

# Applied Category Theory Directory

The purpose of this document is to help people find meaningful interactions in the ACT community.

This document was assembled by the ACT Development Working Group. [See here](#) for more of our thinking around how the applied category theory community can organize its knowledge and activities. For more information, or to join, contact [Joshua Meyers](#) or [Christian Williams](#).

## How to use this document

- **List organized, specific, actionable information about yourself and how you want to interact with the community.**
- You can structure your entry however you want. The categories seeking/offering, for example, are just suggestions.
- Keep the directory alphabetical by last name. Use bookmarks to identify yourself and link activities with people.
- If you have a good idea for how to improve this directory, just do it.
- ...

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### Peter Arndt

University of Düsseldorf, Germany

`peter.arndt@hhu.de`, Zulip

#### Things I have worked on / work on

- Currently: teaching, mostly!
- Motivic homotopy theory, abstract homotopy theory
- Geometry over the field with one element
- Non-classical propositional logic, e.g. algebraizable logics and their generalizations (right now: multialgebraic/hyperalgebraic semantics, semantics in models of a Horn theory)
- Categorical logic, in particular geometric logic and toposes
- Quadratic forms

#### Things I want to understand currently:

- Categorical Probability and Statistics
- Information Theory, Information Geometry
- Other mathematical and philosophical approaches to Information
- Topological Data Analysis
- Categorical views on AI and Data Science
- (semantics of programming languages)

**Meetings:** Sure, let's talk!

### John Baez

UC Riverside, California, USA

`baez@math.ucr.edu`, Zulip

#### Current work

- Advising my graduate students Jade Master and [Christian Williams](#)
- Working with Todd Trimble and [Joe Moeller](#) on “Schur functors and categorified plethysm”
- Working with Kenny Courser and Christina Vasilakopoulou on rewriting “[Structured versus decorated cospans](#)”
- Working with Fabrizio Genovese, Jade Master, Mike Shulman on rewriting “[Categories of nets](#)”
- Working with Evan Patterson, [James Fairbanks](#), [Owen Lynch](#) and Christian Williams on new applied category theory projects
- Visiting the Topos Institute (July 2021)

### Georgios Bakirtzis

UT Austin, Texas, US

`bakirtzis.net`, Zulip, [twitter](#)

#### Stuff I've done

- Compositional methods in cyber-physical system design and analysis
- Systems theory/engineering principles in the abstract that can be made categorically precise
- Safety and security assessment methods that can also be made categorically precise

#### Stuff I want to do/need help with

- Any collaboration involving ACT to engineering
- Mechanization of ACT for new systems modeling languages (particularly for control synthesis, safety, and security)
- Double categories for system design
- Funding strategies for ACT in engineering
- (academic jobs starting in 2022 in engineering that appreciate ACT-email me)

#### Current collaborations

- Compositional cyber-physical systems theory with Jacques Carrette, David Jaz Myers, Christina Vasilakopoulou, Fabrizio Genovese and others
- Multi-agent systems and particularly compositional reinforcement learning for interpretability and safety with Ufuk Topcu (UT Austin) and Cody Fleming (Iowa State)
- System science at large with Spencer Breiner, Eswaran Subrahmanian

#### Meetings

- I will meet anyone on zoom for any reason for 15 minutes (email me)

#### Projects

- [Talon](#)

### Nicolas Blanco

PhD student (with Noam Zeilberger and Paul Levy)

University of Birmingham (currently living in Paris)

<https://nicolas-blanco.github.io/>, [@star\\_autonomy](#), [in/nicolas-blanco-birmingham](#), [n.blanco@pgr.bham.ac.uk](mailto:n.blanco@pgr.bham.ac.uk), Zulip

**Working on:**

- Models of (linear) logic and programming languages using CT and beyond
- Monoidal categories, \*-autonomous categories, LNL-adjunctions...
- Multicategories, polycategories, LNL-multicategories...
- Fibred versions of the above and related Grothendieck constructions
- Finite dimensional Banach spaces and contractive/non-expansive maps as a running example

**Interested in:**

- Mathematical structures coming from the quantum world (e.g. the relation between quantum causal structures and linear logic)
- Environmental challenges, inclusivity... (how can I help as a category theorist, a scientific and a person)
- Applications of CT and logic to other fields (philosophy, linguistics, cognitive science, biology...)

**Other relevant info:**

- In a previous life I was a *formal methods software engineer* and a *safety engineer* at [Clearsy](#)
- I graduated from the master in Mathematical Logic and Foundations of Computer Science [LMFI](#) at Paris Diderot University

**Offering:**

- Conversations, in English or French, about the topics above or any other subject (beware I can become quite chatty)
- A good beer, if you are in the Paris area or you plan on visiting (I am a sour and a stout lover myself but I could accommodate other tastes) (beware I am even more chatty after a couple of beers)
- Help/tutoring (in French or in English) in CT, logic, theoretical computer science, algebra...
- More generally if you feel my insight could be relevant to you then feel free to contact me

**Seeking:**

- New people to chat with
- Learning new topics
- Collaborations (especially in the areas mentioned above)
- (Hopefully) I will graduate early 2022 so I will soon be looking for a postdoc/job

**Meetings:**

- Feel free to drop me an email or a Zulip/LinkedIn/Twitter message anytime
- I will meet anyone on Zoom (or any video service) for any reason for 15 minutes (or more)

**Guillaume Boisseau**

PhD student (with Jeremy Gibbons and Pawel Sobocinski)

University of Oxford

[Twitter](#), Zulip

**Topics:**

- Various extensions to Graphical Linear Algebra
- Using GLA to do actual electrical circuit computations
- Worked on lenses and optics in the past
- Excited about PROP-based axiomatic theories in general

**Kris Brown**

PhD student (in applied computational science)

Berkeley, California, US

[ksb@stanford.edu](mailto:ksb@stanford.edu), or Zulip

<https://web.stanford.edu/~ksb/> (need to update)

**Interests**

Automated theorem proving and proof assistants  
Mathematical knowledge representation  
Pragmatism and analytic philosophy

**Seeking**

Collaboration, tutorials, conversation, full-time work

**Projects**

Catlab development  
- DPO rewriting of C-Sets and structured cospans  
- Finite limit sketches  
- Automorphisms of C-Sets  
- Graphical regular algebra + theorem proving

**Meetings**

Almost always available to chat.

**Joe Brucker**

NLP Research | Lexical Grounding Team at Harvard

[job6134@g.harvard.edu](mailto:job6134@g.harvard.edu) | [Twitter](#)

<https://scholar.harvard.edu/brucker>

- **Background**

- Market Making and Prop Algorithmic Trading in Currencies/Derivatives/Structured Products & U.S./Indian Equities/Derivatives
- Macro-economic sell-side research (Emerging Markets)
- Data Science
- Semantic Web, NLP

- **Interests**

- Semantics for Meaning, Logic, Ontology, Coreference, SRL, Entailment
- NLP + Category Theory Systems to extract and transfer Meaning from Semantics
- Accessibility for non-researchers

- **Seeking**
  - Research collaborators at the intersection of Category Theory and NLP
  - Community at the intersection of Category Theory and NLP
  - Doctoral programs
  - Part-time or full-time research positions

### Cole Comfort

PhD student

University of Oxford

<http://www.cs.ox.ac.uk/people/cole.comfort/>

#### Interested in:

- Categorical semantics for circuits
- Categorical quantum mechanics
- Completeness theorems for monoidal categories
- Restriction categories

### Alejandro Díaz-Caro

Inria / LORIA (France) & Universidad Nacional de Quilmes (Argentina)

<https://members.loria.fr/ADiazCaro/>

alejandro@diaz-caro.info

#### Working on:

- Quantum computing
- Type theory
- Categorical semantics
- Logic and proof theory

### James Fairbanks

University of Florida, CISE Dept.

<https://www.cise.ufl.edu/fairbanks-james/>

#### Interested in:

ACT software and algorithms  
Modeling and simulation, scientific computing,  
Programming Languages  
Applied combinatorics, graph algorithms,  
Data Science

#### Seeking:

Graduate Students, Post-doctoral fellows, Research Scientists, Software Developers (Julia)

### Brendan Fong

Topos Institute, USA

<http://brendanfong.com>

brendan@topos.institute

### Tobias Fritz

University of Innsbruck, Austria

<http://tobiasfritz.science/>

[tobias.fritz@uibk.ac.at](mailto:tobias.fritz@uibk.ac.at)

#### Current main projects

- Categorical probability  
More concretely: developing probability theory and statistics in terms of Markov categories
- Ordered algebraic structures and their applications
- Fundamental physics, mathematical structures in quantum field theory and relativity

#### Meetings

- I will meet anyone on jitsi or zoom for any reason for 15 minutes.
- Email me to schedule an appointment.
- Emails with questions or discussion are welcome too at any time.

### Jake Gillberg

Health informatics software developer

[jake.gillberg@protonmail.com](mailto:jake.gillberg@protonmail.com), Zulip

#### Interested in:

Concurrent computation / distributed systems  
Software verification

#### Seeking:

Bigraph study group  
Projects combining software verification and concurrent computation

### Jules Hedges

MSP group, University of Strathclyde, Glasgow

[julesh.com](http://julesh.com)

[jules.hedges@strath.ac.uk](mailto:jules.hedges@strath.ac.uk) / Zulip

**Interested in:** applying category theory to economics (especially microeconomics), control theory, general systems theory, machine learning, numerical analysis etc etc. (broadly “cybernetics”, hence CyberCat).

Side interests: formal theory & computer implementation of diagrams, proof theory, functional programming, natural language semantics

ACT community development (*especially* on the “applied” side)

#### Current projects:

Stress-testing the [open game engine](#) with various applied modelling projects, & coordinating its development

Understanding how lenses + related objects are a unifying categorical structure in many applied fields

Reinforcement learning & dynamic programming via open games

Organising the 2-categorical foundations of open games

For fun: trying to understand the algebras of the finite support probability monad

#### Seeking

Climate economist - to see if open games can do anything to make the world not worse

In general I’m happy to talk to anyone about anything (bonus points if it’s one of my interests), but I already have twice as many collaborators and projects as I have time to commit to...

#### Tom Hirschowitz

CNRS and Savoie Mont Blanc University, Chambéry, France

<https://www.lama.univ-savoie.fr/pagesmembres/hirschowitz/>

[tom.hirschowitz@univ-smb.fr](mailto:tom.hirschowitz@univ-smb.fr)

#### Current main project: Categorical programming language theory

More concretely: turning methods from programming language semantics into general theorems.

Main research directions:

- Initial semantics: expressive notions of signatures for specifying programming languages.
- Congruence of behavioural equivalences.
- Type safety.
- Compiler correctness (not even started!).

My previous academic investigations appear to have been eaten up by categorical programming language theory.

#### Meetings

Please don’t hesitate to contact me by Email or Zulip.

#### Tomáš Jakl

University of Cambridge

<https://tomas.jakl.one>

[tj330@cam.ac.uk](mailto:tj330@cam.ac.uk)

See my website for details.

#### Anna Knörr

ETH Zurich / Perimeter Institute

[an.kn@protonmail.ch](mailto:an.kn@protonmail.ch)

[content coming soon :P]

#### Jonathan Lorand

[www.lorand.earth/math](http://www.lorand.earth/math)

email: [jonathanlorand@pm.me](mailto:jonathanlorand@pm.me)

**Background:** PhD in mathematics

**Currently:** (as of mid 2022)

- postdoc at ETH Zurich, working on applied category theory for engineering
- mostly teaching and co-writing a textbook: <https://applied-compositional-thinking.engineering/>
- part-time doing a master’s in [transdisciplinary studies](#) at the Zurich University of the Arts

#### Owen Lynch

Universiteit Utrecht

[the\\_man\\_himself@owenlynch.org](mailto:the_man_himself@owenlynch.org) (or literally any @owenlynch.org email address...), Zulip

#### Interested in:

Open Systems

Categorical Probability/Statistics

Statistical Mechanics

Highly Restricted Models for Computation

Scientific Computing

Human Interface Design for Math

#### Current Projects:

Catlab.jl

Acsets (Attributed C-sets)

WireViz.jl (coming soon)

#### Talk to Me About:

Approximations in Category Theory

Any type of gluing

Violations of the second law of thermodynamics in open systems

#### Feel Free to Join:

I run a very casual, very slow reading group on Robert Ghrist’s Elementary Applied Topology at 1pm ET on Sundays. You can join via this Discord link: <https://discord.gg/vDDFtYB6>.

#### Tom Mainiero

Former Postdoc at New High Energy Theory Center, Rutgers

[tommainiero.com](http://tommainiero.com)

[mainiero@physics.utexas.edu](mailto:mainiero@physics.utexas.edu)

**Interested in:**

- Categorical probability
- Quantum/classical information theory and computing
- Categorical aspects of operator algebras
- Applications of quantum field/string theoretic perspectives to other fields

**Current Projects:**

- Categorification of mutual information + homotopical methods in information theory
- Understanding functorial relations between matrix product states, completely positive maps, operator algebras, and TFTs

**Want to learn more about:**

- homotopy type theory, the many functorial perspectives to physics, computer science, dynamical systems, ...

**Seeking**

- Collaborators, any job that I can continue using my passion for category theory in a productive manner!

**Joshua Meyers**

The following is out of date, see [meygerjos.com](http://meygerjos.com) for up-to-date information.

Indiana University Bloomington

Bloomington, IN, US and New York City, NY, US

[meygerjos@gmail.com](mailto:meygerjos@gmail.com), Zulip

**Offering**

- Precisifycation service (you can explain something technical to me and I'll help you make it precise and uncover the underlying mathematical structures at play)
- Math coaching (I will advise on best practices for self-studying math at the [pre-rigorous](#) and [rigorous](#) stages)
- Teaching category theory at the level of Riehl's "Category theory in context"
- Mediation of difficult conversations (Experience: two climate activism groups deciding whether or not to merge; discussion of military funding in ACT)
- Applied Category Theory Research
- Translation between technical and nontechnical writing ([example](#))

**Seeking**

- Collaboration towards building alternative academia
- Math coaching (best practices for self-studying math at the [post-rigorous](#) stage)
- Grad student grant in ACT
- Part-time employment doing ACT research
- Someone who can tell me about the Web3.0/TE/Ethereum world

**Current work**

- [ACT Directory](#) with [Christian Williams](#), Spencer Breiner, [Morgan Rogers](#), and others
- [Algebraic Property Graphs](#) at [Conexus](#) with [Ryan Wisnesky](#) and Joshua Shinavier
- Trying to build a movement that does academia better, with the following key differences from standard academia (right now just in the visioning/networking/learning/planning stage) -- please get in touch if you are interested in this!
  - Emphasis on creating (physical, social, financial, etc.) environments that promote focus
  - Emphasis on the practice of studying: e.g. how to read a book, how to solve a problem, how to write a proof, how to reverse-engineer a definition
  - OCAAT (one class at a time)
  - Storing/stewarding knowledge in social practices rather than primarily in written material
  - Prioritize subject-matter relevant to the meta-crisis
  - Fluid roles --- I might be your teacher in one subject and your student in another subject, I might be a researcher one month and an administrator another month

**Meetings**

- I will meet anyone on zoom for any reason for [30 minutes](#).
- If you want to meet for an hour or more, email me to schedule an appointment.

**Joe Moeller**

National Institute of Standards and Technology

Gaithersburg, Maryland, US

[moeller@math.ucr.edu](mailto:moeller@math.ucr.edu), Zulip

**Projects**

- Categorifying combinatorics and rep theory with John Baez and Todd Trimble
- Thermodynamics in networks
- Implementing categorical structures in Julia

**Chad Nester**

Tallinn University of Technology, Estonia

[Website](#), first.last at gmail, Zulip

**Hello There:**

I'm interested in a reasonably broad selection of things. There seems to be no unifying theme.

I'm open to conversation, and am actively seeking excuses for longer research visits.

If you'd like to talk about ideas I'm happy to listen, but can't guarantee sustained interest.

Recently I am excited about "biosemiotics". I want to model that sort of thing, or try.

**Valeria de Paiva**

Topos Institute, CA

<http://vcvpaiva.github.io/>

<https://logic-forall.blogspot.com/>

[valeria.depaiva@gmail.com](mailto:valeria.depaiva@gmail.com)



### Current main projects:

- Dialectica categories and applications (Petri nets ACT School 2020, Set Theory, <https://github.com/vcvpaiva/DialecticaCategories>)
- Constructive/Linear modal logics
- Automated reasoning in logic/AI (Networked Maths included)
- Natural Language Inference (symbolic and ML) Hy-NLI and SICK projects (<https://github.com/kkalouli/GKR4NLI>)
- Lexical Resources for languages (e.g. OWN-PT project <http://openwordnet-pt.org>)
- Women in Logic/STEM (<https://womeninlogic.blogspot.com/>)

My previous academic investigations never seem to go away, I am always accumulating new ones.

But working with others is fun, do get in touch, if you want to discuss stuff!

I'm trying to organize papers written about the projects above, but this is not going as well as I hoped.

### Meetings

Please don't hesitate to contact me by email (or Zulip/twitter/fb).

### Evan Patterson

Topos Institute

Berkeley, CA

Website: <https://www.epatters.org>

Contact: [evan@epatters.org](mailto:evan@epatters.org), Category Theory Zulip, Julia Zulip

### Robin Piedeleu

University College London, UK

<https://piedeleu.com/>

[r.piedeleu@ucl.ac.uk](mailto:r.piedeleu@ucl.ac.uk)

### Background

Mostly in theoretical computer science, with a broader focus on the study of dynamical systems arising in various scientific contexts (automata, Petri nets, circuits of various sorts, signal flow graphs). I primarily use algebraic and categorical tools, with an emphasis on monoidal categories and diagrammatic reasoning.

### Interests and current projects

- Completeness/axiomatisation/presentation of monoidal categories modeling systems of any kind.
- Semantics of circuits (in particular, asynchronous sequential circuits at the moment)
- Diagrammatic reasoning
- Compositional approaches to security/cryptography
- Compositional energy-cost model for computation.

More generally, I'm interested in applying the tools I have gathered and those of the ACT community to make the complex systems we rely on (computers, networks, supply chains, etc.) more *sustainable* and reliable.

### Meetings

Feel free to send me an email (or message me on Zulip) to discuss shared interests or for any other reason. I am also happy to meet on jitsi or zoom.

### Blake Pollard

CrossnoKaye Inc.

Santa Barbara, CA

[blake561@gmail.com](mailto:blake561@gmail.com)

Interested in rubber-meets-road (darn cars!) projects with some ACT sprinkled in.

### Background

Decorated cospan approach for open Markov processes and chemical reaction networks. Entropy production in open systems. Graphs with dangly ends and gluing them up. Database schemas as finitely presented categories and transformations among them, especially applied to domain-specific model management.

### Interests

Current startup builds control systems for industrial cold storage facilities. Looking to develop (or apply existing) ACT-native or ACT-inspired tools for generating and testing extended finite state machines for controlling real-world hardware. Also developing a domain-specific-language or ontology for industrial refrigeration and other energy-intensive industrial processes. Possible paid internships for phd students or consulting positions for graduated folk out in the wild.

### Tim Porter

ex-Professor in the Maths Department of the University of Bangor, North Wales, UK. (Officially Emeritus Professor.)

### Contact at

[t.porter.maths@gmail.com](mailto:t.porter.maths@gmail.com), or via Linkedin and here at Zulip.

### Interests:

A fuller introduction to my interests and past work can be found at

<https://ncatlab.org/timporter/show/HomePage>

- That also contains links to some notes (The Menagerie) although the version there is slightly old.

I have (recently) worked on or am currently working on

- Categorical and simplicial methods in Homotopy Theory.
- Strict infinity categories and their homotopy theory.
- Topological and Homotopy Quantum Field Theories
- Applications of category theory (I have worked with directed homotopy and its applications to concurrency; I used to teach Operational Research and used Petri nets as a project option, including links with categorical logic, so have some thoughts on the categorical side of these topics)
- Multi-agent systems and modal logic.

### Eigil Rischel

Graduate student in the Mathematically Structured Programming group in the Computer and Information Sciences department at the University of Strathclyde.

Mail: [ayegill@gmail.com](mailto:ayegill@gmail.com)

Website: <https://erischel.com>

Twitter: <https://twitter.com/ayegill>

#### Working on:

- Categorical cybernetics
- Categorical probability and statistics
- Quantitative logic

#### Other interests

- Higher category theory/homotopy theory
- Computational category theory (i.e running CT on a computer)
- Categorical logic
- The connection between complexity theory and probability

#### Meetings

- I will meet anyone for any reason for 15 minutes on Zoom/Jitsi/other platform of your choice. Email to set this up.
- I can also be reached on Twitter or on the CT Zulip

### Morgan Rogers

Università degli Studi dell'Insubria

[mrogers@uninsubria.it](mailto:mrogers@uninsubria.it)

#### Working on:

Topological Semi-Galois Theory  
 Topos theory  
 Monoid and semigroup actions

#### Side interests:

Ethics of AI

#### Meeting:

Message me on Zulip any time if you want to ask me anything or organise an online meeting!

### Sayantana Roy

PhD student

Indraprastha Institute of Information Technology, Delhi, India

[sayantanr@iiitd.ac.in](mailto:sayantana@iiitd.ac.in)

#### Interested in (academic):

Universal logic  
 Abstract algebraic logic (currently trying to learn, see below)  
 Set Theory  
 Category theory (self-studying, currently stopped, planning to resume from August)  
 Type theory  
 Philosophy of logic

#### Interested in (non-academic):

Translating pieces about Grothendieck from French to English.

#### Meeting:

Feel free to reach out to me anytime.

Mailing is probably the best option. Else I am a frequent lurker of the [category zulip](#) as well as [mathematical logic zulip](#) (for the latter if you want to join, email me for an invite link).

#### Reading Group:

I would like to be part of some reading group (preferably from August) which is planning to study the following books (in decreasing order of importance, although the first two are commutable), from scratch (i.e., assuming no previous background):

*Abstract Algebraic Logic: An Introductory Textbook* by Josep Maria Font

*Topoi: The Categorical Analysis of Logic* by Robert Goldblatt

*Type Theory and Formal Proof: An Introduction* by Herman Geuvers and Rob Nederpelt

### Ralph Sarkis

ENS de Lyon, Lyon, France

Zulip

#### Potential Reading Groups:

I really love to study in reading groups and there are so many books and papers that I would like to read on the side. If you are interested in reading one of the following texts (no particular order), let me know.

- *Theories, Sites, Topos*. Olivia Caramello.
- *Topology: A Categorical Approach*. Tai-Danae Bradley, Tyler Bryson, and John Terilla
- *Monoidal Topology: A Categorical Approach to Order, Metric and Topology*. Dirk Hofmann, Gavin J. Seal, and Walter Tholen.
- *Coend Calculus*. Fosco Loregian.
- *Higher-Dimensional Categories: an illustrated guidebook*. Eugenia Cheng and Aaron Lauda.
- *Theoretical Computer Science for the Working Category Theorist*. Noson S. Yanofsky.
- *Algebraic Theories: A Categorical Introduction to General Algebra*. J. Adámek, J. Rosický, E. M. Vitale.
- *Toposes, Triples and Theories*. Michael Barr and Charles Wells.
- *String Diagram Rewrite Theory I: Rewriting with Frobenius Structure*. Filippo Bonchi, Fabio Gadducci, Aleks Kissinger, Pawel Sobocinski, Fabio Zanasi.
- String Diagram Rewrite Theory II and III (when they are out).
- *An Introduction to Effectus Theory*. Kenta Cho, Bart Jacobs, Bas Westerbaan, Abraham Westerbaan.
- *Categorical Logic and Type Theory*. Bart Jacobs.
- *Introduction to Coalgebra*. Bart Jacobs.
- *Temporal Type Theory: A topos-theoretic approach to systems and behavior*. Patrick Schultz, David I. Spivak.
- *2-Dimensional Categories*. Niles Johnson and David Yau.

#### David Spivak

Topos Institute

[david@topos.institute](mailto:david@topos.institute)

<http://www.dspivak.net/>

#### Interests

- Applications of category theory to making things work better / make more sense
- Information, communication, interoperability
- Interacting databases
- Interacting dynamical systems
- What is it for one machine to appropriate (eat, or hire, or own/use) other machines?
- Relationship between brain and mind
- Graphical reasoning
- Teaching kids from categorical perspective (“conceptual math for kids”)
- Natural ethics (let’s not make up the rules, let’s find them)
- Compositional economics

#### Seeking

- Math/philosophy conversation partners in person, e.g. at workshops/conferences

#### Meetings

- Reach out any time.

#### Michael Stay

Pyroflex Corporation

[stay@pyroflex.net](mailto:stay@pyroflex.net)

<https://pyroflex.io>, Zulip, Twitter (@metaweta)

<https://reperiendi.wordpress.com>

#### Interests tangent to CT

- type theory
- functional programming
- quantum computation
- machine learning
- cryptography
- cryptocurrency
- object capability security
- algorithmic information theory
- philosophy

#### Working on

- cryptocurrency platform
- native type theory
- generalizing cuts from beta to more general rewrites

#### Meetings

- Feel free to contact me

#### William Waites

Research Fellow, Centre for Mathematical Modelling of Infectious Diseases, London School of Hygiene and Tropical Medicine

[wwaites@ieee.org](mailto:wwaites@ieee.org), Zulip, Granton Harbour

<https://www.tardis.ed.ac.uk/~wwaites/> (terribly out of date)

#### Working on

- Models of biological and social systems
- Multi-scale, heterogeneous models
- Rule-based graph rewriting
- Petri nets

#### Meetings

- Any time

#### Christian Williams

UC Riverside, California, US



[cwill041@ucr.edu](mailto:cwill041@ucr.edu), Zulip, Twitter  
<https://cbw124.github.io> (need to update)

### Interests

Categorical Logic and Type Theory  
Algebraic Theories, Monads and Modules  
Operational Semantics and Coalgebra  
Bicategories and Equipmentssoftware

### Seeking

Collaboration

- Applied category theory of any kind.
- Develop category theory curricula and resources.
- Develop frameworks in which to design rational social systems.

### Tutorials

- High-productivity workflow, to help lead ACT.
- Haskell, Agda: from experienced, can offer compensation.
- Blockchain and distributed computing.

### Conversation

- Life. I want to know this community.
- Promising applications of category theory.
- How to face the ecological crisis.
- Hegel's Science of Logic.

### Offering

#### Teaching

- Basics of category theory. Can talk on zulip, possibly call.
- Writing: clear, concise, sincere.
- Organization, life balance.

Brainstorming - In general.

Hospitality - Feel free to visit sunny California.

### Projects

[Native Type Theory](#) with [Mike Stay](#)

ACT Infrastructure with [Joshua Meyers](#)

Bialgebra with Stelios Tsampas

Formal CT with Nathanael Arkor

### Meetings

Feel free to reach out any time.

I plan to host regular hangouts, open to all. (using [gather.town](#))

Interested in study groups as well.

### Ryan Wisnesky

<http://wisnesky.net>

Interests: computational category theory, data integration, data migration, type theory, logic, business

Seeking: Collaboration, esp. Re: industry

Offering: bespoke software development and consulting