

RESEARCH INTERESTS

Consciousness science, integrated information theory, EEG complexity, philosophy of mind, artificial consciousness.

EDUCATION

PhD, Cognitive and Information Sciences <i>University of California, Merced, School of Social Sciences, Humanities, and Arts</i> Dissertation (in preparation): Consciousness, complexity, and silent neurons: Philosophical and empirical investigations for integrated information theory (IIT)	2021 – 2026 (expected)
MS, Cognitive and Information Sciences <i>University of California, Merced, School of Social Sciences, Humanities, and Arts</i>	2025
MS, Information <i>University of Michigan, School of Information</i> Specializations: Human-Computer Interaction; Information Analysis and Retrieval	2019
Non-degree seeking coursework in mathematics & computer science <i>Washtenaw Community College</i>	2005, 2015
BS, Environment <i>University of Michigan, College of Literature, Science, and the Arts</i> Specialization: Urban and Environmental Planning	2008

TRAININGS & WORKSHOPS

MESEC Winter School 2024 <i>Mediterranean Society for Consciousness Science</i>	March 19 – 23, 2024
Special Advanced Course: Integrated Information Theory of Consciousness <i>Neuroscience School of Advanced Studies</i>	September 8 – 17, 2023
9 th Science Factory: TMS–EEG Summer School and Workshop <i>Aalto University School of Science, Department of Neuroscience & Biomedical Engineering</i>	May 27 – June 2, 2023

PUBLICATIONS

Ponce de Leon, S., & Yoshimi, J. (in preparation). *Does Husserlian phenomenology support the axiomatic framework of integrated information theory (IIT)*.

Ponce de Leon, S., & Yoshimi, J. (2026). Integrated information theory (IIT) and the testability of the silent neuron predictions. *Neuroscience of Consciousness*. [accepted]

Ponce de Leon, S., Backer, K. C., Monti, M. M., & Yoshimi, J. (2026). Measuring conscious contents using EEG complexity. *In principle acceptance of Version 6 by Peer Community in Registered Reports*. <https://osf.io/msnzp>

SPONSORED RESEARCH

Funding Consciousness Research with Registered Reports (#0593) Jan. 2023 – April 2026
Templeton World Charity Foundation / Center for Open Science / ASSC
Project: Measuring conscious contents using EEG complexity (Stage 1 IPA)
Awarded: \$31,936 USD

AWARDS

ASSC Student Travel Award May 2026
Association for the Scientific Study of Consciousness

CIS Summer 2026 Professional Development Award May 2026
University of California, Merced

MacKenzie Scott Graduate Student Supplemental Travel Award May 2023
University of California, Merced

BrainStorm Neuroscience Pitch Competition **Semi-finalist** June 2025
Mind Science
Project: Does brain activity cause consciousness? A TMS experiment

Student Poster Competition (**2nd place**) June 25, 2023
Association for the Scientific Study of Consciousness 26
Poster: Detecting differences in conscious contents using EEG complexity measures

PUBLIC TALKS

Consciousness science: progress and problems, *Society for Brain Mapping and Therapeutics 21st Annual World Congress* (March 15, 2024) (***invited**).

Detecting differences in conscious contents using EEG complexity measures, *University of California, Los Angeles Department of Psychology MontiLab* (December 11, 2023) (***invited**).

Integrated information theory and the testability of the silent neuron predictions, *Monash University School of Psychological Sciences MoNoC/Tsuchiya Lab* (May 16, 2023) (***invited**).

Does brain activity cause consciousness? A TMS experiment, *University of California, Merced Department of Cognitive and Information Sciences Weekly Brownbag* (April 10, 2023).

Simulating the perturbational complexity index at the edge of chaos, *University of California, Merced Department of Cognitive and Information Sciences Annual Project Mini-Conference* (May 9, 2022).

Philosophical and scientific foundations of integrated information theory, *University of California, Merced Cognitive and Information Sciences Weekly Brownbag* (April 25, 2022).

CONFERENCE POSTERS

Ponce de Leon, S., Backer, K.C., Monti, M. M., Yoshimi, J. Measuring conscious contents using EEG complexity, *CogSci 26*, Rio de Janeiro, Brazil (July 22 – July 15, 2026).

Ponce de Leon, S., Backer, K.C., Monti, M. M., Yoshimi, J. Measuring conscious contents using EEG complexity, *Association for the Scientific Study of Consciousness 29*, Santiago, Chile (June 30 – July 3, 2026).

Ponce de Leon, S., Yoshimi, J. Does Husserlian phenomenology support the axiomatic framework of integrated information theory (IIT), *Association for the Scientific Study of Consciousness 28*, Heraklion, Crete (July 6 – 9, 2025).

Ponce de Leon, S., Yoshimi, J. Integrated information theory (IIT) and the testability of the silent neuron predictions, *Association for the Scientific Study of Consciousness 27*, Tokyo, Japan (July 2 – 5, 2024).

Ponce de Leon, S., Backer, K.C., Yoshimi, J. Detecting differences in conscious contents using EEG complexity measures, *Association for the Scientific Study of Consciousness 26*, New York, NY (June 23 – 25, 2023).

Ponce de Leon, S., Backer, K.C., Yoshimi, J. Detecting differences in conscious contents using EEG complexity measures, *Aalto University School of Science, Department of Neuroscience & Biomedical Engineering 9th Science Factory: TMS–EEG Summer School and Workshop*, Espoo, Finland (May 27 – June 2, 2023).

GRADUATE STUDENT RESEARCHER APPOINTMENTS

University of California, Merced

Measuring conscious contents using EEG complexity

08/2025 – 12/2025

TEACHING ASSISTANT APPOINTMENTS

University of California, Merced

Philosophy of Cognitive Science – COGS 110/PHIL 110 (~53 students)

01/2026 – 05/2026

Philosophy of Cognitive Science – COGS 110/PHIL 110 (~45 students)

01/2025 – 05/2025

Introduction to Neural Networks in Cognitive Science – COGS 103 (~45 students)

08/2024 – 12/2024

Introduction to Phenomenology – PHIL 150 (~24 students)

01/2024 – 05/2024

Consciousness in Philosophy & Cognitive Science – COGS 177/PHIL 173 (55 students)

08/2023 – 12/2023

Philosophy of Cognitive Science – COGS 110/PHIL 110 (62 students)

01/2023 – 05/2023

Introduction to Neural Networks in Cognitive Science – COGS 103 (~30 students)

08/2022 – 12/2022

Computational Cognitive Neuroscience – COGS 123/CSE 173 (39 students)

01/2022 – 05/2022

Introduction to Philosophy – PHIL 001 (42 students)

08/2021 – 12/2021

UNIVERSITY SERVICE

University of California, Merced

Lab Manager, Cognitive and Information Sciences Weekly Philosophy Lab Meetings

09/2023 – 05/2025

Professional Development Officer, CIS Graduate Student Group

08/2023 – 07/2024

Advisory Mentor, Mentorship for Undergraduates Program

02/2024 – 05/2024

Organizer, Cognitive and Information Sciences Weekly Brownbag Meetings

01/2023 – 05/2023

INDUSTRY EXPERIENCE

PMA Consultants, LLC

Ann Arbor, MI

Senior Director, Product Management

2019 – 2021

Director, Product Design & Development

2016 – 2019

Senior Associate, UX Research & Design

2014 – 2016

Associate, UI Design & Customer Support

2013 – 2014

Senior Specialist, UI Design & Digital Marketing

2011 – 2013

Specialist, Technical Writing & UI Design

2008 – 2011

SKILLS & LANGUAGES

Programming: Python, R, Git, JavaScript, HTML, CSS, MATLAB, SQL, PHP, C++

Data Analysis: Bayesian Data Analysis, Generalized Linear Models, EEGLAB/ERPLAB, Information Visualization

Machine Learning: Artificial Neural Networks, Natural Language Processing, Reinforcement Learning

Languages: English (Native), Spanish (Basic)