Mahmoud T. Jalloh

mjalloh@caltech.edu mahmoudtimbojalloh@gmail.com dimensionspace.io

Academic Appointments

California Institute of Technology, Einstein Papers Project — Pasadena, CA
Lecturer in History and Philosophy of Science — Winter 2027
Postdoctoral Scholar in History and Philosophy of Science — September 2025 – Present

St. John's College — Santa Fe, NM
Teaching Fellow — July 2023 – June 2025

Education

University of Southern California — PhD in Philosophy, 2023
- **Dissertation:** *Dimensional Analysis: Essays on the Metaphysics and Epistemology of Quantities*

Northeastern University — B.S. in Physics and Philosophy, 2017

Munich Center for Mathematical Philosophy, LMU — Visiting Student, Fall 2016

Book Project

Richard Chace Tolman: The First American Relativist — In Progress

Journal Articles (and equivalents)

Philosophy of Physics — Volume 4, No. 1
"Tatiana Ehrenfest-Afanassjewa's Critical Contributions to Dimensional Analysis" — 2026

Oxford Studies in Metaphysics — Volume 14
"The Π-Theorem as a Guide to Quantity Symmetries and the Arg. Against Absolutism" — 2025
- Runner-up for the Marc Sanders Prize in Metaphysics

European Journal for Philosophy of Science — Vol. 14, No. 40
"Calibrating the Theory of Model Mediated Measurement" — 2024

HOPOS: Journal of the International Society for the History of Philosophy of Science — Vol. 14, No. 2
"Metaphysics and Convention in Dimensional Analysis, 1914-1917" — 2024
- With Supplement: "The Bridgman-Tolman-Warbuton Correspondence on Dimensional Analysis, 1934"
- Winner of a 2025 Routledge, Taylor & Francis Prize from the American Philosophical Association

Synthese — Vol. 203, No. 141
"Bridgman and the Normative Independence of Science" — 2024
- Part of a Special Issue on: *The Legacy of the Value-Free Ideal of Science*

Theoria. An International Journal for Theory, History, and Foundations of Science — Vol. 38, No. 2
"The Nature of the Physical and the Meaning of Physicalism" — 2023

Book Chapters & Conference Proceedings

The Space Between: Crossing the Conceptual Boundary Between Spacetime & Matter
"Has the Spacetime-Matter Distinction Already Been Sublated?" — Forthcoming
- Edited by Niels Martens, Sanne Vergouwen, and Antonio Ferreiro (CUP)

Minnesota Studies in Philosophy of Science
"Towards a Methodological Conception of the Metaphysics of Science" — Forthcoming
- Edited by Alan Love and Sander Verhaegh (UMN Press)

Contributions to the 41st International Wittgenstein Symposium
"Reversing the Consequence Argument" — 2018
- Edited by Gabriele M. Mras, Paul Weingartner, and Bernhard Ritter (De Gruyter)

Book Reviews

The British Journal for the History of Science
"Steven French, *A Phenomenological Approach to Quantum Mechanics*" 2024

Phenomenological Reviews
"Phenomenological Approaches to Physics, H. Wiltsche and P. Berghofer (eds.)" 2021

Oral History Interviews

American Institute of Physics
David Malament Conducted February 11 & 12, 2025

- **Subjects:** Conscientious Objection, Rockefeller Institute, Philosophy of Spacetime, Gödel Universes

Public Writing (* indicates a blog.)

The Chronicle of Higher Education
Can Academe Survive the Tidal Wave of AI Slop? November 2026

- Not my choice of title. Better title: "Mitigating a DDoS Attack on Peer-Review"

Philosophers' Cocoon*
One Paper, One Reviewer: An Easy Amelioration of the Referee Crisis January 2024

Griffith Observer
"Hubble and Huxley: Patriot and Pacifist, Hollywood Stars, Seers of Nebulae" September 2023

- Joan and Arnold Seidel Science Writing Contest: Honorable Mention

Awards and Grants

American Philosophical Association
Routledge, Taylor & Francis Prize ($1000) 2025

- "The prize is awarded for the two best published articles in philosophy written by adjunct professors."

American Institute of Physics, Center for History of Physics
Project: Oral Interviews with Philosophers of Physics ($2500, with Fons Dewulf) 2025
Project: Modeling and Metaphysics with Dimensional Analysis ($2500) 2022

National Science Foundation
Graduate Research Fellowship: Honorable Mention 2018

Selected Teaching Experience (* indicates co-taught.)

California Institute of Technology Winter Term 2027

- Science in America: Methodological Developments in its Rise (Operationalism & Behaviorism)

St. John's College 2023 - 2025

- The Metaphysics of Space and Time (Aristotle, Descartes, Newton, Leibniz-Clarke, Du Châtelet, Kant)
- Junior Seminar* (Cervantes, Descartes, Pascal, Milton, Hobbes, Spinoza, Leibniz, Hume, Kant, Smith)
- Junior Laboratory (Galileo, Huygens, Newton, Young, Faraday, Maxwell)
- Sophomore Mathematics (Ptolemy, Copernicus, Kepler, Apollonius, Descartes, Pascal)
- Freshman Mathematics (Euclid)
- Freshman Laboratory (Aristotle, Goethe, Harvey, Driesch, Pascal, Lavoisier, Dalton)
- Freshman Seminar* (Homer, Plato, Aristotle, Sophocles, Aristophanes, Thucydides, Herodotus)
- Science Institute/Summer Classics:* Beyond Numbers: Set-Theory; Du Châtelet's *Foundations of Physics*; An Introduction to C. S. Peirce [Short Seminar and Experimental Courses for Non-Degree Students]

Selected Presentations

(* indicates an invited presentation.)

The Scale of Reality: Metaphysics of Quantities, Laws, and Constants* — Lyon, FR
"Laws as Equations: Methodological Primitivism" — December 2026

Philosophy of Science Association Meeting — San Diego, CA
"Wallace, Wittgenstein, and World Structure" — November 2026

NYU, The Remarque Institute: — NYC
Anscombe's *Intention* & the Human Sciences Workshop*
"Distinguishing Conceptions of Behaviorism" — November 2026

HSS-ESHS Joint Meeting — Edinburgh, UK
"Similitude and Scalar Gravity: Tolman's Principle and Nordström's Theory" — July 2026

History and Philosophy of Cosmology Conference — Athens, GR
"Can the Constants Vary? Some Metaphysical and Cosmological Considerations" — July 2026

HOPOS — Columbus, OH
"Maxwell's Notion of Dynamics: Lessons for Modeling, Modality, and Explanation" — June 2026

Society for the Metaphysics of Science — Toronto, CAN
University of New Mexico, Philosophy Department* — Albuquerque, NM
"Constants of Nature, Law Construal, and Theory Individuation" — May 2026, November 2023

USC Math Education Seminar* — Los Angeles, CA
"Ehrenfest-Afanassjewa's Extension of the Erlanger Program to Dimensions" — April 2026

Association for the Philosophy of Mathematical Practice — Orange, CA
"Descartes' Dimensions and the Euclidean Taboo" — January 2026

St. John's College, Santa Fe* — Santa Fe, NM
"Maxwell, Peirce, and Planck: The Quest for Absolute Measurement & Abs. Reality" — June 2025

Notre Dame Biennial History of Astronomy Workshop — Notre Dame, IN
"Hubble and Huxley: Hollywood Stars and Empiricists" — June 2025

British Society for the Philosophy of Science — York, UK
"Is Dimensionlessness an Invariant Property?" — July 2024

The Gravitational Constant, from the Local to the Universal — St. Andrews, SCT
"Dynamical Symmetries and the Values of the Constants: A Historical Episode" — April 2023

Integrated History and Philosophy of Science 9 — Columbia, SC
"Metaphysics and Convention in Dimensional Analysis, 1914-1917" — March 2023

Euro-American Migration and the Development of Postwar Philosophy — Tilburg, NL
"The Roots of Operationalism in Dimensional Analysis" — August 2022

Measurement at the Crossroads: Measuring and Modeling — Milan, IT
"Measurement Dimensions: On the Common Quantity Assumption" — July 2022

2nd Young Scholars Pragmatism Conference: Inquiry, Science, Truth — Cambridge, UK
"Scientific Polysemy, Semantic Detoxification, and Sophisticated Operationalism" — October 2021

Novembertagung, Axiomatics: Ancient and Contemporary Perspectives — Berlin, DE/Online
"Wilson's 'Semantic Detoxification' and Conceptual Change as Axiomatic Change" — November 2020

Service

(Co-)Organizer: Caltech Philosophy of Science Reading Group 2025-27
SJC Science Institute Conversations/Lectures 2024, 2025; SJC Summer Academy 2025
BSPS 2024 Symposium on *Establishing the Philosophy of Dimensions*; USC/UCLA Graduate Conference 2020

Conference Referee: USC/UCLA Graduate Conference 2018-2023; NASSLLI 2022

Article Referee: *The Philosophical Review, Linguistics & Philosophy, Philosophy of Physics*
Philosophy of Science, Journal for General Philosophy of Science, Ratio, Foundations of Physics
European Journal for Philosophy of Science, British Journal for the Philosophy of Science

Book Referee: Cambridge Elements in the Philosophy of Physics, Routledge

Award Referee: APA Routledge, Taylor, & Francis Essay Prize 2026

Panelist: St. John's Summer Academy 2024; Caltech Stargazing Lecture Q&A 2026

Thesis Advising: On Kant (Senior, 2025); On Hegel (Senior, 2025)
On Anselm (Senior, 2025); On Paracelsus (Senior, 2025)

Thesis Examinations: On Wittgenstein & Einstein (Senior, 2025)
On Euripides (Senior 2025); On Pascal (Senior, 2025, Chair); On Nietzsche (Senior, 2025)
On Gödel & Cohen (Senior, 2025, Chair); On Aristotle (Senior, 2024); On Bergson (Masters, 2024, Chair)

Selected Continuing Education & Professional Development

Max Planck Institute for Mathematics in the Sciences — Leipzig, DE
Summer School on the History of Space in Mathematics and Physics — July 2023

Rutgers Center for the Philosophy of Religion — New Brunswick, NJ
God and Fine-Tuning Summer School — July 2023

University of Wuppertal — Wuppertal, DE
Particle Physics at the Crossroads, Epistemology of the LHC — July 2018

University of Split — Split, HR
The Chimera of Entropy, Seventh Philosophy and Physics Summer School — July 2018

Memberships (semi-regular): APA; PSA; ESHS; HOPOS; Philosophy of Physics

Languages: German (Intermediate); French (Basic)