Alexandra G. Tremblay-McGaw

Personal Information

email: atrembla@stanford.edu

Current Position

May 2021-Current — Lead Clinical Research Coordinator (CRC-2), Stanford University, Palo Alto, CA
Biobehavioral Pediatric Pain Lab - Laura Simons, Ph.D
Oversee all lab activities and projects; collect and analyze fMRI data; coordinate simultaneous studies (four NIH funded projects) and supervise data collection and participant recruitment; train, oversee, schedule, and mentor multiple CRC-A's and undergraduate research assistants. Work with graduate students, post-docs, and faculty across institutions and universities.

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

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)

Research Experience

May 2021-Current — 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 a 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 surveys for three months at home.
CONTRIBUTION: As the Lead Coordinator of the SPRINT study, I manage and oversee study recruitment, data collection, database management, and multiple team meetings. I work to standardize procedures, coordinate blood transfers, and facilitate all data analysis by collating the data, merging, and cleaning it. I assist with the writing and submission of progress reports to the NIH. Additionally, I am leading 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 will examine 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 that should be further studied.
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 I collected all of the 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 that I conceptualized, designed, implemented, analyzed, presented, and wrote up.

Clinical Experience

Apr 2022-Current — Clinical Interviewer, Journey in Pain Care Study, Stanford, CA
Biobehavioral Pediatric Pain Lab - Laura Simons, Ph.D
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 — Volunteer, Asociación Española Contra Cáncer, Madrid, Spain
Hospital Infanta Sofía - Patricia Pradera, Ph.D
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.*

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

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., Griffin, A., Parvathinathan, G., Griffin, A., Caruso, T.J., Stinson, J., Weisman, A., Liu, T., Christensen, R., & Koeppen, K. (under review). *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.

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

Tremblay-McGaw, A.G., Harrison, L.E., & Simons, L. (in preparation). *Sleep and Individual Differences in Youth with Chronic Pain.* Poster session TBD, presenting 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. (in preparation). *A longitudinal examination of parent diagnostic uncertainty in pediatric chronic pain.* Poster session TBD, presenting 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

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

June 2021-Current	Bloodborne Pathogens Certification, **Stanford School of Medicine**
June 2021-Current	HIPPA for Researchers and Protecting Patient Privacy Certification, **Stanford School of Medicine**
June 2021-Current	MRI Safety Certification, **Stanford University**
June 2021-Current	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**

Computer Skills

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

Memberships

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

Languages

English:	Fluent
Spanish:	Fluent

Primary References

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Assistant Professor, University of Virginia
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Kathryn Wissman, PhD
Assistant Professor, North Dakota State University
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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