Amir Motesharei

University of South Carolina
Department of Philosophy

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Areas of Specialization

AOS Philosophy of AI & ML · Scientific Realism · Philosophy of Science

AOC Models and Modeling in Science · Michel Foucault's Genealogy

Education

2023–present **(PhD) Philosophy** *University of South Carolina (GPA: 4/4)*
Dissertation: Scientific Realism and the Epistemology of Computational Modeling
Advisor: Michael Stoeltzner
Committee: Michael Dickson, George Khushf

2020–2022 **(MS) Philosophy of Science** *Sharif University of Technology (GPA: 4/4)*
Thesis: A Study on the Role of Values in Science: Extending van Fraassen

2017–2019 **(MA) Visual Arts** *University of Tehran (GPA: 4/4)*
Thesis: A Genealogy of Pictorial Social Networks

2009–2014 **(BS) Electrical Engineering** *Amirkabir University of Technology (GPA: 3/4)*
Thesis: A New Method for Finding the Maximum Efficiency Point in Solar Panels Using Artificial Neural Networks (ANNs)

Publications

Published / Forthcoming

2027 "Exploration Before Representation: What Do Machine Learning Models Do in Science?" *Philosophy of Science.* Forthcoming.

2026 "Good Senses and Bad Lots: Virtue Epistemology Between Duhem and Stanford." *European Journal for Philosophy of Science (EJPS).* Forthcoming.

2022 Motesharei, A., and Taqavi, M. "Science and Tradition: Towards a Pluralistic Scientific Society." *Journal of Philosophical Investigations (JPI).*

Under Review

"The Barbaric Physics: Leibniz, Newton, and the Gravitational Force." R&R at *Studies in History and Philosophy of Science*.

"Enabling the Enablers: On the Logic of Enabling and Its Relation to Grounding." Under review in *Synthese*.

"The Many Faces of Autism: Conceptual Change and the Limits of Medical Classification." Under review in *Synthese*.

Research Projects

2026 **Computational Modeling Adversarial Auditor (Theoretical Validity)**
MindRL Hub Modeling Challenge — Team Pragmatic (with Maritza Mills)

- Evaluated three computational models of human sequential decision-making, examining whether their claimed cognitive mechanisms were supported by their implementations.
- Conducted construct- and content- validity analyses, assessing implemented mechanisms and alternative cognitive explanations.

2026 **AI-Assisted Scientific Discovery: AI as an Epistemic Agent in Scientific Modeling**
SPARC Graduate Research Grant Project — University of South Carolina

- Research project investigating the design of an AI system to assist scientific discovery

2023 **AI Ethics Curriculum Development**
University of South Carolina — Department of Philosophy

- Collaborated with Prof. Michael Stoeltzner and Dr. Jeff Turner on developing and integrating AI-related case studies into Engineering Ethics course (PHIL 325).

Honors & Awards

2026 Best Auditing Team Award, MindRL Hub Cognitive Modeling Challenge

2026 SPARC Graduate Research Grant

2026 USC Dean's Award for Doctoral Achievement (finalist).

2025 USC Philosophy Department Richard Greener Graduate Student Award.

2024 Best Poster Award, Society for the Philosophy of Science in Practice (SPSP) 2024

2023–2027 USC College of Arts and Sciences Dean's Distinguished Graduate Scholar Award

Pre–PhD:

2020 Ranked 1st in the national university entrance exam for Master of Philosophy of Science.

2017 Ranked 1st in the national university entrance exam for the Master of Arts

2009 Ranked 300 among >300,000 participants in the national university entrance exam.

2002–present Member of Iran's National Organization for Development of Exceptional Talents (NODET).

Selected Talks

Nov 2026 **Exploration Before Representation: What Do Machine Learning Models Do in Science?**
Philosophy of Science Association (PSA) Biennial Meeting, San Diego, CA

Jul 2026 **Perspectival AI-Assisted Scientific Discovery: AI as an Epistemic Agent in Scientific Modeling**
Society for the Philosophy of Science in Practice (SPSP) Biennial Conference, Cambridge.

The Barbaric Physics: Leibniz, Newton, and the Gravitational Force

Jun 2026 International Society for the History of Philosophy of Science (HOPOS), Columbus, OH

Jan 2025 American Philosophical Association (APA) Eastern, Symposium, New York, NY

Jan 2024 South Carolina Society for Philosophy (SCSP)

Apr 2026 **Enabling the Enablers: On the Logic of Enabling and Its Relation to Grounding**
American Philosophical Association (APA) Pacific, online

Feb 2026 **Good Sense and Bad Lots: Virtue Epistemology Between Duhem and Stanford**
American Philosophical Association (APA) Central, Chicago, IL

Aug 2025 **Kyle Stanford's Pessimistic Virtue Epistemology: Duhem's Good Sense Revisited**
European Philosophy of Science Association (EPSA), Groningen

May 2024 **Science and Tradition: Towards a Pluralistic Scientific Society**
Society for the Philosophy of Science in Practice (SPSP) Biennial Conference, Columbia, SC

Teaching

Primary Instructor

Summer 2027 **Engineering Ethics,** University of South Carolina

Spring 2027 **Communicating Moral Issues,** University of South Carolina

Fall 2026 **Engineering Ethics,** University of South Carolina

Summer 2026 **Engineering Ethics,** University of South Carolina

Teaching Assistant

Fall 2025 **Engineering Ethics,** University of South Carolina

Spring 2025 **Engineering Ethics,** University of South Carolina

Fall 2024 **Engineering Ethics,** University of South Carolina

Fall 2023 **Engineering Ethics,** University of South Carolina

Spring 2026 **Communicating Moral Issues,** University of South Carolina

Spring 2024 **Communicating Moral Issues,** University of South Carolina

Spring 2022 **Philosophy of Science II,** Sharif University of Technology

Fall 2021 **An Introduction to the Philosophy of Science,** Sharif University of Technology

Service & Leadership

Refereeing

2026 Studies in History and Philosophy of Science (SHPS)

2025 European Journal for Philosophy of Science (EJPS)

Academic and University Service

2025 Co-founder of the "AI Reading Group," USC Philosophy Department

2025–present Founder and Manager of the "Philosophy Unplugged! An Interview with a Professor," an event series at the USC Philosophy Department

2024–present Co-founder and Manager of the "Philosophy Film Club," USC

2025 Treasurer and Social Chair, USC Iranian Students Association

2024–present Co-founder and Social Chair, USC Philosophy Graduate Students Association (PGSA)

References

Michael Stoeltzner
Professor, Department of Philosophy
University of South Carolina
Ph.D. Supervisor and TA Supervisor
stoeltzn@sc.edu

Jeffrey Turner
Senior Instructor, Department of Philosophy
University of South Carolina
TA Supervisor
turner@sc.edu

Mostafa Taqavi
Associate Professor and Dean
Department of Philosophy of Science
Sharif University of Technology
M.S. Supervisor and TA Supervisor
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Mohammadreza Abolghassemi
Assistant Professor, Department of Visual Arts
University of Tehran
M.A. Supervisor
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