# C. Eric Overton-Walker

# ~Curriculum Vitae~

University of Arkansas

**Department of Mathematical Sciences** 

Fayetteville, AR 72703

Email address:

cew028@uark.edu

Office location: SCEN 325

Website: https://locallyringed.space

## Education.

| PhD Candidate in Mathematics; advisor: Prof. Lance Edward Miller. | University of Arkansas | in progress |
|---|------------------------|-------------|
| MS in Mathematics.  | University of Arkansas | May 2018    |
| BA cum laude with distinction in Mathematics and in Spanish;      |                        |             |
| math advisor: Prof. Christopher S. Camfield;                      | Hendrix College        | May 2016    |
| thesis: An Open Door to Geometric Measure Theory.                 |                        |             |

## Research Interests.

Homological and homotopical algebra, derived methods in commutative algebra and algebraic geometry, deformations, arcs and jets, Kähler differentials and the cotangent complex.

## Honors and Awards.

| NSF-supported participant in AMS MRC 2023  Derived Categories, Arithmetic and Geometry | Beaver Hollow, New York | 4-10 June 2023 |
|--|-------------------------|----------------|
| John C. Massie Memorial Fund   | University of Arkansas  | 2022-2023      |
| John C. Massie Memorial Fund   | University of Arkansas  | 2021-2022      |
| William Alton Anderson Endowed Scholarship in Arts & Sciences                          | University of Arkansas  | 2019-2020      |
| Julia Hicks Endowed Graduate Teaching Award  | University of Arkansas  | 2018-2019      |
| Lawrence Jesser Toll, Jr. Endowed Fund   | University of Arkansas  | 2017-2018      |

## Publications and Preprints.

| Derived jets and arcs                                   | [auViv fauth coming] |
|---|----------------------|
| In preparation with Roi Docampo and Lance Edward Miller | [arXiv forthcoming]  |

## Talks.

| Lightning talk title TBD  | 15 April 2023          |
|---|------------------------|
| CARES: Commutative Algebra Regional Expository Seminar (virtual)  Spectral sequences aren't scary (no, really!)                     | 24 October 2022        |
| Graduate student colloquium (internal)  Video game character creation is a moduli problem   | 19 October 2022        |
| Graduate student colloquium (internal)  Algebraic geometry for new grad students  | 6 September 2022       |
| URiCA: Upcoming Researchers in Commutative Algebra (University of Nebraska-<br>Lincoln)  Derived algebraic geometry and jet schemes | 7 May 2022             |
| ARTS: Algebra and Representation Theory Seminar (University of Oklahoma)  Derived algebraic geometry and jet schemes                | 1 April 2022           |
| Algebra seminar (internal)  Derived algebraic geometry and jet schemes  | 4 February 2022        |
|   | Continued on most news |

Continued on next page.

## Talks, continued.

| Graduate student colloquium (internal)  UARK GSC What is? #1: Tropical Geometry  | 26 January 2022  |
|--|------------------|
| Graduate student colloquium (internal)   |                  |
| What's on the mind of air traffic controllers and algebraic geometers? #2 (Blowing up points on the plane)                                       | 17 November 2021 |
| CARES: Commutative Algebra Regional Expository Seminar (virtual)  The module of Kähler differentials   | 12 October 2021  |
| Jet spaces / arc spaces learning seminar (University of California San Diego, virtual)  Jets, arcs, and cylinders                                | 19 May 2021      |
| CARES: Commutative Algebra Regional Expository Seminar (virtual)  Macaulay2 Panel (joint with Michael DeBellevue, Alexander Duncan, David Smith) | 15 April 2021    |
| CARES: Commutative Algebra Regional Expository Seminar (virtual)  Jet and arc spaces from a commutative algebra point of view                    | 11 March 2021    |
| The Curry Seminar: Algebra and topology seminar (internal) The Silmarillion: K-Theory  | 13 October 2020  |
| Graduate student colloquium (internal)   |                  |
| What's on the mind of air traffic controllers and algebraic geometers? (An introduction to jet spaces)   | 11 March 2020    |
| Spectral sequence seminar (internal)  Differentially bigraded algebras and spectral sequence constructions                                       | 31 July 2019     |
| Spectral sequence seminar (internal)   | 05     0010      |
| Perfectly balanced: Using spectral sequences to balance Tor and Ext, and the Universal Coefficient Theorem                                       | 25 July 2019     |

## Service.

| University of Arkansas Graduate Student Colloquium Co-organizer, Vice President. | Spring 2022-present   |
|--|-----------------------|
| STAG: Students Teaching Algebraic Geometry discussion seminar Co-organizer.      | Fall 2020-Summer 2022 |

# Teaching Experience.

| Linear Algebra (MATH 3083)<br>instructor      | Summer 2023.   |
|---|--|
| Calculus 1 (MATH 2554) instructor/coordinator | Summer 2022, Summer 2020 (coord.), Summer 2019 (coord.), Summer 2018, Summer 2017.   |
| Survey of Calculus (MATH 2043) instructor     | Summer 2021, Spring 2021.  |
| College Algebra (MATH 1203)<br>instructor     | Spring 2023, Fall 2022, Spring 2022, Fall 2021, Fall 2020, Spring 2020, Fall 2019, Spring 2019, Fall 2018, Spring 2018, Fall 2017. |
| Math Spot<br>tutor                            | Since Fall 2016.   |
| Calculus 1 (MATH 2554)<br>teaching assistant  | Spring 2017, Fall 2016.  |