

tslil clingman

5th year graduate at Johns Hopkins

Supervised by **Emily Riehl**

Interested in: *formal category theory*, *higher categories*, and *homotopy type theory*.

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200 Krieger Hall, 3400 N. Charles St.
Baltimore, MD 21218

— Education —

■ Ongoing **PhD Candidate Math.**

JOHNS HOPKINS

Completed written qualifying exams and oral speciality exam

■ 2018 **Masters Degree**

JOHNS HOPKINS, M.A. MATH., COURSEWORK

■ 2016-2018 **Principle Fulbright Scholar**

JOHNS HOPKINS

Selected & funded to pursue PhD in Math.

■ 2015 **Masters Degree**

UNIV. CAPE TOWN, M.SC. MATH., WITH DISTINCTION

Dissertation: "On the local and global properties of information manifolds"

■ 2014-2015 **Research Group**

UNIV. CAPE TOWN, INFORMATION GEOMETRY

Quantum Gravity and Strings Laboratory

■ 2014 **Honours Degree**

UNIV. CAPE TOWN, PURE MATH., FIRST CLASS

■ 2011-2013 **Bachelor of Science**

UNIV. CAPE TOWN, DEGREE WITH DISTINCTION

Majors: Pure Math., Applied Math., and Astrophysics, each with distinction

— Notable Service —

■ 2019 **Primary organiser**

2019 CATEGORY THEORY OCTOBERFEST ([website](#)),

JOHNS HOPKINS

■ Ongoing **Co-organiser**

DIRECTED READING PROGRAM (DRP), JOHNS HOPKINS

Individual pairing of undergraduates with graduates for independent studies ([website](#)). Mentor (2017-ongoing), organiser (2018-ongoing)

■ 2015 **Organiser**

MATHS POSTGRAD. TEA PARTY, UNIV. CAPE TOWN

Founder of a biweekly meeting of graduates, comprising peer lectures and discussions over tea

■ 2011-2015 **Various roles**

ALGORITHM CIRCLE – THEORETICAL COMP. SCI. CLUB, UNIV. CAPE TOWN

Free and open lectures, and competition prep. Lecturer (2011-2015), Vice-chairman (2012, 2014), Chairman (2013)

■ 2011 & 2012 **Organiser**

HASKELL PROGRAMMING COURSE, UNIV. CAPE TOWN

Organised and gave a free and open Haskell language programming course

— Talks —

■ 2020/09/11 **Category Theory Seminar**

JOHNS HOPKINS (ONLINE, OPEN TO PUBLIC)

2-lessons from Australian Category Theory: Mates and Doctrinal Adjunction

■ 2020/09/11 **Category Theory Seminar**

JOHNS HOPKINS (ONLINE, OPEN TO PUBLIC)

BI DOUBLing categories we'll see/ MULTIPLE morphisms acting weakly/ Two out of the four/ Have laws rather poor/ But the last is coherent VIRTUALLY!

■ 2019 Fall **Category Theory Seminar**

JOHNS HOPKINS

*Induction & construction: the pointless theory of localic topox;
Within and not without: an apology for internal languages (2 parts)*

■ 2019/06/15 **Types 2019**

OSLO

Towards proof relevant category theory, as modelled by globular T-categories

■ 2019/06/06 **HoTT-UF Project**

CAS OSLO

What is proof relevant category theory?

■ 2019/04/02 **School and Workshop on Univalent Mathematics**

UNIVERSITY OF BIRMINGHAM

The univalence axiom, a brief & incomplete tour

■ 2019/02/19 **Category Theory Seminar**

JOHNS HOPKINS

Polynomial functors, a degree of generality

■ 2019/02/10 **Johns Hopkins Mathematics Tournament**

"Fractions: ratio of two integers or universal machine?", audience of high-school students

■ 2018/11/30 **University Seminar**

GEORGE WASHINGTON UNIV.

Homotopy Type Theory, the confluence of logic and space

■ 2018/11/08 **Category Theory Seminar**

JOHNS HOPKINS
What is an LCC?

■ 2018/09/20 **Oral Speciality Exam**

JOHNS HOPKINS
Type Theory and Categories, the unbearable likeness of being

■ 2017/12/05 **Graduate Topics Course**

JOHNS HOPKINS
'Rings Modules and Algebras in Infinite Loop Space Theory' at a glance

■ 2017/11/15 **Graduate Topics Course**

JOHNS HOPKINS
What do we mean when we say spectra?

■ 2017/11/30 **University Seminar**

GEORGE WASHINGTON UNIV.
An Intuitive Description of Toposes, Toposes as a Description of Intuitionism

■ 2017/10/12 **Category Theory Seminar**

JOHNS HOPKINS
All good things must come to an end

■ 2017/04/09 **Graduate Topics Course**

JOHNS HOPKINS
The Calculus of Fractions and Homotopy Theory

■ 2016/12/12 **Category Theory Seminar**

JOHNS HOPKINS
A monad is just ...(with an eye to universal algebra)

— Teaching Experience —

See my website for details.

■ Falls 18-20 **Head T.A. & WeBWoK administrator**

JOHNS HOPKINS
Calculus III & ODE and online homework system

■ Spring 2019 **Course development assistant**

JOHNS HOPKINS
Introduction to Proofs

■ Fall 2017 **Sole Instructor**

JOHNS HOPKINS
Introduction to Calculus

■ Jan. 2017 **Primary Instructor**

JOHNS HOPKINS
Intersession Course: Recreational Math. for All

■ 2017, 18, 19 **DRP Mentor**

JOHNS HOPKINS
Mentored projects in: General Topology, Braid Group Representations, Category Theory, Homotopy Type Theory

■ Oct. 2014 **Invited Instructor**

UNIV. CAPE TOWN
Introduction to Group Theory

■ Cumulative **Teaching Assistant**

Real Analysis, Introductory Abstract Algebra, Linear Algebra, Differential Equations, Calculus Sequence, String Theory

— Conferences Attended —

- 2020 Programme Associate, Higher Categories and Categorification, MSRI
- 2019 Category Theory Octoberfest, JHU
- 2019 Homotopy Type Theory, CMU
- 2019 Category Theory, Edinburgh
- 2019 Types, Oslo
- 2019 HoTT-UF Project, CAS Oslo
- 2019 Summer School on Higher Topos Theory and Univalent Foundations, Leeds
- 2019 School and Workshop on Univalent Mathematics, Birmingham
- 2018 Vladimir Voevodsky Memorial Conference, IAS
- 2018 Category Theory Octoberfest, CUNY
- 2018 Directed Reading Programme Network & Workshop, MIT
- 2017 Category Theory Octoberfest, CMU
- 2017 Category Theory 2017, UBC

— Competencies —

- Proficient in C, Haskell, and Rust, with experience in Agda, (x86 & AVR) Assembly, Common Lisp, Coq, Java, Javascript, L^AT_EX, and Python
- English (fluent), Hebrew (intermediate), Afrikaans (intermediate)

— Personal Pursuits —

- **Electronics** Various projects leveraging micro-controllers and custom circuitry
- **Esoteric Programming Languages** Authored and implemented several languages
- **Fractal Art** Exploration of the media of iterated function systems, chaotic maps and attractors, and epicyclic generators
- **Digital Music** Leveraged trackers and other platforms to create a variety of compositions

References available upon request