Alexandra G. Tremblay-McGaw

Personal Information

Email: alex.tremblaymcgaw@ucsf.edu
Publications: Google Scholar

Current Position

July 2023-Current — Clinical Research Coordinator (CRC) , University of California, San Francisco
Sleep and Mood Lab - Andrew Krystal, MD

DESCRIPTION: Communicate closely with patients with treatment resistant depression regarding symptom progression and overall health and mood. Monitor patient surveys and neural data. Plot symptom variability and provide weekly patient updates to the team. Work on FitBit, BIOPAC, and depression biomarker analysis using Python. Visit patients and implement NeuroPace device stim and detector changes. Conduct structured clinical interviews. Work with clinicians, graduate students, post-docs, and faculty to ensure research progression.

Education

Sep 2014-May 2018 — Bachelor of Arts in Psychology, **Skidmore College,** Saratoga Springs, NY
magna cum laude and honors within the major
Thesis: "The Integration of Memories in the Human Brain"
Advisor: Dr. Daniel Peterson GPA: 3.9 | Detailed List of Courses

Sep 2014-May 2018 — Bachelor of Arts in Economics, **Skidmore College,** Saratoga Springs, NY
magna cum laude and honors within the major
Thesis: "An Examination of Homelessness and Mental Illness"
Advisor: Dr. Sandra Goff GPA: 3.8 | Detailed List of Courses

Jan 2017-May 2017 — Semester Abroad, **Universidad Autónoma de Madrid,** Madrid, Spain
Skidmore Tufts: in Spain GPA: 3.7 | Detailed List of Courses

Aug 2003-May 2012 — Student and Dancer, **San Francisco Ballet School,** San Francisco, CA
full scholarship pre-professional dancer with various solos

Honors and Awards

June 2023 — Best Clinical Science Abstract Research Award **Stanford University School of Medicine** (USD $500)
Nov 2018 — Travel to Present Award **Skidmore College** (USD $700)
Jan 2018 — Mary Shafer Dennis Endowed Scholarship **Skidmore College** (USD $5,440)
Sep 2017 — Foley Psychology Department Research Fund **Skidmore College** (USD $300)
Mar 2017 — See Beyond Award **Skidmore College** (USD $4,000)
2015-2018 — Dean's List Honors **Skidmore College**
2014-2018 — Tuition Exchange Scholarship **Skidmore College** (USD $134,500)
2014-2018 — Skidmore College Grant **Skidmore College** (USD $43,702)
2010-2014 — Scholarship to attend **Drew High School** (USD $128,000)
2003-2012 — Full scholarship to attend the **San Francisco Ballet School** (USD $100,000)

Computer Skills

Basic Knowledge: MatLab, SPSS, LaTeX, LiveCode, R, JASP
Intermediate Knowledge: Python, Adobe, Excel, Word, PowerPoint, EndNote, Zotero, REDCap
Toolboxes: CONN, SUIT, MarsBar

Languages

English: Fluent
Spanish: Fluent

Research Experience

July 2023-Current

Clinical Research Coordinator (CRC) , University of California, San Francisco, CA
Sleep and Mood Lab - Andrew Krystal, MD

Project: *Closed-Loop Deep Brain Stimulation for Major Depression - PReSiDio (UH3NS123310-01A1)*

DESCRIPTION: The purpose of this study is to test a personalized approach to brain stimulation as an intervention for depression. We use a surgically implanted device to measure each individual's brain activity related to their depression. Then the team uses small electrical impulses to alter that brain activity and measure whether these changes help reduce depression symptoms. This study is intended for patients with major depression whose symptoms have not been adequately treated with currently available therapies.

CONTRIBUTION: As a CRC on the project I work closely with patients to monitor their depression, anxiety, suicidal ideation, and anhedonia symptoms. Additionally, I implement device detector and stim changes, travel to visit patients, and conduct structured clinical interviews. I work on multiple data analysis projects including a BIOPAC/FitBit Depression biomarker augmentation analysis and a grant budget analysis.

May 2021-July 2023

Lead Clinical Research Coordinator (CRC-2) , Stanford University, Palo Alto, CA
Biobehavioral Pediatric Pain Lab - Laura Simons, Ph.D

Project: *Signature for Pain Recovery in Teens - SPRINT (R61 NS114926)*

DESCRIPTION: SPRINT is a multisite, international effort to uncover a biological signature predicting pain recovery and persistence in teens with musculoskeletal pain. In collaboration with the University of Toronto, Hospital for Sick Children (SickKids), and Cincinnati Children's Hospital, we are using a novel machine learning technique to generate and test an elastic net model, opening doors for new screening and treatment approaches. SPRINT participation consists of a blood draw, an hour-long MRI, sensory testing, and parent and child questionnaires in person, and biweekly at-home surveys over three months.

CONTRIBUTION: As the Lead Coordinator of the SPRINT study, I managed and oversaw study recruitment, data collection, database management, and multiple team meetings. I standardized procedures, coordinated blood transfers, and facilitated all data analysis by collating the data, merging, and cleaning it. I assisted with the writing and submission of progress reports to the NIH. Additionally, I lead an independent project on proposing a framework to examine diversity and representation in the recruitment and participation of this study and future research.

Project: *Learning and Memory in Pediatric Chronic Pain (R01 HD083270)*

DESCRIPTION: Given the influential role of learning and memory on pain outcomes in youth with chronic pain, the goal of the current study is to examine the process of aversive learning in adolescents with pain in comparison to healthy individuals. This study utilizes brain imaging (fMRI), psychophysical (skin conductance), and saliva cortisol measures to assess functional circuit and physiological changes associated with altered learning and memory patterns.

CONTRIBUTION: I have managed data analysis for this study and contributed to multiple manuscripts and posters that are products of this study, including an independent project examining threat learning in the cerebellum in youth with chronic pain and pain-free peers.

Project: *Pain Rehabilitation Virtual Reality - PRVR (R21 AR079140)*

DESCRIPTION: In collaboration with Stanford Children's Health, Agile Physical Therapy, and California Rehabilitation & Sports Therapy, this randomized controlled trial examines a novel approach to pain management through the use of virtual reality (VR) technologies. We expect to address factors relevant to chronic pain, including increasing range of motion, reducing pain-related fear of movement, and improving the mind-body connection. VR tools for pain have shown promise in numerous research studies and our mission is to continue to improve care for children and adolescents with chronic pain.

CONTRIBUTION: For this clinical trial I assisted with study start-up and initializing regulatory and IRB contracts and protocols. I helped develop the protocol and best uses for VR in Physical Therapy. I trained and oriented study staff and physical therapists. Additionally, I helped write the published protocol paper.

Project: *Journey in Pain Care (K24 AR078945)*

DESCRIPTION: Journey in Pain Care aims to conduct formative research to identify opportunities for better care among youth with chronic pain and their families. Our goal is to characterize–with in-depth interviews and longitudinal quantitative data–the experiences of youth living with chronic MSK pain and their parents who are seeking and completing multidisciplinary pain care. The purpose is to highlight gaps in care, communication, and understanding for further study.

CONTRIBUTION: I trained to become a clinical interviewer on the study, assisted with regulatory affairs, participated in bi-weekly group supervision to further develop and build upon clinical and research skills.

Jun 2018-Aug 2021

Lab Manager , The University of Oregon, Eugene, OR
The Kuhl Lab - Brice Kuhl, Ph.D

Project: *DIPPER (NSF Career Award BCS-1752921)*

DESCRIPTION: DIPPER aims to examine to what extent representations of imagined events resemble representations of retrieved events. We used fMRI pattern similarity analyses to compare neural representations of retrieved and imagined events. In the course of one study visit, participants were scanned while watching videos, remembering previously viewed videos, and imagining novel events conceptually related to the content of watched and remembered videos.

CONTRIBUTION: I participated in the development of this research idea, the planning of the study design, and collected all imagining data. The manuscript is in preparation.

Project: *PEMS EEG (R01 NS089729 and NSF Career Award BCS-1752921)*

DESCRIPTION: In PEMS EEG, we tested whether encoding and retrieval biases can be decoded from patterns of neural activity and whether decoded evidence of memory biases predicts how new events will be remembered. During an EEG session, participants were first familiarized with a series of common objects. Afterwards, subjects completed a continuous recognition task that included 'old' and 'new' objects. The order of stimulus presentation was controlled such that half of the new objects were preceded by an old object and half were preceded by a new object. Following continuous recognition, participants completed a post-test that required discriminating objects from the continuous recognition task vs. perceptually similar lures.

CONTRIBUTION: I collected the PEMS EEG data and worked to check the data quality and analyze the data. I submitted an abstract and presented a poster of our results.

Project: *ColorSep (R01-NS089729)*

DESCRIPTION: In ColorSep, we tested whether similarity between events triggers adaptive biases in how those events are remembered. We generated pairs of competing objects that were identical except in color and varied the degree of color similarity for the competing objects. Across a series of several experiments, subjects repeatedly studied and were tested on associations between each of these objects and corresponding faces.

CONTRIBUTION: For ColorSep, I collected all of the data, implemented study design changes, worked to trouble shoot MatLab errors, and assisted with figure generation for the final manuscript.

Sep 2016-May 2018

Research Assistant & Lab Manager , Skidmore College, Saratoga Springs, NY
Memory and Learning Sciences Lab - Daniel Peterson, Ph.D

Project: *Physiological Stress and Face Recognition (James S. McDonnell Foundation Grant)*

DESCRIPTION: In two experiments, participants encoded faces either under physiological stress (via a cold pressor task) or under control conditions. Participants were later given a recognition memory test for the faces and provided confidence judgments in their old/new decisions.

CONTRIBUTION: While working in the lab, I managed data collection, oversaw the training of research assistants, and discussed study design and implementation.

Project: *Memory Integration (Foley Psychology Research Award)*

DESCRIPTION: In the Memory Integration experiment, we implemented a repeated measures design to assess the impact of seeing a positive version of a negative event. Sixty-three participants participated in a for-credit or paid experiment advertised as a study on "emotional processing" that consisted of viewing a series of negative, positive, or neutral images of scenes while having their skin conductance measured.

CONTRIBUTION: This was my senior year honors thesis which I conceptualized, designed, implemented, analyzed, presented, and wrote up.

Clinical Experience

July 2023-Current	Clinical Interviewer , University of California, San Francisco- San Francisco, CA **PReSiDio Clinical Trial Lab - Andrew Krystal, MD**
	DESCRIPTION: Conducted structured clinical interviews for adults participating in the PReSiDio clinical trial. Participated in bi-monthly group supervision.
Apr 2022-July 2023	Clinical Interviewer , Stanford University - Palo Alto, CA **Biobehavioral Pediatric Pain Lab - Laura Simons, Ph.D**
	DESCRIPTION: Interviewed parents and pediatric patients with chronic pain about their pain care journey in semi-structured clinical interviews. Participated in bi-weekly group supervision.
Jan 2017-May 2017	Hospital Volunteer , Hospital Infanta Sofía - Madrid, Spain **Asociación Española Contra Cáncer - Patricia Pradera, Ph.D**
	DESCRIPTION: Visited cancer patients; took notes about their demeanor and reported to head psychologist regarding the patients' emotional state and well-being. Provided information to patients and families regarding hospital and government services and aid. Supported families emotionally through their hospital stay. All communication conducted in Spanish.

Manuscripts

Tremblay-McGaw, A.G., Biggs, E.E., Timmers, I., Moulton, E., & Simons, L.E. (in preparation). *The role of the cerebellum in threat learning in youth with chronic pain.*

Biggs, E.E., Heathcote, L.C., Timmers, I., **Tremblay-McGaw, A.G.**, Noel, M., Borsook, D., & Simons, L.E. (under review). *Testing the boundary conditions of emotional memory bias: A multi-method examination in adolescents with chronic pain.*

Tremblay-McGaw, A.G., Biggs, E.E., Sokol, O., Wiseman, A.M., Goya Arce, A., & Simons, L.E. (under review). *Who is being represented in research? A framework for assessing diversity and representation in prospective research cohorts.*

Timmers, I., Bruckert, L., Biggs, E.E., **Tremblay-McGaw, A.G.**, Borsook, D., Zhang, H., & Simons, L.E. (under review). *A comprehensive interrogation of neurite microstructure in youth with chronic pain: multi-shell diffusion weighted imaging.*

Simons, L.E., Hess. C.W., Choate, E.S., Van Orden, A.R., **Tremblay-McGaw, A.G.**, Menendez, M., Boothroyd, D.B., Parvathinathan, G., Griffin, A., Caruso, T. J., Stinson, J., Weisman, A., Liu, T., Christensen, R., & Koeppen, K. (2022). *Virtual Reality Augmented Physiotherapy for Chronic Pain in Youth: Protocol for a randomized controlled trial enhanced with single case experimental design.* Journal of Medical Internet Research. 11(12):e40705.

Chanales, A.J.H., **Tremblay-McGaw, A.G.**, Drascher, M.L., & Kuhl, B.A. (2020). *Adaptive repulsion of long-term memory representations is triggered by event similarity.* Psychological Science. 32 (5), 705-720.

Posters

Pascual-Diaz, S., Suñol, M., Biggs, E.E., **Tremblay-McGaw, A.G.**, King, C., Saberi, M., Aghaeepour, N., Angst, M., Gaudilliere, B., Stinson, J., Moayedi, M., Coghill, R., Simons, L.E., & Lopez-Solà, M., (2023, October). *Augmented brain responses to multisensory stimulation in affective/regulation circuits is associated with worse quality of life in adolescents with chronic musculoskeletal pain.* Poster Session TBD, presented at the International Symposium on Peadiatric Pain, Nova Scotia, Canada.

Biggs, E.E., Neville, A., **Tremblay-McGaw, A.G.**, Wiseman, A.M., Coghill, R., King, C., Lopez-Sola, M., Moayedi, M., Gaudilliere, B., Aghaeepour, N., Angst, M., Stinson, J., & Simons, L.E. (2023, September). *Measuring Recovery in Pediatric Chronic Pain.* Poster Session TBD, presented at the European Peadiatric Psychology Conference, Scotland, United Kingdom.

Tremblay-McGaw, A.G., Harrison, L.E., Biggs, E.E., & Simons, L. (2023, April). *Chronic Pain and Sleep Disturbance in Youth with Chronic Pain.* Poster session II, presented at the Social and Affective Neuroscience Society Annual Meeting, Santa Barbara, CA

Neville, A., Biggs, E.E., **Tremblay-McGaw, A.G.**, Wiseman, A.M., Coghill, R., King, C., Lopez-Sola, M., Moayedi, M., Gaudilliere, B., Aghaeepour, N., Angst, M., Stinson, J., & Simons, L.E. (2023, March). *A longitudinal examination of parent diagnostic uncertainty in pediatric chronic pain.* Poster 64, session III, presented at the Society for Pediatric Psychology, Chicago, IL.

Hess, C.W., Madgavkar, D., Van Orden, A.R., Wiseman Miner, A., **Tremblay-McGaw, A.G.**, Wiseman, A.M., Choate, E., Neville, A., & Simons, L.E. (2023, March). *Journey in Pain Care: A qualitative protocol examining the lived experiences of children and caregivers navigating chronic pain treatment.* Poster 80, session III, presented at the Society for Pediatric Psychology, Chicago, IL.

Tremblay-McGaw, A.G., Biggs, E.E., Goya Arce, A., Sokol, O., Wiseman, A.M., & Simons, L.E. (2022, September). *Representation of chronic pain populations in experimental research.* Poster PWD310, presented at the IASP World Congress on Pain, Toronto, Canada.

Tremblay-McGaw, A.G., Biggs, E.E., Timmers, I., Moulton, E., & Simons, L.E. (2022, September). *The role of the cerebellum in threat learning in youth with chronic pain.* Poster PFR155, presented at the IASP World Congress on Pain, Toronto, Canada.

Madgavkar, D. Hess, C.W., Van Orden, A.R., Wiseman, A.M., **Tremblay-McGaw, A.G.**, Choate, E.S., & Simons, L.E. (2022, August). *Journey in Pain Care (JiPC): A qualitative protocol for examining the lived experiences of children and families navigating chronic pain treatment.* Poster session A, presented at the Stanford Bio-X Interdisciplinary Annual Symposium, Palo Alto, California.

Tremblay-McGaw, A.G., Biggs, E.E., Simons, L.E., & Timmers, I. (2022, May). *Alterations in white matter microstructure for youths with chronic pain relate to pain catastrophizing: an evaluation of diffusion MRI data using multi-compartment modelling.* Poster session VIII, presented at the Association for Psychological Science Annual Convention, Chicago, IL.

Choate, E., Hess, C., Van Orden, A., **Tremblay-McGaw, A.G.**, Griffin, A., Feinstein, A., Caruso, T., & Simons, L. (2022, April). *Virtual reality in physical therapy: A randomized clinical trial.* Poster session III, presented at the Society for Pediatric Psychology, Pheonix, AZ.

Molitor, R.J., **Tremblay-McGaw, A.G.**, DuBrow, S., & Kuhl, B.A. (2020, March). *Distributed representations of remembered vs. imagined events.* Poster session A, presented at the Cognitive Neuroscience Society, Boston, MA.

Drascher, M.L., **Tremblay-McGaw, A.G.**, & Kuhl, B.A. (2019, October). *Repulsion and sharpening along diagnostic feature dimensions support resolution of memory interference.* Poster session 169, presented at the Annual Society for Neuroscience, Chicago, IL.

Tremblay-McGaw, A.G., Kuhl, B.A., & Long, N.M. (2019, March). *Decoding biases between memory encoding and retrieval induced by recent experience.* Poster session A, presented at the Annual Cognitive Neuroscience Society, San Francisco, CA.

Tremblay-McGaw, A.G., Wissman, K.T., & Peterson, D.J. (2018, November). *The integration of memories in the human brain.* Poster session IV, presented at the Annual Psychonomic Society, New Orleans, LA.

Invited Seminars

Tremblay-McGaw, A.G., O'Dempsey, S., Vlhek, K., & Singh, M. (2023, September). *Life After Graduation.* Presented by the Economics and Business Departments and Alumni Association: SUNY Oneonta, Oneonta, NY.

Hoffman, H., Van Orden, A.R., Hess C.W., **Tremblay-McGaw, A.G.**, & Simons, L.E. (2022, September). *The Powers and Application of Virtual Reality: A Special Hands-On Workshop.* Presented at the Pediatric Sedation and Pediatric Dental Sedation Symposium: Boston Children's Hospital & Harvard Medical School Teaching Hospital "Outside of the Operating Room" Conference, San Francisco, CA.

Training

Oct 2023	Suicide-Focused Assessment and Treatment Course, **McLean Hospital**
Oct 2023-Oct 2024	MRI Level II Safety Certification, **University of California, San Francisco**
July 2023-Current	CITI Basic Training Course for Biomedical Research & GCP Training, **University of California, San Francisco**
July 2023-Current	HIPPA for Researchers and Protecting Patient Privacy Certification, **University of California, San Francisco**
June 2021-June 2023	Bloodborne Pathogens Certification, **Stanford School of Medicine**
June 2021-June 2023	HIPPA for Researchers and Protecting Patient Privacy Certification, **Stanford School of Medicine**
June 2021-June 2023	MRI Safety Certification, **Stanford University**
June 2021-June 2023	CITI Basic Training Course for Biomedical Research & GCP Training, **Stanford University**
May 2021	Bystander Intervention to Stop Anti-Asian/American Harassment and Xenophobia Training, **Hollaback**
Oct 2019	NSF GRFP Workshop, **University of Oregon**
Aug 2019	Philips Neuro HD EEG Workshop, **University of Oregon**
May 2017-2021	CITI Basic Training Course for Biomedical Research, **University of Oregon**
May 2017-2021	MRI Safety Certification, **University of Oregon**

Memberships

November 2022-Current	Social and Affective Neuroscience Society
May 2022-May 2023	International Association for the Study of Pain
Nov 2021-Feb 2023	Society of Pediatric Psychology
Mar 2020-Mar 2022	Association for Psychological Science
Nov 2018-Nov 2020	Cognitive Neuroscience Society
Jul 2018-Jul 2020	Society for Neuroscience
Jul 2018-Jul 2019	Psychonomic Society

Primary References

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Bachelor of Arts in Psychology, Skidmore College

Courses

Introduction to Psychological Science
Research Methods in Psychology I
Abnormal Psychology
Colloquium in Psychological Science
Social Psychology
Research Methods in Memory
Clinical Psychopharmacology
Psychology of Race
Senior Research Project I
Senior Research Project II

Bachelor of Arts in Economics, Skidmore College

Courses

Introduction to Macroeconomics
Introduction to Microeconomics
Calculus I
Macroeconomic Theory
Statistical Methods
Advanced Macroeconomic Theory and Policy
Evolutionary Economics
Income Distribution
Pre-Thesis
Environmental and Resource Economics
Senior Seminar

Exchange Program, Universidad Autónoma de Madrid

Courses

Clinical Psychology