# Fernando Granha Jeronimo (webpage)

Information Computer Science Department

University of Chicago granha@uchicago.edu https://granha.github.io/

Feb.2006-Jul.2012

Nationality: Brazilian

EDUCATION University of Chicago - UChicago, Chicago, IL, USA

Ph.D. in Theoretical Computer Science. Sept.2015–Jul.2020 (expected)

Advisor: Prof. Madhur Tulsiani

University of Campinas - Unicamp, Campinas, SP, Brazil

M.Sc. in Theoretical Computer Science. Mar.2013-Jun.2015

Title: Quantum computing: automata, games, and complexity

Advisor: Arnaldo V. Moura.

Fellowship: FAPESP and CAPES

GPA: 4.0

Telecom ParisTech - ENST, Paris, France

Double Degree Program (french masters in engineering). Sept.2009-Jul.2011

Fellowship: CAPES Brafitec

University of Campinas - Unicamp, Campinas, SP, Brazil

B.Sc. Computer Engineering.  $1^{\rm St}$  ranked computer engineer at graduation among

about 100 students (von Neumann prize)

Publications and in Press

"Unique Decoding of Explicit  $\epsilon$ -balanced Codes Near the Gilbert-Varshamov Bound", with Dylan Quintana, Shashank Srivastava and Madhur Tulsiani to appear in Proceedings of the 61st IEEE Symposium on Foundations of Computer Science (FOCS) 2020, [full-version]

"Sum-of-Squares Lower Bounds for Sherrington-Kirkpatrick via Planted Affine Planes", with Mrinalkanti Ghosh, Chris Jones, Aaron Potechin and Goutham Rajendran to appear in Proceedings of the 61st IEEE Symposium on Foundations of Computer Science (FOCS) 2020, [full-version]

"List Decoding of Direct Sum Codes",

with Vedat Levi Alev, Dylan Quintana and Shashank Srivastava and Madhur Tulsiani Proceedings of the 31st ACM-SIAM Symposium on Discrete Algorithms (SODA) 2020 pp 1412–1425,

[proceedings] [full-version]

"Approximating Constraint Satisfaction Problems on High-Dimensional Expanders", with Vedat Levi Alev and Madhur Tulsiani

Proceedings of the 60th IEEE Symposium on Foundations of Computer Science (FOCS) 2019 pp 180-201,

[proceedings] [full-version]

### AWARDS AND HONORS

- UChicago Unrestricted (UU) fellowship Fall 2019
- Computer Science TA Prize UChicago 2017, 2018
- von Neumann Prize 2012 IC/Unicamp: 1st ranked computer engineer at graduation
- Brazilian Computing Society (SBC): outstanding student award
- CREA-SP: outstanding undergraduate student in computer and electrical engineering
- Engineering Institute: outstanding undergraduate student in computer engineering
- Institute of Computing Unicamp: distinction award
- IBM Team Work Award

## VISITING POSITIONS

## California Institute of Technology - Caltech, Pasadena, CA, USA

Visiting Student Researcher.

Jun.2014-Nov.2014

Title: Quantum computational complexity and entanglement.

Advisor: Thomas Vidick.
Fellowship: BEPE FAPESP.

#### LANGUAGES

- English: fluent
- French: fluent (DALF, Diplôme approfondi de langue française C1)
- Spanish: basic
- Portuguese: native speaker

## TEACHING ASSISTANT

- Algorithms (MPCS55001) UChicago: Fall 2016, Fall 2017, Spring 2018, Fall 2018, Fall 2020
- Algorithms (CMSC27200) UChicago: Winter 2016, Spring 2016, Winter 2019
- Discrete Mathematics (MPCS50103) **UChicago**: Winter 2017, Winter 2018, Winter 2020
- Discrete Mathematics and Data Analysis (CAPP30271) UChicago: Spring 2017
- Discrete Mathematics (CMSC27100) UChicago: Fall 2015
- Introduction to Algorithms (MC102) Unicamp: Aug.2007-Dec.2007

## SERVICE

- Helped organizing theory reading groups at UChicago on high-dimensional expanders and coding theory.
- Reviewer/Subreviewer: FOCS, STOC, ITCS and SICOMP.

## Professional Experience

## IBM Linux Technology Center, Hortolândia, Brazil

Software Engineer

Jan.2012-Feb.2013

• Virtualization and Cloud Management