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## CURRICULUM VITAE

### Chaitanya Leena Subramaniam

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### Interests

( $\infty$ -)category theory, ( $\infty$ -)topoi, homotopy type theory (HoTT), categorical logic, algebraic topology/homotopy theory, (higher) algebra.

### Current status

**2021?** – : **University of San Diego**. — At some point, I will begin a postdoc at the Department of Mathematics, working with Michael Shulman.

### Past employment

**2020 – 21** : **Université de Paris (Paris Diderot)**. — Teaching assistant (ATER) at the department of Computer Science.

**2017 – 21** : **Université de Paris (Paris Diderot)**. — Ph.D. student (doctorant contractuel) at the Institut de Recherche en Informatique Fondamentale (IRIF).

**Thesis:** *From dependent type theory to higher algebraic structures.*

Advisor: Paul-André Melliès, IRIF.

## Education

**2016 – 17 : Université Paris Diderot/École Polytechnique.** — Second year (M2) of the Master Parisien de Recherche en Informatique (MPRI) masters programme.

**Masters thesis:** *Towards a cubical dependent type theory à la Martin-Löf*  
Advisor: Gilles Dowek, École Normale Supérieure de Cachan.

**2013 – 17 : École Polytechnique.** — Diplôme d'ingénieur of École Polytechnique. Specialisation : Mathematics and Computer Science.

**Third-year thesis:** *A model of type theory in the category of span diagrams of a model of type theory (formalised in Coq)*  
Advisors: Peter LeFanu Lumsdaine and Erik Palmgren, Stockholm University.

**2010 – 13 : St. Xavier's College, Mumbai University.** — Bachelor of Science (Physics).

## Research

**Preprints.** —

1. Small object arguments, plus-construction, and left-exact localizations (with Mathieu Anel, Carnegie Mellon University). arXiv:2004.00731
2. Opetopic algebras III: presheaf models of homotopy-coherent opetopic algebras (with Cédric Ho Thanh, NII Tokyo). arXiv:2001.07924
3. Opetopic algebras I: algebraic structures on opetopic sets (with Cédric Ho Thanh, NII Tokyo). arXiv:1911.00907

**In preparation.** —

1. Opetopic algebras II: homotopy-coherent opetopic algebras (with Cédric Ho Thanh, NII Tokyo).
2. Contextual categories as monoids in a category of collections (with Peter LeFanu Lumsdaine, Stockholm University).

**PhD thesis.** —

- “From dependent type theory to higher algebraic structures”, defended on 28 September 2021. arXiv:2110.02804

**Conference talks.** —

1. International Conference on Homotopy Type Theory, Carnegie Mellon University, 2019.
2. Memorial Conference for Erik Palmgren, online, 2020.
3. Species and operads in combinatorics and semantics, online, 2020

**Teaching**

293 hours of courses taught between 2018-2021 at the Dept. of Computer Science, Université Paris Diderot. Courses taught: introductory programming, object oriented programming and graphical interfaces, logic, advanced logic.

**Languages**

**Fluent.** — English, Hindi, French.

**Basic.** — Malayalam.

**Programming.** — Java, Python, Coq, OCaml.

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C. LEENA SUBRAMANIAM, IRIF, Université de Paris (Paris Diderot).