

# Sean Walsh

## CONTACT INFORMATION

*Email:* walsh@ucla.edu

*Website:* <http://philosophy.ucla.edu/person/sean-walsh/>

*Office:* 398 Dodd Hall.

## AREAS OF RESEARCH SPECIALIZATION

Philosophy of mathematics, philosophy of logic, mathematical logic.

## APPOINTMENTS

1. Associate Professor, Department of Philosophy at the University of California, Los Angeles. November 2017 – present.
2. Associate Professor, Department of Logic and Philosophy of Science at the University of California, Irvine. July 2016 – October 2017. Courtesy appointment in Department of Mathematics.
3. Assistant Professor, Department of Logic and Philosophy of Science at the University of California, Irvine. July 2012– June 2016. Courtesy appointment in Department of Mathematics.
4. Post-doc. Department of Philosophy, Birkbeck, University of London, associated with Øystein Linnebo’s European Research Council-funded project “Plurals, Predicates, and Paradox.” 2010–2012. Three year post-doc, declined third year.

## EDUCATION

1. Ph.D., Logic and Foundations of Mathematics, University of Notre Dame. Defended in September 2010, degree awarded in January 2011. Advisors: Peter Cholak & Michael Detlefsen. Other committee members: Tim Bays, Patricia Blanchette, and Julia Knight.
2. B.A., Philosophy, English; B.S., Mathematics, Gonzaga University, 2001.

## PUBLICATIONS

1. An Invitation to Nonstandard Analysis and Its Recent Applications. Coauthored with Isaac Goldbring. *Notices of the American Mathematical Society* 66 (6): 842–51, 2019. <https://www.ams.org/journals/notices/201906/rnoti-p842.pdf>
2. *Philosophy and Model Theory*. Coauthored with Tim Button, with a historical appendix by Wilfrid Hodges. Oxford University Press, 2018. <https://global.oup.com/academic/product/philosophy-and-model-theory-9780198790402>
3. The Prehistory of the Subsystems of Second-Order Arithmetic. Coauthored with Walter Dean. *The Review of Symbolic Logic*, 10(2):357–396, 2017. <http://dx.doi.org/10.1017/S1755020316000411>.
4. Definability Aspects of the Denjoy Integral. *Fundamenta Mathematicae*, 237:1–29, 2017. <http://doi.org/10.4064/fm773-9-2016>
5. Structure and Categoricity: Determinacy of Reference and Truth-Value in the Philosophy of Mathematics. Coauthored with Tim Button. *Philosophia Mathematica* 24(3):283–307, 2016. <http://doi.org/10.1093/phimat/nkw007>.
6. Realizability Semantics for Quantified Modal Logic: Generalizing Flagg’s 1985 Construction. Coauthored with Benjamin G. Rin. *The Review of Symbolic Logic* 9(4): 752–809, 2016. <http://dx.doi.org/10.1017/S1755020316000095>.

7. The Strength of Abstraction with Predicative Comprehension. *The Bulletin of Symbolic Logic* 22(1):105–120, 2016. <http://dx.doi.org/10.1017/bsl.2015.39>. Reprinted in: *Journal of Applied Logics*, 4 (10): 3467-3485 (Special Issue: New Trends in Logic). <http://www.collegepublications.co.uk/downloads/ifcolog00019.pdf#page=360>.
8. Fragments of Frege’s *Grundgesetze* and Gödel’s Constructible Universe. *The Journal of Symbolic Logic* 81(2):605 – 628, 2016. <http://dx.doi.org/10.1017/jsl.2015.32>.
9. Predicativity, the Russell-Myhill Paradox, and Church’s Intensional Logic. *The Journal of Philosophical Logic* 45(3):277–326, 2016. <http://dx.doi.org/10.1007/s10992-015-9375-5>.
10. Relative Categoricity and Abstraction Principles. Coauthored with Sean Ebels-Duggan. *The Review of Symbolic Logic*, 8(3):572–606, 2015. <http://dx.doi.org/10.1017/S1755020315000052>.
11. Empiricism, Probability, and Knowledge of Arithmetic: A Preliminary Defense. *Journal of Applied Logic*, 12(3):319–348, 2014. Special Issue on Combining Probability and Logic to Solve Philosophical Problems. <http://dx.doi.org/10.1016/j.jal.2013.12.002>.
12. Logicism, Interpretability, and Knowledge of Arithmetic. *The Review of Symbolic Logic*, 7(1):84–119, 2014. <http://dx.doi.org/10.1017/S1755020313000397>.
13. Comparing Hume’s Principle, Basic Law V and Peano Arithmetic. *Annals of Pure and Applied Logic*, 163:1679–1709, 2012. <http://dx.doi.org/10.1016/j.apal.2011.12.016>.
14. Incongruent Counterparts and Causality. *Kant-Studien* 98(4):418-430, 2007. <http://dx.doi.org/10.1515/KANT.2007.026>.

## BOOK REVIEWS

1. Critical review of Christopher Pincock’s *Mathematics and Scientific Representation*. Coauthored with Eleanor Knox and Adam Caulton. *Philosophy of Science*, 81(3):460–469, 2014.

## EDITED VOLUMES / SPECIAL ISSUES

1. *Notre Dame Journal of Formal Logic*, Volume 56, Number 1, 2015. Set Theory and Higher-Order Logic: Foundational Issues and Mathematical Developments. Co-edited with Salvatore Florio, Øystein Linnebo, and Philip Welch.

## LANGUAGES

1. German (reading)
2. French (reading)

## AWARDS, GRANTS, AND FELLOWSHIPS

1. Luskin Endowment Thought Leadership, Conference Support Grant. Spring 2018. \$15,000. (Award shared with the other co-organizers of conference, see item 9 in section ‘Service to the Profession’ below).
2. Interdisciplinary Teaching Support Award, UC Irvine Academic Senate. Fall 2017. \$10,000.
3. Kurt Gödel Research Prize Fellowship, Kurt Gödel Society. 2011–2014. €100,000.
4. Doctoral Fellowship, L’Agence nationale de la recherche, in conjunction with the “Ideals of Proof” project. 2009–2010.
5. Research Grant and Study Scholarship, DAAD (Deutscher Akademischer Austausch Dienst), for study at the Georg-August-Universität Göttingen. 2004–2005.

**INVITED CONFERENCE AND WORKSHOP TALKS**

1. *February 26, 2010.* FregeFest III, Department of Logic and Philosophy of Science, University of California, Irvine.
2. *April 27, 2011.* Mini Workshop, Kurt Gödel Research Center, Vienna.
3. *April 28, 2011.* New Trends in Logic, Österreichische Akademie der Wissenschaften, Vienna.
4. *June 16, 2011.* Logicism Today (Actualité du logicisme), Besse-en-Chandesse.
5. *March 18, 2012.* The Limits and Scope of Mathematical Knowledge, Bristol.
6. *June 3, 2012.* Bucharest Colloquium in Analytic Philosophy.
7. *October 21, 2012.* Numbers and Truth: The Philosophy and Mathematics of Arithmetic and Truth. Göteborgs Universitet.
8. *February 7, 2014.* Prague Gathering of Logicians 2014, Villa Lanna, Prague.
9. *April 26, 2014.* Abstractionism Workshop, University of Connecticut Logic Group.
10. *May 19, 2014.* Association for Symbolic Logic, North American Annual Meeting, Boulder. Plenary speaker.
11. *November 7, 2015.* French Phil Math Workshop, Paris.
12. *March 2, 2016.* Association for Symbolic Logic Winter Meeting (with American Philosophical Association). Chicago.
13. *April 19, 2016.* Operations, Sets, and Types. Logic and Theory Group, Institute of Computer Science, Universität Bern.
14. *May 24, 2016.* Association for Symbolic Logic, North American Annual Meeting, University of Connecticut. Special Session on History and Philosophy of Logic.
15. *June 22, 2017 and June 25, 2017.* Set Theoretic Pluralism, Bristol.
16. *June 2, 2018.* 7th CSLI Workshop on Logic, Rationality and Intelligent Interaction, Stanford.
17. *March 23, 2019.* Mathematics in Philosophy: Purity and Idealization, Conference in honor of the 70th birthday of Professor Mic Detlefsen, Notre Dame.
18. *April 18, 2019.* American Philosophical Association, Pacific Division Meeting, Vancouver. Book symposium on the book *Philosophy and Model Theory*.

**INVITED SEMINAR AND COLLOQUIUM TALKS**

1. *December 9, 2008.* Urbana Logic Seminar, Urbana.
2. *February 24, 2009.* Southern Wisconsin Logic Seminar, Madison.
3. *March 2, 2009.* University of Chicago Logic Seminar, Chicago.
4. *December 2, 2009.* Séminaire de travail “Mathématiques à l’âge classique”, REHSEIS, Paris.
5. *December 8, 2009.* Equipe d’Analyse Fonctionnelle, Institut de Mathématiques de Jussieu, Paris.
6. *January 25, 2011.* Logic and Philosophy of Mathematics Seminar, University of Bristol.
7. *February 4, 2011.* Departmental Colloquium, Department of Logic and Philosophy of Science, University of California, Irvine.
8. *April 15, 2011.* Logic Seminar, Göteborgs Universitet.
9. *May 12, 2011.* Logic Seminar, University of Cambridge.
10. *May 31, 2011.* Arché, University of St. Andrews.
11. *November 28, 2011.* Philosophy of Mathematics Seminar, Oxford.
12. *May 15, 2012.* Logic and Metaphysics Forum, London.
13. *May 28, 2012.* The Northern Institute of Philosophy, Aberdeen.
14. *June 20, 2012.* Séminaire PHILMATH, IHPST, Paris.
15. *February 15, 2013.* Logic Colloquium, UCLA.

16. *March 15, 2013.* Departmental Colloquium, UC Davis.
17. *October 25, 2013.* Departmental Colloquium, California State University, San Bernardino.
18. *November 1, 2013.* Montreal Inter-University Workshop on History and Philosophy of Mathematics. Montreal.
19. *November 8, 2013.* Departmental Colloquium, Kansas State University.
20. *February 2, 2014.* Colloquium, Munich Center for Mathematical Philosophy.
21. *February 5, 2014.* Seminar, Institute of Mathematics of the Academy of Sciences of the Czech Republic, Prague.
22. *February 6, 2014.* Seminar, Research Group for the History and Philosophy of Science, Institute of Philosophy, Research Centre for Humanities, Hungarian Academy of Sciences, Budapest.
23. *June 10, 2014.* Utrecht Philosophy Lectures, Department of Philosophy and Religious Studies, Utrecht University.
24. *February 22, 2017.* Working Group in the History and Philosophy of Logic, Science, and Mathematics, University of California, Berkeley.
25. *February 24, 2017.* Logic Colloquium, University of California, Berkeley.
26. *March 24, 2017.* Logic Colloquium, University of Connecticut.
27. *April 10, 2018.* Logic Seminar, Department of Mathematics, The Ohio State University.
28. *March 19, 2019.* Logic Seminar, Department of Mathematics, The Ohio State University.
29. *March 20, 2019.* Logic or Language Society Colloquium, Department of Philosophy, The Ohio State University.

## CONTRIBUTED TALKS

1. *October 8, 2005.* Sixth Annual Midwest Philosophy of Mathematics Workshop, Notre Dame.
2. *September 8, 2009.* Ideals of Proof Fellows' Workshop, Paris.
3. *October 21, 2009.* First Paris-Nancy Philmath Workshop, Nancy.
4. *January 25, 2010.* Ideals of Proof Fellows' Workshop, Paris.
5. *June 4, 2010.* Philosophy and Model Theory, Université Paris Ouest & ENS, Paris.
6. *June 19, 2010.* Varieties of Higher-Order Logic, Plurals, Predicates and Paradox Project & Institute of Philosophy, London.
7. *June 27, 2010.* History of Philosophy of Science (HOPOS 2010), Central European University, Budapest.
8. *March 30, 2011.* Higher-Order Logic versus Set Theory, Plurals, Predicates and Paradox Project & Institute of Philosophy, London.
9. *November 5, 2011.* Midwest Philosophy of Mathematics Workshop, Notre Dame.
10. *March 20, 2012.* Reflection Principles in Set Theory, Oxford.
11. *March 27, 2012.* The Mathematics of Abstraction, Plurals, Predicates and Paradox Project, London.
12. *August 12-16, 2013.* ESSLI (European Summer School in Logic, Language, and Information), Düsseldorf.
13. *September 18, 2013.* Prolog 2013: Sixth Workshop on Combining Probability and Logic, Munich.
14. *June 4, 2014.* Philmath Intersem 2014, Université Paris Diderot – Paris 7.
15. *October 24, 2014.* Inductive Logic and Confirmation in Science II. University of Utah.

**SERVICE TO PROFESSION**

1. Co-organizer, The Number Concept: Axiomatization, Cognition and Genesis, Nancy, November 3-5, 2010.
2. Co-organizer, Séminaire de philosophie des mathématiques, Paris-Diderot, 2010-2011. Year long seminar, with seven one-day meetings with multiple speakers.
3. Co-organizer, Summer School: Set Theory and Higher-Order Logic: Foundational Issues and Mathematical Developments, London, August 1-6, 2011.
4. Co-organizer, FregeFest IV, UC Irvine, April 12-13, 2013.
5. Co-organizer, FregeFest V, UC Irvine, April 8, 2016.
6. Co-organizer, So-Cal PhilMath + PhilLogic + FoM Workshops, 2012-2015. Six one-day workshops.
7. Program Committee, Association for Symbolic Logic, Spring Meeting (with American Philosophical Association), April 16-17, 2014, San Diego.
8. Program Committee, French Phil Math Workshop (formerly Paris-Nancy Phil Math Workshop), 2010-2015.
9. Co-organizer, Defeasible Inference in Philosophy and Artificial Intelligence. UCLA, October 11-12, 2019.
10. External Reviewer for: (i) the European Institutes for Advanced Study (EURIAS) Fellowship Programme, 2012-2016 (ii) The Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Pegasus Marie Curie Fellowship programme, 2014, (iii) Fonds de la Recherche Scientifique – FNRS, Belgium, 2019.
11. External Examiner, MPhil Thesis, University of Warwick, September 2015.
12. Commentator: (i) Truth be Told, a Workshop on Philosophical and Formal Theories of Truth, Department of Philosophy and the Institute for Logic, Language, and Computation of the Universiteit van Amsterdam, March 24, 2011; (ii) Fifth Annual Cambridge Graduate Conference on the Philosophy of Logic and Mathematics, January 21, 2012; (iii) 11th Annual Formal Epistemology Workshop, University of Southern California, June 20, 2014.
13. Referee: *Synthese*, *Erkenntnis*, *Mind*, *Journal of Applied Logic*, *Philosophy of Science*, *History and Philosophy of Logic*, *Philosophia Scientiae*, *Annales de la Faculté des Sciences de Toulouse*, *Theoria* (Stockholm), *Review of Symbolic Logic*, *Philosophia Mathematica*, *Philosophical Studies*, Cambridge University Press.
14. Editor, *The Review of Symbolic Logic*, July 2017-January 2020.

**SERVICE TO CAMPUS AND SYSTEM**

1. Council on Research, Computing, and Libraries (CORCL), UC Irvine, academic years 2013-2014, 2014-2015, 2015-2016.
2. The University Committee on Library and Scholarly Communication (UCOLASC), academic year 2015-2016.
3. Information Security and Privacy Committee, UC Irvine, academic years 2014-2015, 2015-2016, 2016-2017.
4. Associate Director, The Center for the Advancement of Logic, its Philosophy, History, and Applications (C-ALPHA), UC Irvine, academic years 2013-2014, 2014-2015, 2015-2016, 2016-2017.
5. Council on Planning and Budget, UCLA, academic year 2018-2019.
6. The Faculty Executive Committee, UCLA College of Letters and Science, academic year 2018-2019.

**SERVICE TO DEPARTMENT**

1. Admissions Committee, UC Irvine, academic years 2013-2014, 2014-2015, 2015-2016.
2. Placement Committee, UC Irvine, academic years 2014-2015, 2015-2016.
3. Placement Director, UC Irvine, academic year 2016-2017.
4. Graduate Advisor, UCLA, academic year 2018-2019.
5. Summer School Coordinator, UCLA, summer 2019.

**TEACHING**

Key:  $[g]$  = graduate,  $[u]$  = undergraduate,  $[g/u]$  = combined graduate/undergraduate.

1. *Notre Dame*. Introduction to Philosophy  $[u]$ , Spring 2007 (PHIL 10101).
2. *Notre Dame*. Introduction to Philosophy  $[u]$ , Spring 2008 (PHIL 10101) (2 sections).
3. *Notre Dame*. Beginning Logic  $[u]$ , Fall 2008 (MATH 10130).
4. *Birkbeck*. Tutorials: Logic and Metaphysics Revision Tutorials  $[u]$ , Autumn 2010; Philosophy of Language Revision Tutorials  $[u]$ , Winter 2011; Symbolic Logic Tutorials  $[g]$ , Autumn 2010, Winter 2011, Autumn 2011, Winter 2012.
5. *Birkbeck*. Research Seminars: Introduction to Set Theory  $[g]$ , Autumn 2010; Topics in the Philosophy of Set Theory  $[g]$ , Winter 2011; Philosophy and Model Theory  $[g]$  (co-convened with Tim Button) Autumn 2011; Formal Perspectives on Truth and Paradox  $[g]$  (co-convened with Salvatore Florio), Winter 2012; Computation and Intension  $[g]$  (co-convened with Walter Dean), Summer 2012.
6. *Birkbeck*. Lectures: Frege, Russell, Wittgenstein  $[u]$ , Winter 2012.
7. *UC Irvine*. Elementary Set Theory  $[g/u]$  (LPS/Philos 105a/205a), Fall 2012.
8. *UC Irvine*. Logicism  $[g]$  (LPS/Philos 247), Winter 2013.
9. *UC Irvine*. Introductory Symbolic Logic  $[u]$  (LPS/Philos 30), Spring 2013.
10. *UC Irvine*. Elementary Set Theory  $[g/u]$  (LPS/Philos 105a/205a), Fall 2013.
11. *UC Irvine*. Philosophy of Language  $[g/u]$  (LPS/Philos/Linguis 145/245), Winter 2014.
12. *UC Irvine*. Logic Seminar  $[g]$  (LPS/Philos 246), Winter 2014 (co-convened with Jeremy Heis, Richard Mendelsohn, and Kai Wehmeier).
13. *UC Irvine*. Undecidability and Incompleteness  $[g]$  (LPS/Philos 205c), Spring 2014.
14. *UC Irvine*. Intuitionism and Constructive Mathematics  $[g]$  (LPS/Philos 247), Spring 2014.
15. *UC Irvine*. Modal Logic  $[g/u]$  (LPS/Philos 106/206), Fall 2014.
16. *UC Irvine*. Elementary Set Theory  $[g/u]$  (LPS/Philos 105a/205a), Fall 2014.
17. *UC Irvine*. Introductory Symbolic Logic  $[u]$  (LPS/Philos 30), Winter 2015.
18. *UC Irvine*. Logic Seminar  $[g]$  (LPS/Philos 246), Winter 2015 (co-convened with Jeremy Heis, Richard Mendelsohn, and Kai Wehmeier).
19. *UC Irvine*. Introductory Symbolic Logic  $[u]$  (LPS/Philos 30), Spring 2015.
20. *UC Irvine*. Proof Theory  $[g/u]$  (LPS/Philos 106/206), Spring 2015.
21. *UC Irvine*. Descriptive Set Theory  $[g]$  (Math 285), Spring 2015.
22. *UC Irvine*. Elementary Set Theory  $[g/u]$  (LPS/Philos 105a/205a), Fall 2015.
23. *UC Irvine*. Modal Logic  $[g/u]$  (LPS/Philos 106/206), Fall 2015.
24. *UC Irvine*. Formal Theories of Truth and Paradox  $[g]$  (LPS/Philos 246), Fall 2015.
25. *UC Irvine*. Probability and Randomness (LPS/Philos 247), Winter 2016 (co-convened with Simon Huttegger and Jeffrey Barrett).
26. *UC Irvine*. Logic Seminar  $[g]$  (LPS/Philos 246), Winter 2016 (co-convened with Jeremy Heis, Richard Mendelsohn, and Kai Wehmeier).
27. *UC Irvine*. Modal Logic  $[g/u]$  (LPS/Philos 106/206), Fall 2016.

28. *UC Irvine*. Elementary Set Theory [g/u] (LPS/Philos 105a/205a), Fall 2016.
29. *UC Irvine*. Introductory Symbolic Logic [u] (LPS/Philos 30, Linguis 43), Winter 2017.
30. *UC Irvine*. Logic Seminar [g] (LPS/Philos 246), Winter 2017 (co-convened with Jeremy Heis, Richard Mendelsohn, and Kai Wehmeier).
31. *UC Irvine*. Intensionality [g] (LPS/Philos 245), Winter 2017.
32. *UC Irvine*. Privacy [u] (LPS/Philos 144), Fall 2017 (co-convened with Isaac Straley).
33. *UC Irvine*. Elementary Set Theory [g/u] (LPS/Philos 105a/205a), Fall 2017.
34. *UC Irvine*. Proof Theory [g/u] (LPS/Philos 106/206), Fall 2017.
35. *UC Irvine*. Independent Studies: Set Theory and Its Philosophy [u] (Fall 2012); Non-Classical Logic and Belief Revision [g] (Spring 2013); Non-Monotonic Logic [g] (Winter 2014); Modal Logic and Philosophy [u] (Winter 2015); Logic for Philosophy [u] (Spring 2015); The Nature of Truth [g] (Winter 2016); Counterpossibles [u] (Winter 2016); Philosophical Logic [u] (Winter 2016).
36. *UCLA*. Metalogic [g/u] (Philos 135), Winter 2018.
37. *UCLA*. Philosophy of Mathematics: from Quine to the Present-day [g] (Philos 235), Spring 2018.
38. *UCLA*. Philosophy of Mathematics: from Kant to Hilbert [g/u] (Philos 128), Fall 2018.
39. *UCLA*. Metalogic [g/u] (Philos 135), Winter 2019.
40. *UCLA*. Defeasible Inference [g] (Philos 225), Spring 2019.

## **SUPERVISION, PAST GRADUATE STUDENTS**

1. Benjamin G. Rin. Department of Logic and Philosophy of Science, University of California, Irvine. Co-chair of dissertation committee. Defended August 2014. Initial placement: Amsterdam University College and the Institute for Logic, Language and Computation at the University of Amsterdam, 3-year position. Current placement: Department of Philosophy and Religious Studies, Utrecht University (tenure-track equivalent).
2. Kyle Banick. Department of Philosophy, University of California, Irvine. Co-chair of dissertation committee. Defended May 2017. Initial placement: Mellon Humanities Faculty Fellowship (Mellon 5+2 Program), School of Humanities, University of California, Irvine.
3. Stella Moon. Institute for Logic, Language, and Computation at the University of Amsterdam. External supervisor of MSc thesis. Defended June 2017.

## **SUPERVISION, CURRENT GRADUATE STUDENTS**

William Stafford. Phd Student, Department of Logic and Philosophy of Science, University of California, Irvine. Co-advisor.

## **PROFESSIONAL AFFILIATIONS**

Association for Symbolic Logic  
 American Philosophical Association  
 American Mathematical Society

**REFERENCES**

- Michael Detlefsen. Professor, Department of Philosophy, University of Notre Dame.  
Peter Cholak. Professor, Department of Mathematics, University of Notre Dame.  
Patricia Blanchette. Professor, Department of Philosophy, University of Notre Dame.  
Øystein Linnebo. Professor, Department of Philosophy, University of Oslo.  
Stewart Shapiro. Professor, Department of Philosophy, The Ohio State University.  
Peter Koellner. Professor, Department of Philosophy, Harvard University.