Sergio Ponce de Leon
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RESEARCH INTERESTS

Consciousness science, philosophy of mind, artificial intelligence. Computational, philosophical, & empirical approaches.

EDUCATION

PhD, Cognitive and Information Sciences — 2021 – 2026 (expected)
University of California, Merced, School of Social Sciences, Humanities, and Arts
Dissertation (in preparation): Consciousness, complexity, and silent neurons: Philosophical and empirical investigations for integrated information theory (IIT)

MS, Cognitive and Information Sciences — 2025
University of California, Merced, School of Social Sciences, Humanities, and Arts

MS, Information — 2019
University of Michigan, School of Information
Specializations: Human-Computer Interaction; Information Analysis and Retrieval

Non-degree seeking coursework in mathematics & computer science — 2005, 2015
Washtenaw Community College

BS, Environment — 2008
University of Michigan, College of Literature, Science, and the Arts
Specialization: Urban and Environmental Planning

TRAININGS & WORKSHOPS

MESEC Winter School 2024 — March 19 – 23, 2024
Mediterranean Society for Consciousness Science

Special Advanced Course: Integrated Information Theory of Consciousness — September 8 – 17, 2023
Neuroscience School of Advanced Studies

9th Science Factory: TMS–EEG Summer School and Workshop — May 27 – June 2, 2023
Aalto University School of Science, Department of Neuroscience & Biomedical Engineering

SPONSORED RESEARCH

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

AWARDS

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

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. (2025). Integrated information theory (IIT) and the testability of the silent neuron predictions. *Neuroscience of Consciousness*. [in revision]

Ponce de Leon, S., Backer, K. C., Monti, M. M., & Yoshimi, J. (2025). Detecting differences in conscious contents using EEG complexity measures. *In principle acceptance of Version 3 by Peer Community in Registered Reports*. https://osf.io/kdsau

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., 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

Detecting differences in conscious contents using EEG complexity measures	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)