Christopher S. Shaw
pronouns: he/him/his

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EDUCATION

Ph.D., Mathematics, *University of Maryland*, College Park, MD (2008)
Thesis: *Weakly o-minimal structures and Skolem functions*, advised by M. C. Laskowski

M.A., Mathematics, *University of Maryland*, College Park, MD (2004)
Scholarly Paper: *O-minimal theories and omitting types*

B.A., Mathematics and Spanish Literature, *The George Washington University*, Washington, DC (2001)
Summa cum laude; University Honors Scholar
Honors Thesis: *Models of time and Jorge Luis Borges*

EMPLOYMENT

Columbia College Chicago, Chicago, IL
>   *Associate Professor of Mathematics, Science and Mathematics Department, 2016–*
>   *Assistant Professor of Mathematics, Science and Mathematics Department, 2010–2016*

University of Maryland, College Park, MD, 2008–2010
>   *Associate Director, Norbert Wiener Center, 2008–2010*
>   *Graduate Teaching Assistant, Department of Mathematics, 2001–2006*

The George Washington University, Washington, DC
>   *Executive Aide, Undergraduate Admissions, 2000–2001*

TEACHING

Columbia College Chicago, 2010–present
>   *Class experience*
>   - College Mathematics (Math 110)
>   - Liberal Arts Mathematics (Math 115) (developed course, both in-person and remote asynchronous)
>   - Quantitative Reasoning (Math 120)
>   - Math in Art & Nature (Math 155, re-designed course for fall 2022)
>   - Mathematical Ideas (Math 160), online course
>   - Introduction to Statistics (Math 205)
>   - Calculus I (Math 220)
>   - Calculus II (Math 221)
>   - Linear Algebra (Math 310)
>   - Calculus III (Math 320)
>   - Elementary Differential Equations (Math 330)
>   *Other curriculum development*
>   - Bachelor of Science in Computational and Applied Mathematics (co-developed with A. Khosravani, C. Rasinariu, and W. Li; program was approved but later suspended before students could be recruited or enroll)
>   - Mathematical Analysis of Games (High School Summer Institute course, has not run)

- Modeling Biology with Mathematics: Honors (Biol 315H; co-developed with E. Davis-Berg and W. Li, has not run)

University of Maryland, College Park, 2001–2010
Teaching experience
- Elementary Probability (Math 111)
- Precalculus (Math 115)
- Math for Elementary School Teachers I: Elements of Mathematics (Math 210)
- Math for Elementary School Teachers II: Elements of Geometry (Math 211)
- Elementary Calculus I (Math 220), large lecture instructor
- Elementary Calculus II (Math 221), large lecture instructor
- Calculus III – Honors (Math 241H), grader
- Math SPIRAL summer research program, teaching assistant and grad student coordinator
- Introduction to Mathematical Logic I (Math 712, graduate course), grader

Curriculum development
- Professional Masters Program in Mathematics of Advanced Industrial Technology (co-developed with J. Benedetto and I. Konstantinidis, began in 2005)

SCHOLARLY AND CREATIVE WORK

Peer–reviewed publications
- "Exploring personality profiles with matrices," C. Shaw, *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*, DOI 10.1080/10511970.2017.1388316 (2018)
- "Definable choice for a class of weakly o-minimal theories," M. C. Laskowski and C. Shaw, *Archive for Mathematical Logic* vol. 55, no. 5, pp. 735–748 (2016)
- "Quantitative Literacy: Problems That Motivate," *Ohio Journal of School Mathematics* vol. 72 (2015)
- "Using data from real sources: Motivating statistics definitions on day one," G. Johnson and C. Shaw, *Mathematics in Michigan* vol. 46, no. 2 (2013)
- "Zero autocorrelation waveforms: A Doppler statistic and multifunction problems," J. Benedetto, J. Donatelli, I. Konstantinidis, and C. Shaw, *Proceedings of the 2006 IEEE International Conference on Acoustics, Speech and Signal Processing* (2006)
- "A Doppler statistic for zero autocorrelation waveforms," J. Benedetto, J. Donatelli, I. Konstantinidis, and C. Shaw, *Proceedings of the 2006 IEEE Conference on Information Science and Systems* (2006)

Invited publications
- "Observing Demand Elasticity with Direction Fields," applied project invited for *Differential Equations with Boundary Value Problems 9E*, D. Zill, Cengage Learning (2020)
- Book Review for *Euler's Pioneering Equation: The most beautiful theorem in mathematics* (author Rob Wilson), *Mathematics Teacher* vol. 112 no. 6, p. 477 (2019)

In preparation
- "Assessing and Encouraging Student Participation in Remote Asynchronous Courses," to be submitted to *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)* (2022)
- "Understanding legal terminology through symbolic logic," C. Shaw, on hold (2020)

Other creative work
- "Diagonal Calculation," mathematics-themed crossword puzzle, published in *Illinois Mathematics Teacher*, vol. 64, no. 1 (2018)
- (Untitled), daily crossword puzzle, published by *Los Angeles Times* (June 16, 2017)

- "Follow the Directions," mathematics-themed crossword puzzle, published in *Illinois Mathematics Teacher*, vol. 62, no. 1 (2014)
- "Qu-Ali-Ty Work," crossword puzzle, published in the word game wordXross (2009)

PROFESSIONAL PRESENTATIONS

Refereed presentations
- "Assessing Participation in the Time of Black Squares," MAA MathFest, Remote Conference, August 2021
- "Sharing Your Innovations as Scholarly Articles," with D. Jordan, Illinois Math & Science Conference, Peoria, IL, October 2019
- "Unifying sets and logic with the real world in a Liberal Arts Mathematics course," Mathematics Association of America session at Joint Mathematics Meetings conference, Baltimore, MD, January 2019
- "Writing an Article for the Illinois Mathematics Teacher Journal," with D. Jordan, Illinois Math and Science Conference, Tinley Park, IL, October 2018
- "Understanding legal terminology through symbolic logic," Mathematics Association of America session at Joint Mathematics Meetings conference, San Diego, CA, January 2018
- "Skolem functions for a weakly o-minimal structure with a new convex predicate," Winter meeting of the Association for Symbolic Logic, Atlanta, GA, January 2017
- "Writing an Article for the IMT Journal," with D. Jordan, Illinois Math and Science Conference, Peoria, IL, October 2016
- "Exploring personality profiles with matrices," Mathematics Association of America session at Joint Mathematics Meetings conference, Seattle, WA, January 2016
- "Transforming Assessment of Student Learning in a Multi-Discipline Department," with G. Adams, D. Jordan, T. McCaskey, and J. Minbiole, National Science Teachers Association National Conference, Chicago, IL, March 2015
- "The unsuspecting analyst: Mathematics that needs no introduction," Mathematics Association of America session at Joint Mathematics Meetings conference, San Antonio, TX, January 2015
- "Does inherent Platonism predict strength in abstract mathematics?," with G. Johnson and H. Johnson, Mathematics Association of America session at Joint Mathematics Meetings conference, Baltimore, MD, January 2014
- "Writing an article for the Illinois Mathematics Teacher journal," with D. Jordan, Illinois Council of Teachers of Mathematics Annual Meeting, Peoria, IL, October 2013
- "Writing an article for the Illinois Mathematics Teacher journal," with D. Jordan, Metropolitan Mathematics Club Conference of Workshops, Chicago, January 2013
- "Voting alliances: Using politics to motivate combinatorial counting," Mathematics Association of America session at Joint Mathematics Meetings conference, San Diego, CA, January 2013
- "The war on apathy in a terminal statistics course: Motivating definitions from day one," with G. Johnson, Mathematics Association of America session at Joint Mathematics Meetings conference, New Orleans, LA, January 2011
- "Definable choice for a class of weakly o-minimal structures," Winter meeting of the Association for Symbolic Logic, New Orleans, LA, January 2011

Invited lectures
- "Definable Skolem functions for weakly o-minimal structures," University of Illinois at Chicago, January 2017
- "Definable choice for a class of weakly o-minimal structure," Southern Wisconsin Logic Colloquium, November 2016

- "Skolem functions for a weakly o-minimal structure with a new convex predicate," University of Notre Dame, October 2016
- "Gödel's incompleteness theorems," Elmhurst College Mathematics Seminar Series, March 2014
- "Two ideas that shook the foundations of mathematics," Science and Mathematics Colloquium, Columbia College Chicago, April 2013
- "Skolem functions in weakly o-minimal structures," University of Illinois at Chicago, April 2011
- "Ordered Structures, o-minimality, and definable choice," Carnegie Mellon University, Pittsburgh, PA, March 2011
- "Model theory and definable sets in ordered structures II," The George Washington University, Washington, DC, February 2010
- "Model theory and definable sets in ordered structures I," The George Washington University, Washington, DC, February 2010
- "Weakly o-minimal structures and Skolem functions," McDaniel College, Cumberland, MD, March 2008
- "Definability in weakly o-minimal structures," Spotlight conference, University of Maryland, College Park, MD, April 2007
- "What are the 'strongest' weakly o-minimal structures?," US Naval Academy, Annapolis, MD, January 2007
- "Classical o-minimal structures and theories," The George Washington University, Washington, DC, February 2004
- "A few classical results in the model theory of fields," The George Washington University, Washington, DC, April 2003

Seminar talks
- "Skolem functions in weakly o-minimal structures," Maryland logic seminar, April 2008
- "Weakly o-minimal structures," Maryland logic seminar, January 2007
- "Orthogonality and dimension," Maryland logic seminar, November 2006
- "How strong is weak o-minimality?," Maryland logic seminar, February 2006
- "Independence in totally transcendental theories," Maryland logic seminar, September 2004
- "Still more classical o-minimal structures," Maryland logic seminar, May 2004
- "Definability and decidability in some familiar rings," Maryland logic seminar, May 2003
- "The model theory of fields," Maryland logic seminar, March 2003
- "Indiscernibles in first-order logic," Maryland logic seminar, March 2002

GRANTS, AWARDS, AND HONORS

- *Virtual Learning Community Fellowship,* Columbia College Center for Innovation in Teaching Excellence (J. Minbiole and C. Shaw, co-PIs), 2014
- Norbert Wiener Center Society of Fellows, University of Maryland, 2011
- *Young Investigators Grant*, National Security Agency (C. Shaw, PI), 2010, *not funded*
- Monroe Martin Prize, Spotlight on Graduate Research contest, University of Maryland, 2006
- Elected Student Representative to MATH Graduate Program, University of Maryland, 2004
- Honorable Mention, Excellence in Teaching Awards, University of Maryland, 2003
- Special Mention, Excellence in Teaching Awards, University of Maryland (nominated but not eligible to win an award), 2001
- Two-year Academic Fellowship, University of Maryland, 2001

CONSULTATION

- Publisher review, *Calculus, 9E*, J. Stewart (Cengage), 9th Ed., 2018
- Publisher review, *Calculus*, M. Sullivan, K. Miranda (Macmillan), 2nd Ed., 2018
- Publisher review, *Mathematics All Around*, T. Pirnot (Pearson), 5th Ed., 2014
- Publisher review, *The Nature of Mathematics*, K. Smith (Brooks/Cole), 12th Ed., 2012
- Publisher review, *Quantitative Literacy*, B. C. Crauder, B. Evans, J. A. Johnson, A. V. Noell, (W. H. Freeman) 1st Ed., 2012

SERVICE

College

- Academic Coordinator (10–18 sections per semester), 2012–
- Science and Mathematics DEI Pedagogy Committee, fall 2019–
- Faculty mentor for tenure-track faculty member, 2019–
- Campus Reopening Task Force, 2022–
- Science and Mathematics Assessment Committee, 2013–2016; 2020–
- Search Committee for Tenure-Track Faculty Member in Earth Sciences, spring 2022
- Columbia College Faculty Senate
    - Interim senator, spring 2016
    - Executive Committee, 2018–2022
    - Senate Secretary, 2019–2022
    - Bylaws Review Committee Chair, spring 2020; spring 2022
- Social Justice Dialog Organizing Committee, spring 2021
- Search Committee for Instructional Design roles, invited by the Academic Technology Team, 2020–2021
- Departmental Transfer Credit Evaluator for Mathematics, spring 2020
- Member, Columbia Core Committee, 2018–2020
- Facilitator, "Teaching Online at Columbia College Chicago" course, 2020
- Faculty Online Pedagogy Team organized by Academic Affairs, spring 2020
- Search committee for Senior Vice President and Provost, 2018–2019
- Science and Mathematics Curriculum Committee, 2011–2014, 2017–2019 (Chair 2017–2019)
- Art and Materials Conservation program Task Force, 2018-2019
- Sabbatical Leave Committee, 2017–2019
- School of Liberal Arts and Sciences Curriculum Committee, 2017–2018 (Chair 2017–2018)
- Ad-Hoc College Committee on Faculty Workload, spring 2017
- Ad-Hoc College Committee on Faculty Compensation, spring 2016
- Excellence in Teaching Awards Committee, 2014–2016 (Chair 2015–2016)
- Co-facilitator, "Getting started with Moodle" online course, Center for Innovation in Teaching Excellence, fall 2014
- Faculty Advising Ambassador, College of Liberal Arts and Sciences, 2012–2014
- Search committee member, tenure-track position in English, 2012
- Search committee member, tenure-track position in English, 2011
- Science and Mathematics subcommittee for midterm evaluations, 2010–2011
- Open House volunteer, 2010–2017

Profession

- Co-Editor of *Illinois Mathematics Teacher*, the journal of the Illinois Council of Teachers of Mathematics, 2012–

- Reviewed 10 articles for *Mathematics Teacher*, the journal of the National Council of Teachers of Mathematics (2013–2022)
- Reviewed 3 articles for *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)* (2018–2019)
- Reviewed 1 article for *Mathematics in Michigan,* the journal of the Michigan Council of Teachers of Mathematics (2014)
- Co-Organizer of MidWest Model Theory Day, a regional conference held at the University of Illinois at Chicago (fall 2011, spring 2012)

PROFESSIONAL MEMBERSHIPS

- Association for Symbolic Logic
- National Council of Teachers of Mathematics
- Illinois Council of Teachers of Mathematics
- American Association of University Professors

OTHER SKILLS AND ACTIVITIES

- Technical: LaTeX (mathematics typesetting), Mathematica (software for mathematics computation and demonstrations; see http://tinyurl.com/pskg7l9 for samples)
- Graphics and design: HTML, CSS, Moodle, Illustrator, Dreamweaver, Photoshop, Fireworks