

Stella Moon

Curriculum Vitae

✉ moonsb@uci.edu
📄 <https://sites.uci.edu/stellamoon>
Citizenship: South Korea
Permanent Resident of Canada

Areas of Specialisation

Philosophy of Mind and Cognition, Phenomenology (esp. Husserl and Empathy), Logic, Philosophy of Mathematics

Areas of Competence

Metaphysics, Epistemology, Ethics, Early Modern (esp. Descartes), History of Analytic Philosophy, Philosophy of Language, Philosophy of Science and Technology (including non-Western), Science Communication

Academic Appointments

- July 2023– **Post-Doctoral Fellow**, *Department of Logic, Institute of Philosophy of the Czech Academy of Sciences.*
Prague, Czech Republic
- Apr-Jun 2023 **Visiting Research Fellow**, *Institute Vienna Circle, Universität Wien.*
Vienna, Austria
3 month visiting position
- Fall 2022 **Part Time Lecturer**, *Mount Allison University.*
New Brunswick, Canada
Lead Instructor for Phil 2611 Introductory Logic
- Jan-Jun 2017 **Visiting Graduate Student**, *University of California, Irvine.*
Department of Logic and Philosophy of Science,
Center for Advancement of Logic, its Philosophy, History and Applications
Invited by Dr. Sean Walsh

Education

- 2017-August **PhD. Philosophy**, *University of California, Irvine.*
2023 Department of Philosophy
(expected) Dissertation Title: Husserlian Phenomenology of Mathematical Practice: An Empathy-First Approach
Co-Advisors: Professor David Woodruff Smith and Professor Marco Panza (Chapman, Paris-1)
Committee Members: Professor David Woodruff Smith (Chair), Professor Marco Panza (Chapman, Paris-1), Professor Erich Reck (UCR), Associate Professor Kate Ritchie, Associate Professor Jeff Helmreich
Dissertation Abstract: In my dissertation, I develop a Husserlian Phenomenological method to identify the goals of mathematical theories, and evaluate which philosophical questions are interesting to mathematical practice.
- 2020 **MA. Philosophy**, *University of California, Irvine.*
Department of Logic and Philosophy of Science
- 2017 **MSc. Logic**, *Universiteit van Amsterdam.*
Institute for Logic, Language and Computation
Beth Scholar
Thesis Title: Isaacson's Thesis and Wilkie's Theorem
- 2015 **BSc.(Hons) Mathematics and Philosophy with Specialism in Logic and Foundations**, *University of Warwick.*
Dissertation Title: Compositional Theory of Truth
First Class

Research

Papers Under Review

Descartes's Geometry, and Clarity and Distinctness.
Available upon request

Isaacson's Thesis and Isaacson's Structuralism.

Available upon request

Papers in Preparation

Does Path Induction Need a Justification?.

Draft available upon request

Mathematical Empathy.

Arithmetical and Non-Arithmetical Numbers.

Husserlian Phenomenology of Mathematical Practice.

Refereed Presentations

2023 **Does Path Induction Need a Justification?.**

Workshop on Homotopy Type Theory/Univalent Foundations, Vienna, Austria

2021 **On the Incompatibility of Isaacson's Thesis and Isaacson's Structuralism.**

American Philosophical Association, Pacific Meeting, Online

2017 **Isaacson's thesis and Wilkie's Theorem.**

15th Asian Logic Conference, Daejeon, S Korea

Invited Presentations

2023 **Methodological and Ontological Structuralisms in Mathematics: A Husserlian Take.**

Logik Cafe, Institute Vienna Circle, University of Vienna

2023 **Husserlian Phenomenology and Homotopy Type Theory.**

UC Riverside

2022 **Understanding Numbers: Logic, Phenomenology and Cognitive Science.**

Phoenix Colloquium, Department of Philosophy, Mount Allison University

2021 **Does Path Induction Need a Justification?.**

Korea Logic Day, Korea Advanced Institute of Science and Technology
Invitation for Contributed Talk

2020 **Demarcating Descartes's Geometry by Clarity and Distinctness.**

Orange County Inland Empire Seminar on History and Philosophy of Mathematics and Logic

2018 **First-Order Theory of Internally Categorical Second-Order Arithmetic.**

Logic and Computing special session, German Mathematics Society (DMV) and Korean Mathematics Society (KMS)
Joint Fall Meeting, S. Korea

2017 **Isaacson's thesis and Wilkie's Theorem.**

Yonsei University, S. Korea

Contributed Presentations

2019 **First Order Theory of Internalised Peano arithmetic.**

Logic Seminar, UC Irvine

2017 **Isaacson's Thesis and Wilkie's Theorem.**

C-Alpha workshop in Logic and its Applications, UC Irvine

2016 **Every function can be computable.**

Cool Logic Seminar, ILLC, Amsterdam
Joint presentation with Levin Hornischer

2015 **Deflationism and Axiomatic Theories of Truth.**

Cool Logic seminar, ILLC, Amsterdam

2015 **Can we use set theoretic foundations for mathematics?.**

Mathematics and Philosophy societies, University of Warwick

2015 **What are Numbers?.**

Cumberland Logic Weekend, Department of Philosophy, University of Warwick

Poster Presentations

- 2022 **Husserlian Phenomenology of Mathematical Practice.**
Peer-Reviewed
São Paulo School of Advanced Science on Contemporary Logic, Rationality, and Information, Brazil
- 2014 **Can we use set theoretic foundations for mathematics?.**
Undergraduate Research Summer Scheme Showcase, University of Warwick

Teaching

- Fall 2022 **Lead Instructor**, Mount Allison University, New Brunswick, Canada.
Phil 2261 Introductory Logic
Course Information: Mandatory course for philosophy majors, satisfying various Science and Humanities Requirements
Responsibilities: 60 undergraduate students from a variety of academic backgrounds; create a course syllabus covering the topics of informal reasoning, informal fallacies, propositional logic, and predicate logic; deliver weekly lectures/tutorial 3 times a week online; create and grade homework and exams
- 2017– **Graduate Teaching Assistant**, *University of California, Irvine.*
Philos 1 Introduction to Philosophy,
Philos 2 Puzzles and Paradoxes,
Philos 3 Technology and Society,
Philos 4 Ethics,
LPS 29 Critical Reasoning,
LPS 30 Intro to Symbolic Logic,
Philos 101 Metaphysics,
Anthro C2 Intro to Archaeology,
Psych 9A Psychology Fundamentals (for psychology majors)
- 2014–15 **Undergraduate Mathematics Supervisor**, *University of Warwick.*
Responsibilities: 2 one-hour supervisions a week with 4 undergraduate mathematics students covering all of their first year courses, and marking their assignments
Courses Taught: Algebra I and II, Abstract Algebra, Linear Algebra, Geometry and Motion, and Differential Equations.
- 2015 **Set Theory Revision lecture**, *University of Warwick.*
Warwick Maths Society
Responsibilities: A revision lecture of the third year bachelor's on Set Theory taken by 60 BSc. and MMATH students at Warwick

Service to the Profession

Organising

- Feb 2022 **Dr. Mirja Hartimo (Helsinki) Visit**, *Chapman University.*
Events Organised: OCIE seminar (see below)
California Phenomenology Circle Workshop
UC Irvine Philosophy Guest Lecture
- 2020– **OCIE seminar on History and Philosophy of Mathematics and Logic.**
Orange County-Inland Empire seminar on History and Philosophy of Mathematics and Logic
Jointly Organised with members of CSU San Bernadino, Chapman University, Claremont Colleges, UC Irvine and UC Riverside
Responsibilities: Create and update Google Calendar for the seminar; Invite and contact speakers for talks; Keep other organisers updated on future sessions, Run Hybrid Meetings
- 2018 **Student volunteer at Formal Social Epistemology Workshop**, *University of California, Irvine.*
Responsibilities: Chairing talks and technological support; host one of visiting graduate presenters
- 2016 **Student helper at Amsterdam Workshop on Intensionality and Truth**, *ILLC, Amsterdam, and Amsterdam University College.*
Responsibilities: Technological support for speakers
- 2015–16 **Co-Organiser of Cool Logic Seminars**, *ILLC, Amsterdam.*
Bi-weekly seminars for and by masters and PhD students.
Responsibilities: Send out emails to advertise the meetings; find speakers to present their research; chair talks

- 2015 **Student Volunteer at Amsterdam Colloquium, ILLC, Amsterdam.**
Responsibilities: Check-in speakers and attending guests; technological support
- 2013–15 **Co-founder/Organiser, Logic Reading Group, University of Warwick.**
Topics covered: History of Logics; Substructural Logics; Theories of Truth; Intuitionistic Logic
- 2013–14 **Publicity Officer at Warwick Maths Society, University of Warwick.**
A student organisation for and by mathematics students
Responsibilities: Give shoutouts for 1st and 2nd year lectures weekly; weekly emails to 2000 mathematics undergraduate students; help out at distributing revision guides
Events Organised: Career Day
Achievements: Membership increased by 200%; Created a Facebook page for the society for outreach
- 2014 **Main Organiser of External Guest Lecture, University of Warwick.**
Warwick Maths Society
Guest Lecturer: Prof. David Corfield (University of Kent)
Responsibilities: Correspondence with the speaker for arranging travel and accommodation; chair the talk; create a poster; advertise the event
- 2012–13 **Secretary at University of Warwick Chorus, University of Warwick.**
Responsibilities: taking attendance; taking notes of the termly meetings
- 2012–13 **Chair and Student Representative, Student Staff Liason Committee.**
Language Centre, University of Warwick
Responsibilities: report any concerns from students taking language courses at the Language Centre; chairing termly meetings with heads of each language course
Achievements: founding chair of the committee; successfully communicated between the members of the Languages Centre and Academic Departments across campus

Science Communications

- 2022-2023 **Managing Editor, Loh Down on Science.**
A 90 second radio-podcast on NPR communicating science to the public
Responsibilities: Editing 4 to 6 scripts a month to prepare them for recording; verifying whether a pitched research topic is new and appropriate for a script
- 2020-2022 **Writer & Peer Editor, Loh Down on Science.**
Responsibilities: Writing two scripts a month and editing four scripts; submitting a summary of a published research paper to write scripts on

Mentoring

- 2019, 2022 **Co-Founder/Co-Organiser of WonderPhilosophy, University of California, Irvine.**
A two day workshop for first generation undergraduate students about applying to graduate school in philosophy.
See more on <https://wonderphilosophy.com>
- 2021-2022 **Founder/Organiser of Graduate Student Disability Support Group, University of California, Irvine.**
A bi-weekly support group and community for graduate students with disabilities or chronic illnesses at UCI.
Events Organised: Socials with Undergraduate Peer Mentors at UCI's Disability Service Center
- 2019-2020 **DECADE student representative, University of California, Irvine.**
Diverse Educational Community and Doctoral Experience, Graduate Division
Department of Logic and Philosophy of Science
Responsibilities: Quarterly events for graduate students from diverse backgrounds; a peer contact for graduate students from diverse backgrounds; attending quarterly meetings for DECADE representatives to discuss any problems
Events Organised: Writing Therapy Group with the Graduate Counsellor (Phong Luong PsyD);
A discussion group for international graduate students at UCI.
- 2018 **Graduate Interconnect Peer Mentor, University of California, Irvine.**
Graduate Division
Responsibilities: Welcoming new international students to UCI; sending weekly emails providing some information that would be relevant for moving and settling at UCI; three blog posts including one on the topic of imposter syndrome; informal peer contact for any on-going problems
Events Organised: Game Night Social

- 2015–16 **Meet the Masters**, *Univesiteit van Amsterdam*.
 Responsibilities: Working at reception at Information Days for visiting students
 Taking visiting students around for their Meet-the-master's day
 Giving a presentation for new international master's students at Amsterdam

Mentoring Certificates

- 2022 **Office of Excellence and Inclusivity Certificate**, *UC Irvine*.
 2020 **Cascading Mentoring Certificate**, *UC Irvine*.
 2019 **Science Communications**, *UC Irvine*.
 2018 **Mentoring Excellence Certificate**, *UC Irvine*.

Awards, Funding and Scholarships

- 2023 **Lex Academic Philosophy Scholarship**, *Lex Academic*.
 Competitive, Jointed Awarded
 UK£500 divided between two joint winners
- 2023 **Graduate Student Research and Travel Award**, *School of Humanities, UC Irvine*.
 Competitive
 US\$1,000
- 2023 **School of Humanities Summer Dissertation Fellowship**, *School of Humanities, UC Irvine*.
 Competitive
 US\$5,000
- 2023 **Humanities Center Graduate Student Research Grant**, *Humanities Center, School of Humanities, UC Irvine*.
 Competitive
 US\$2,500.00
- 2023 **Institute Vienna Circle Fellowship**, *Institut Vienna Circle, University of Vienna*.
 Competitive, €1.800,00 monthly
- 2023 **Professional Development Funds**, *Department of Philosophy, UC Irvine*.
 Competitive, US\$800.00
- 2022 **Logic and Language Award**, *Department of Philosophy, UC Irvine*.
 US\$500.00
- 2021-22 **Graduate Fellowship**, *Center for Excellence in Writing and Communications, UC Irvine*.
 US\$48,000.00
- 2020-25 **Humanities Fellowship**, *School of Humanities, UC Irvine*.
- 2017–21 **Associate Dean's Supplement Fellowship**, *School of Social Sciences, UC Irvine*.
 US\$20,000
- 2017–20 **Merit Fellowship**, *School of Social Sciences, UC Irvine*.
- Fall 2017 **Graduate Dean's Recruitment Fellowship**, *Graduate Division, UC Irvine*.
 US\$5,000.00
- 2015–17 **Beth Scholarship, The Evert Willem Beth Foundation**.
 €6.000,00 per year
 International Student Tuition Remission at the University of Amsterdam for MSc. Logic

Travel Grants

- 2023 **São Paulo School of Advanced Science on Contemporary Logic, Rationality, and Information**, *Centre for Logic, Epistemology and the History of Science (CLE) of the University of Campinas (Unicamp), Brazil*.
 Full Funding for Travel, Insurance and Accommodation
- 2018 **Summer School on the Foundations of Geometry in Historical Perspective**, *Max Planck Institute for Mathematics in the Sciences, Leipzig*.
 US\$1000.00

- 2018 **Feminist Philosophy and Formal Logic Workshop**, *Minnesota Center for Philosophy of Science, University of Minnesota, Twin Cities.*
- 2017 **International Conference on Computability and Complexity in Analysis**, *Association of Symbolic Logic.*
- 2017 **Asian Logic Conference Student travel grant**, *Association of Symbolic Logic.*
- 2016 **Foundations of Mathematics: Univalent Foundations and Set Theory workshop**, *Deutsche Vereinigung für Mathematische Logik und für Grundlagenforschung der Exakten Wissenschaften scholarship.*
- 2015 **Cumberland Lodge Bursary**, *Department of Philosophy, University of Warwick.*
£500.00
- 2014 **Undergraduate Research Summer Scheme**, *University of Warwick.*
£1000.00

Selected Graduate-level Courses Taken

The below list is organised by my area of specialisation. The * after the year indicates audited courses.

Logic (Including Mathematical and Philosophical Logics, and Philosophy of Language/Logic)

UCI	Logic Seminar	2016*, 2017, 2018, 2019, 2020, 2022* Prof. Kai Wehmeier, Prof. Jeremy Heis, Dr. Sean Walsh, Dr. Toby Meadows
UCI	Independent Research: Arithmetic and Internalism	2019, Dr. Toby Meadows
UCI	Independent Research: Homotopy Type Theory	2018, Prof. Jim Weatherall
UCI	Proof Theory: Martin-Löf Type Theory	2017, Dr. Sean Walsh
UCI	Model Theory	2017, Dr. Isaac Goldbring
UCI	Intensionality	2016*, Dr. Sean Walsh
Amsterdam	Mathematical Logic Seminar: Infinite Games	2016, Prof. Dr. Benedikt Löwe
Amsterdam	Model Theory	2016, Dr. Benno van den Berg
Amsterdam	Proof Theory	2015, Dr. Benno van den Berg
Amsterdam	Mathematical Logic Seminar: Models of Peano Arithmetic	2016, Prof. Dr. Benedikt Löwe
Amsterdam	Set Theory: Forcing	2016, Prof. Dr. Benedikt Löwe
Amsterdam	Mathematical Structures in Logic	2016, Dr. Nick Bezhanishvili
Amsterdam	Axiomatic Set Theory	2016, Prof. Alexandru Baltag
Amsterdam	Modal Logic	2016, Dr. Nick Bezhanishvili
Amsterdam	Meaning, Reference and Modality	2015, Prof. Paul Dekker
Amsterdam	Homotopy Type Theory	2016, Prof. Benno van den Berg
Amsterdam	Philosophical Logic	Prof. Dr. Robert van Rooij
Warwick	Modal Logic	2015, Dr. Walter Dean
Warwick	Incompleteness and Undecidability	2014, Dr. Walter Dean
Warwick	Set Theory	2013, Dr. Adam Epstein
Warwick	Meta-Theory	2012, Dr. Walter Dean

Philosophy of Mathematics (Including History)

Chapman	Mathematical Object Between History, Intuition and Rationality	2022*, Prof. Jean-Michel Salanskis (visiting professor)
UCI	Space and Geometry	2022*, Prof. Jeremy Heis
UCI	Philosophy of Mathematics	2017, 2018*, Prof. Pen Maddy; 2022, Dr. Toby Meadows
UC Riverside	Wittgenstein's Tractatus	2021, Prof. Erich Reck

UCI	Independent Research: Husserl and Mathematics	2021, Prof. David Woodruff Smith
UCI	Directed Research: Descartes	2019*, 2020*, Prof. Jeremy Heis
UCI	Kant's Philosophy of Science	2018, Prof. Jeremy Heis
UCI	Wittgenstein	2018*, Prof. Pen Maddy
UCI	Foundations of Geometry	2018, Prof. Jeremy Heis
Amsterdam	Philosophy of Mathematics	2016, Dr. Luca Incurvati
Warwick	History of Mathematics: Differential Equations	2013, Prof. Jeremy Gray
Warwick	Philosophy of Computation	2013, Dr. Walter Dean
Warwick	Philosophy of Mathematics	2012, Dr. Walter Dean

Phenomenology and Philosophy of Mind/Cognition

UCI	Independent Research: Merleau-Ponty's <i>Phenomenology of Perception</i>	2021*, Prof. David Woodruff Smith
UCI	Empathy: Stein and Levinas	2020*, Prof. David Woodruff Smith, Dr. Jeff Helmreich
UCI	Social Epistemology	2020*, Prof. Annalisa Coliva
UC San Diego	Cognitive Foundations of Mathematics	2018, Prof. Rafael Núñez
UCI	Philosophy of Mind: Brentano's Psychology from an Empirical Standpoints	2018, Prof. David Woodruff Smith
Amsterdam	Philosophy of Cognition	2016, Dr. Elsbeth Brouwer
Amsterdam	Philosophy of Language	2016, Dr. Elsbeth Brouwer

Other

UCI	Fundamentals of Reading German	2021, Prof. Kai Evers
UCI	Modern Philosophy: Malebranche	2020*, Prof. Sean Greenberg
UCI	Independent Research: Philosophy of Race and Feminism	2018, Prof. Jeremy Heis

Languages

English (Native Speaking and Writing), German (Reading), Dutch (Lower Intermediate), Korean (Fluent Speaking and Writing, with Basic Reading of Classical Chinese), Japanese (Lower Intermediate) and Spanish (European Reference Framework A1)

Professional Membership

Association of Symbolic Logic, American Philosophical Association, Canadian Philosophical Association
 International Society for the History of Philosophy of Science, Association for the Philosophy of Mathematical Practice
 American Association of Philosophy Teachers
 Korean Mathematics Society, Korean Logic Society

References

Research and Teaching

[David Woodruff Smith](#)

University of California, Irvine

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Research

[Marco Panza](#)

Institut d'Histoire et de Philosophie des Sciences et
des Techniques (IHPST), Paris-1

Chapman University

Email: Panza@chapman.edu

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Reference: send.Panza.3EF02F258E@interfolio.com

[Erich Reck](#)

University of California, Riverside,

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[Mirja Hartimo](#)

University of Helsinki

Email: mirja.hartimo@helsinki.fi

Reference: send.Hartimo.F1A7B6FA5A@interfolio.com

Teaching

[Robbie Moser](#)

Mount Allison University

Email: rmoser@mta.ca

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PhD Dissertation Abstract

In my dissertation, I develop a Husserlian phenomenological method to study contemporary mathematical practice. This view challenges those (e.g. (Gray & Ferreirós, 2006; Maddy, 2000)) who have advocated for adopting non-philosophical methods to study the philosophy of mathematics. I argue that phenomenology is a descriptive science whose methods should be adopted, along with cognitive science, as the means to study human cognition and understanding. I also argue in my dissertation that Husserl offers a method of studying group knowledge, such as mathematical knowledge. Husserl's method is unique in that it first offers a novel characterisation of groups or communities, then gives us a systematic way to answer questions about group knowledge.

By giving a phenomenological analysis of 'mathematical' concepts that we frequently use in ordinary life, I demarcate sophisticated mathematics from ordinary 'mathematics'. For example, the phenomenological analysis of the number sequence, '1, 2, 3, ...', shows that the ordinary number concept is different from the mathematical concept of natural numbers: the latter consists only of the numbers generated by the successor operation, resembling the act of counting, but the former allows 'numbers' to include those we arbitrarily give names to. This distinction allows us to demarcate existing scientific practice from ordinary non-scientific practice. I also compare this approach with existing cognitive science research on number cognition to support my phenomenological, descriptive analysis of the number sequence with empirical evidence (Relaford-Doyle & Núñez, 2017, 2018, 2021). This shows how phenomenology, as a descriptive science, can work with cognitive science.

Beyond the general method of phenomenological analysis, Husserl also offers a method for studying group knowledge by analysing scientific practice as teleological (Husserl, 1969, 1970, 2001; Moran, 2001). This method, known as *Besinnung*, involves standing in the 'community' with the scientists and clarifying the aims and goals that drive their discipline. These aims and goals are then understood to be necessary features which allow the practice to be possible. For example, a goal/aim for number theory might be the unique structure of natural numbers. In order to discover this goal, *Besinnung* requires you to stand in the community with the number theorists. By observing that number theorists are interested in proving general theorems about natural numbers, *Besinnung* allows us to clarify and describe the unique structure. I argue that Husserl's notion of community is different from other existing notions of group/community in that it is defined from a first-person perspective, and that it is defined based on certain properties/experiences shared in common between myself and others in a teleological group subjectivity. When the method of *Besinnung* is applied to mathematical practice, it can help philosophers to evaluate whether a question is genuinely important to understanding the practice. Once the mathematicians' goals and aims are clarified, then we can consider whether a given philosophical question needs a philosophical answer with respect to the goals and aims. This feature makes the method superior to those found in other disciplines, which do not offer this meta-analysis.

I demonstrate this by applying *Besinnung* to a contemporary foundational theory in mathematics, called Homotopy Type Theory (HoTT). Philosophers of HoTT (e.g. Ladyman & Presnell, 2015; P. Walsh, 2017) have argued that the definition of identity in HoTT (also known as path induction) needs a philosophical justification. However, I challenge this claim by showing that the aims of HoTT are to provide a mathematical theory which can be computer-implemented and has a homotopical interpretation. These aims are then necessary features of HoTT. A homotopy, in mathematics, refers to a continuous function between topological spaces which can morph one space into the other. Considering whether path induction ought to be justified independently of these necessary features of the theory would be misdirected for philosophers of mathematical practice. Given the homotopical interpretation, identity is seen as a homotopy equivalence, and thus the definition is given by the homotopy lifting property. I provide a mathematical proof of this interpretation and argue that the method of *Besinnung* has shown that path induction does not need a further philosophical justification.