

Shannon Proksch

sproksch[at]ucmerced[dot]edu

www.shannonproksch.com

EDUCATION

PhD Cognitive and Information Sciences	est. grad. 2022
University of California, Merced	
Advisor: Prof. Ramesh Balasubramaniam	
MSc, Mind, Language and Embodied Cognition	2017
with Distinction	
The University of Edinburgh	
BA, Music, minors Philosophy & Psychology	2015
Summa Cum Laude, Honors Program Graduate with Thesis Defense	
Texas A&M University – Corpus Christi	
Certificate, Teaching English to Speakers of Other Languages	2015
Texas A&M University – Corpus Christi	
Seven-week French Language Immersion Program	2013
Middlebury College, Vermont	

ADDITIONAL TRAINING

Institute for Evidence-Based Teaching Practices	
Center for Engaged Teaching & Learning, UC Merced, California	2021
Neuromatch Academy Computational Neuroscience Summer School	2020
American Psychological Association Advanced Training Institute:	
Nonlinear Methods for Psychological Science, University of Cincinnati, Ohio	2019
Spring School Language and Music in Cognition:	
Integrated Approaches to Cognitive Systems, Universität zu Köln, Cologne, Germany	2019
Linear Models and Mixed Models with R, University of Edinburgh (Instructor: Bodo Winter)	2017

AWARDS & SCHOLARSHIPS

Cognitive & Information Sciences Graduate Student Spotlight Award	Fall 2021
for outstanding contributions to scholarship and service, <i>UC Merced</i>	
NSF Research Traineeship (NRT) Fellowship-	
Intelligent Adaptive Systems <i>UC Merced</i>	Fall 2021-Summer 2022
NSF Research Traineeship (NRT) Fellowship-	
Intelligent Adaptive Systems <i>UC Merced</i>	Fall 2019-Summer 2020
NRT Interdisciplinary Computational Graduate Education Program <i>UC Merced</i>	Spring 2019
Travel grant from the American Psychological Association	Summer 2019
for the Advanced Training Institute: Non-Linear Methods for Psychological Science	
Graduate Dean's Recruitment Fellowship <i>UC Merced</i>	Fall 2018-Summer 2019
Highly Commended Dissertation Prize <i>University of Edinburgh</i>	October 2017
Conference Travel Funding Award (<i>University of Edinburgh; for presentation at the 6th Dubrovnik Conference on the Philosophy of Art</i>)	April 2017

PUBLICATIONS & IN PRESS

- Proksch, S.,** Reeves, M., Spivey, M., Balasubramaniam, R. (*in press*) Measuring acoustic social worlds: reflections on a study of multiagent human interaction. In S. Besser, F. Lysen, N. Geode (Eds.) *Worlding the Brain*, forthcoming with Brill in 2022.
- Proksch, S.,** Reeves, M., Balasubramaniam, R., & Spivey, M. (2022). Coordination Dynamics of Multi-Agent Human Interaction in a Musical Ensemble. *Scientific Reports*. 12, 421.
Preprint doi: 10.31234/osf.io/nz4g2
Publication doi: 10.1038/s41598-021-04463-6
- Moser, C., Ackerman, J., Dayer, A., **Proksch, S.,** Smaldino, P.E. (2021) Why don't cockatoos have war songs? [commentary on Mehr et al. and Savage et al.] *Behavioral and Brain Sciences*. Preprint doi: 10.31234/osf.io/j3nd6 Publication doi: 10.1017/S0140525X20001223
- Holbrook, C., Iacoboni, M., Gordon, C., **Proksch, S.,** Makhfi, H., & Balasubramaniam, R. (2021). Posterior Medial Frontal Cortex Regulates Sympathy: A TMS Study. *Social Neuroscience*.
Preprint doi: 10.31234/osf.io/hduac Publication doi: 10.1080/17470919.2021.1980097
- Pouw, W., **Proksch, S.,** Drijvers, L., Gamba, M., Holler, J., Kello, C., Schaefer, R., Wiggins, G. (2021). Multilevel interactions in multimodal communications. *Philosophical Transactions of the Royal Society B: Biological Sciences*. Preprint doi: 10.31219/osf.io/psmhn
Publication doi: 10.1098/rstb.2020.0334
- Proksch, S.** Comstock, D. C., Médé, B., Pabst, A., Balasubramaniam, R. (2020). Motor and predictive processes in auditory beat and rhythm perception. *Frontiers in Human Neuroscience, Cognitive Neuroscience*. 14:578546. doi: 10.3389/fnhum.2020.578546
- Holbrook, C., Iacoboni, M., Gordon, C., **Proksch, S.,** Balasubramaniam, R. (2020). Posterior medial frontal cortex mediates threat-enhanced religious belief: A replication and extension study. *Social Cognitive and Affective Neuroscience*, nsaa153. doi: 10.1093/scan/nsaa153
- Proksch, S.** (2017). Interoceptive inference and emotion in music: Integrating the neurofunctional 'Quartet Theory of Emotion' with predictive processing in music-related emotional experience. *Journal of Cognition and Neuroethics*, 5(1): 101-125.
- Proksch, S.** (2017). *Integrating the neurofunctional 'Quartet Theory of Emotion' with predictive processing in music-related emotional experience*. (Unpublished master's dissertation). The University of Edinburgh, Edinburgh, Scotland.
- Proksch, S.** (2015). *Music and language: Evolutionary and cognitive perspectives*. (Unpublished BA Honors Thesis). Texas A&M University-Corpus Christi, Corpus Christi, Texas.
- Proksch, S.** (2014). *Music and language in the mind: Intention, structure, and perception*. (Unpublished BA Thesis). Texas A&M University-Corpus Christi, Corpus Christi, Texas.

PREPRINTS & SUBMISSIONS

- Ross, J. M.*, **Proksch, S.***, Iversen, J., Balasubramaniam, R. (*submitted*). Contributions of left and right parietal cortex for musical beat perception: replication and extension. **These authors contributed equally*
- Pabst, A., **Proksch, S.,** Médé, B., Comstock, D., Ross, J. M., & Balasubramaniam, R. (2021, April 2). A systematic review of the efficacy of intermittent theta burst stimulation (iTBS) on cognitive enhancement. Preprint doi: 10.31234/osf.io/me6n4

CONFERENCE PRESENTATIONS

- Proksch, S.**, (October 2021). Acoustic social worlds: from Markov blankets to interpersonal synergies. Talk presented at *Cognitio 2021: Active inference and collective intelligence*. Montréal, Canada.
- Proksch, S.**, Reeves, M., Spivey, M., Balasubramaniam, R. (August 2021). Coordination dynamics of multi-agent human interaction—recurrence quantification analysis of a musical performance. Poster presented at the *16th International Conference on Music Perception and Cognition and 11th triennial conference of the European Society for the Cognitive Sciences of Music*. Sheffield, United Kingdom.
- Proksch, S.**, (November 2019). Synchrony and the Markov Blankets of Multi-Agent Human Interaction. Talk presented at the *Timescales of Life and Mind: Interdisciplinary Conference on Timescales as a Methodological Approach to Predictive Processing and the Free Energy Principle*, Edinburgh, Scotland.
- Ross, J. M., **Proksch, S.**, Iversen, J.R., Balasubramaniam, R. (August 2019). Down-regulation of left posterior parietal cortex impairs musical phase shift detection in subjects with good perceptual acuity for phase timing. Poster presented at the *Biennial Meeting of the Society for Music Perception and Cognition*. New York City, USA.
- Ross, J. M., **Proksch, S.**, Iversen, J.R., Balasubramaniam, R. (July 2019). Down-regulation of left posterior parietal cortex impairs musical phase shift detection in subjects with good perceptual acuity for phase timing. Poster presented at *Synchrony and Rhythmic Interaction: From Neurons to Ecology Lorentz Workshop*, Leiden, Netherlands.
- Proksch, S.**, Booth, L., Dayer, A., Reeves, M., Spivey, M. (June 2019). Online and In Sync? Bodily synchrony & interpersonal closeness in audiovisual communication. Poster presented at the *American Psychological Association Advanced Training Institute on Nonlinear Methods for Psychological Science*, Cincinnati, Ohio.
- Ross, J. M., **Proksch, S.**, Iversen, J.R., Balasubramaniam, R. (March 2019). Hemispheric differences in parietal contributions to auditory beat perception. Poster presented at *Cognitive Neuroscience Society 2019 Annual Meeting*, San Francisco, California.
- Proksch, S.**, Ross, J. M., Balasubramaniam, R. (February 2019). Hemispheric differences in parietal contributions to auditory beat perception. Poster presented at *Spring School 2019 Language and Music in Cognition: Integrated Approaches to Cognitive Systems*, Cologne, Germany.
- Proksch, S.** (November 2017). Interoceptive inference and emotion in music: Integrating the neurofunctional ‘Quartet Theory of Emotion’ with predictive processing in music-related emotional experience. Poster presented at *Expecting Ourselves: Prediction, Action, and the Embodied Mind*, Edinburgh, United Kingdom, November 2017.
- Proksch, S.** (November 2017). Grounding musical entrainment and social cohesion in sensorimotor contingencies. Talk presented at the *Worlding the Brain Conference*, Amsterdam, Netherlands.
- Proksch, S.** (August 2017). Interoceptive inference and emotion in music: Integrating the neurofunctional ‘Quartet Theory of Emotion’ with predictive processing in music-related emotional experience. Talk presented at the *Mind and Brain Annual Conference*, Flint, MI.
- Novelli, N. & **Proksch, S.** (April 2017). The limitations of music making machines. Talk presented at the *6th Dubrovnik Conference on the Philosophy of Art*, Dubrovnik, Croatia.

OTHER PRESENTATIONS

- Frontiers of Science Institute – University of Northern Colorado** June 2021
Presented my research to high school students interested in pursuing STEM research in higher education; Discussed transitioning from an arts and humanities background into STEM-oriented fields
Topic: Music, Movement, and the Brain
- Research Seminar in Systematic Musicology – Universität Graz** June 2021
Topic: Coordination dynamics of multi-agent interaction within a musical ensemble
- Achievement Rewards for College Scientists Foundation** March 2021
Presented to the ARCS Northern California Chapter
Topic: Overview of my music/brain work, & graduate student life at UC Merced
- Guest Lecturer – University of North Carolina, Charlotte** January 2021
Presented to undergraduate music students of the UNC-Charlotte Wind Bands
Lecture Topic: Neuroscience, Music, & Emotion
- Workshop Leader – Professional Development Event** October 2020
Led an interactive workshop for the Cognitive & Information Sciences Graduate Student Group
Workshop Topic: Giving Effective Presentations at Online Conferences
- Guest Lecturer – COGS 001, Intro to Cognitive Science** July 2020
Lecture Topic: Neuroscience and Music
- RadioBio GradStory** March 2020
Interviewed by RadioBio, a graduate student run podcast, during UC Merced's Research Week
Interview topic: Rhythms in Brains and Interacting People.
- Cognitive Science Student Association Symposium** December 2019
Outreach event sharing graduate student cognitive science research with undergraduate students
Talk title: On Music & Artificial Intelligence: The limitations of music-making machines
- Edinburgh Music Psychology Research Reading Group** Spring 2017
Organized and led discussion for three reading group sessions on:
Introduction to music and predictive processing
Emotion in music and predictive processing
Rhythm in music and predictive processing

TEACHING EXPERIENCE

- Instructor of Record – PHIL / COGS 110, Philosophy of Cognitive Science** Summer 2021
University of California, Merced
- Teaching Assistant – PHIL / COGS 110, Philosophy of Cognitive Science** Spring 2021
University of California, Merced
- Teaching Assistant – COGS 140, Perception and Action** Fall 2020
University of California, Merced
- English Second Language Instructor** Nov 2016—May 2018
E-Joy English Online Language School, Beijing, China

Elementary Music and English Second Language Instructor Ameri-Can International Academy, CIBT Education Group, Weifang, China	Feb 2016—June 2016
Grader/Supplemental Instructor- Honors Elementary Formal Logic Texas A&M University- Corpus Christi	Spring 2015
Reader/Grader- Music Appreciation Texas A&M University- Corpus Christi	Fall 2014
Counselor/Music Theory Instructor- Islander Band Camp Texas A&M University- Corpus Christi	2013—2015 (summers)

PROFESSIONAL SERVICE

Mentor, Undergraduate Research Assistants Guided four RAs on projects as members of the “Motion Capture Crew” within the Sensorimotor Neuroscience Lab, UC Merced	Fall 2019—Present
Cognitive & Information Sciences Graduate Group Administrative Fellowship Updated and clarified policies and procedures on the CIS webpage, created FAQ and detailed guides for CIS graduate program milestones	Summer 2021
Graduate Students Rights & Responsibilities Review Committee Graduate Student Association, University of California, Merced	Spring 2021
Professional Development Officer Cognitive and Information Sciences Graduate Student Group University of California, Merced	Fall 2019—Spring 2021
Co-founder Cognitive & Information Sciences Graduate Student Group University of California, Merced	Fall 2019
Mentor, Women in Science and Technology WSTEM University of California, Merced	Fall 2019—Spring 2020
Delegate, Cognitive & Information Sciences Graduate Student Association, University of California, Merced	Fall 2019—Spring 2020
Co-organizer of Cognitive Science for the Common Good Event Theme: Improving Workplace Climate & Gender Equity in Academia Cognitive & Information Sciences, University of California, Merced	October 2019

WORKSHOP & EVENT ORGANIZATION

Professional Development Event Series (Organizer) Industry(+) Job Market Panels (2) Academic Job Market Panel Giving Effective Presentations at Online Conferences (presenter) Time Management Workshop (2) Open Sciences & the Practicalities of Pre-registration Graduate Student Experience & Navigating Support Structures Grant Writing Workshop	Fall 2019—Spring 2021
Cognitive Science for the Common Good (Co-organizer) Event Theme: Improving Workplace Climate & Gender Equity in Academia	October 2019
Cognitive & Information Sciences Brownbag (Co-host) Co-host of the CIS Graduate Student Speaker Series Organized an Industry Jobs Panel w/ CIS Alumni Organized an Academic Jobs Panel w/ Early Career CIS Professors	Spring 2019

Interactive Alexander Technique Workshop

March 2015

Organized a workshop enhancing awareness of the body in performance practice to prevent repetitive stress and posture related injuries and promote relaxed performance. *Guest speaker: Dr Teresa Ford, American Society for the Alexander Technique*

Interactive Dalcroze Eurythmics Workshop

February 2014

Organized a workshop reinforcing rhythm, structure, and musical expression in the body through movement. *Guest speaker Dr David Frego, University of Texas at San Antonio*

Province Days: Three Day Educational Symposium

February 2014

Co-organized musical performances, workshops on embodied musicianship and body awareness in musical performance, and presentations on arts management, arts communication, and financial management for performing artists. *Attended by South Texas Members of the Sigma Alpha Iota Music Fraternity and students from Texas A&M University-Corpus Christi, Del Mar College, Texas A&M University-Kingsville, and University of Texas-San Antonio*

SKILLS

Transcranial Magnetic Stimulation, EEG

Motion Capture (Vicon 3D MoCap system & integrated AMTI force plates; OpenPose 2D real-time multi-person keypoint detection)

R, Python, MATLAB

LANGUAGES

English (native)

French (speak, read, & write with proficiency)

ORGANIZATIONS

Society of Music Perception and Cognition

American Psychological Association

Cognitive Neuroscience Society

INSTRUMENTS

Primary: Oboe/English Horn

Secondary: Saxophone/Clarinet/Flute

References available upon request