosts in free recall performance to spatial encoding strategies. Presented as a talk at the Bay Area Memory Meeting 2015.

Bouffard, N. R.*, Stokes, J., Kyle, C., Lieberman, J., Ekstrom, A. Temporal Method of Loci. Presented as a poster at the Stanford Undergraduate Research Conference 2015.

Bouffard, N. R.*, Stokes, J., Kyle, C., Lieberman, J., Ekstrom, A. Temporal Method of Loci. Presented as a talk at the University of California, Davis Undergraduate Research Conference 2015.

RESEARCH EXPERIENCE

Junior Specialist (July 2015-June 2018)

Advisor: Charan Ranganath, Ph.D.
Dynamic Memory Lab, Center for Neuroscience, University of California, Davis

Projects: While working as a junior specialist in the Ranganath lab, I have made large contributions to two projects. One project utilizes fMRI to examine the neural mechanisms that underlie the use of context as a cue for memory-guided behavior. For this project, I collected the behavioral data, collected all fMRI scans, scripted first and second level GLM analyses using FSL, and presented the poster at a conference (see "PRESENTATIONS AND TALKS") under the supervision of a previous postdoc in the lab, Laura Libby, and current postdoc in the lab, Eda Mizrak. The other project is an fMRI investigation of temporal sequence schemas and the relationship between context and item memory. For this project, I helped collect the behavioral data, collected the fMRI scans, helped

analyzed some of the behavioral data in R, and scripted first and second level GLM analyses using FSL, under the supervision of a graduate student.
Managerial Responsibilities: Assist with fMRI, EEG, tDCS, and behavioral data collection for eight postdoctoral fellows and graduate students. Maintain lab equipment (EGG, StarStim). Train and manage thirty undergraduate research assistants. Manage human subject protocols, make sure the laboratory's practices are compliant with the university's IRB, purchase supplies and equipment, manage computers and user accounts. Assist with grant reports and edit grant proposals. Create and maintain two websites for the lab and the Memory and Plasticity group. Organize weekly meetings for the Memory and Plasticity group. Screen and interview applicants for a staff researcher position.

Research Assistant (July 2014-June 2015)
Advisor: Arne Ekstrom, Ph.D.
Human Spatial Cognition Lab, Center for Neuroscience, University of California, Davis

Projects: While working in the Ekstrom lab, I proposed and conducted my own original experiment. Along with the conception of the idea, I designed the paradigm, helped to script the experiment and stimulus presentation in Matlab, collected data from 75 participants, analyzed data using R, presented my research as a poster and a 15-minute talk at multiple conferences (see "PRESENTATIONS AND TALKS"), and wrote the manuscript. The paper was accepted to Memory and Cognition in June 2017.
Responsibilities: Scheduled participants for testing obtained informed consent, ran participants and collected behavioral data; gained proficiency in MATLAB and Unity for running experiments, coded experimental data for analysis; participated in lab meetings; MRI safety trained December 2014 to observe fMRI and MRI experiments; conducted an honors thesis in 2015.

Research Assistant (April 2014-June 2015)
Advisor: Kristin H. Lagattuta, Ph.D.
Mind-Emotion Development Lab, Center for Mind and Brain, University of California, Davis

Projects: While working in the Lagattuta lab I was involved with two projects: one that studied the development of children's moral judgments and decision making and the other was a future forecasting experiment that aimed to study the influence of inhibitory control on children's ability to predict future events.
Responsibilities: Recruited and scheduled participants, obtained informed consent, ran child (4- to 13-year-olds) and adult participants, collected behavioral data, coded behavioral data, inputted data into SPSS for statistical analysis, created and edited stimuli in Photoshop, contributed to many discussions regarding interpretations of data, proofread abstracts and drafts of manuscripts.

RESEARCH COMPETENCIES

MRI Operator/safety certified: Certified to collect data in fMRI experiments. (Safety certified since 12/2014 and operator certified since 7/2015)
R: Proficient in R, have used to compute descriptive statistics as well as repeated measures ANOVA, t tests, correlations, and to plot behavioral data.

MATLAB/Psychtoolbox: Proficient in Matlab. Have written scripts to present stimuli for experiments. Have also written scripts for coding and organizing behavioral data, computing descriptive statistics, and plotting behavioral data.
FSL: Used to preprocess fMRI data and run first, second and group level GLM for univariate and ROI analyses
Bash (OS X): Used to write scripts to automatize FSL analyses
Photoshop: Used to create and edit stimuli and figures for a research grant

---

WORK EXPERIENCE

Junior Specialist (July 2015-Present)
Dynamic Memory Lab, Center for Neuroscience
University of California, Davis
Advisor: Charan Ranganath, Ph.D.
Responsibilities: see "RESEARCH EXPERIENCE"

Special Transitional Enrichment Program Tutor (Summer 2013, Summer 2014)
Student Academic Success Center, University of California, Davis
Responsibilities: Tutored incoming freshmen from underprivileged areas in statistics.

Drop-in Tutor (August 2013- June 2014)
Student Academic Success Center, University of California, Davis
Responsibilities: Tutored small classrooms of UC Davis students in elementary statistics

Intercollegiate Athlete Tutor (March 2013- March 2014)
Student Academic Success Center, University of California, Davis
Responsibilities: Tutored student-athletes in calculus and statistics for two hours a week and prepared weekly lessons.

REFERENCES

Charan Ranganath Ph.D.
Professor, Psychology
University of California, Davis
(530) 757-8750
cranganath@ucdavis.edu

Arne Ekstrom, Ph.D.
Associate Professor, Psychology
University of California, Davis
(530) 757 - 8850
adekstrom@ucdavis.edu

Kristin Hansen Lagattuta, Ph.D.
Professor, Psychology
University of California, Davis
(530) 747-3801
khlaga@ucdavis.edu

Joy Geng, Ph.D.
Associate Professor, Psychology
University of California, Davis
(530) 297-4486
jgeng@ucdavis.edu