## Jonathan Prieto-Cubides

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**Date of Birth:** 1991-04-18

Gender: Male

Citizenship: Colombia

Current Profession: Ph.D. Research Fellow

Fosswinckels GATE13, 5007, Bergen, Norway

Ph.D Research Fellow in the Department of Informatics at University of Bergen in Norway. Currently studying mathematics for computer science, i.e., foundations and algorithms.

## **Research Experience**

2018-present **Research Fellow** 

University of Bergen. ICT Research Group. PUT.. Bergen, Norway

• Type Theory, Functional Programming

2016-2017

### **Young Research Assistant**

EAFIT University. Logic and Computation Research Group. Medellín, Colombia

• Logic, Type Theory, Agda, Functional Programming

2013-2015

2011-2014

#### **Young Researcher**

Observatorio de Restitución y Regulación de Derechos de la Propiedad Agraria. Bogotá, Colombia

• Text Data Mining, Machine Learning, Algorithms, Functional Programming

# Teaching Experience

2016-II **Engineering** 

Instituto Tecnológico Metropolitano. Medellín, Colombia

• Linear Algebra

• Linear Programming and Algebra

### **Young Lecturer**

Universidad Sergio Arboleda. Bogotá, Colombia

• Algorithms I and II 2011-2012, 2014

• Discrete Mathematics jointly Competitive Programming 2014-2015

### **Education**

### 2018-present

(4 years)

## Ph.D. in Computer Science

University of Bergen. Bergen, Norway

Emphasis in Type Theory and Functional Programming

Thesis Title. -not available yet-

Advisory. Marc Bezem

#### 2016-2017

(2 years)

### **Master in Applied Mathematics**

EAFIT University. Medellín, Colombia.

Emphasis in Logic, Type Theory, and Functional Programming.

Thesis Title. Proof Reconstruction for Metis in Agda

Advisory. Andrés Sicard-Ramírez

### 2007-2013

#### **Bachelor in Mathematics**

Sergio Arboleda University. Bogotá, Colombia.

**Emphasis in Computer Science** 

Thesis Title. An Introduction to Elliptic Curves

Advisory. PhD. Hermes Jackson

#### \_\_\_\_\_

(5 years)

## **Publications**

• Prieto-Cubides J., Argoty Camilo. *Dealing with Missing Data using a Selection Algorithm on Rough Sets.* 2017. International Journal of Computational Intelligence Systems. (Submitted)

# **Open-Source Projects**

Athena Haskell, Agda

http://github.com/jonaprieto/athena

Athena is a Haskell program that translates proofs given by Metis Prover in TSTP format to Agda code. This work was present in the Agda Implementors' Meeting XXV at Chalmers University.

Agda-Prop Agda

http://github.com/jonaprieto/agda-prop

Agda library to work with Classical Propositional Logic using a deep embedding. Natural deductions Proofs for around seventy theorems.

Agda

**Agda-Metis** 

http://github.com/jonaprieto/agda-metis

This library aims to provide the necessary functions and theorems for Athena to reconstruct proofs found by the automatic theorem prover, Metis.

Haskell

#### **OnlineATPs**

http://github.com/jonaprieto/online-atps

OnlineATPs is a command-line client for TPTP World. We can use an online ATP as it would be running locally. Indeed, SystemOnTPTP has available more than forty automatic theorem provers and we take avantage of all.

Latex

#### Curriculum-Vitae

http://github.com/jonaprieto/curriculum-vitae

This document was generated using this project. It makes easier maintain your Resume using LaTeX and Pandoc.

Python

## PonyWhoosh

http://github.com/jonaprieto/ponywhoosh

Integration between the Whoosh search engine and PonyORM, this library makes your database full-text searchable

Python

## Flask-PonyWhoosh

http://github.com/jonaprieto/flask-ponywhoosh

A web search engine for flask using PonyORM and Whoosh.

## **Private Projects**

Mathematica

#### **Poirot**

Sergio Arboleda University, IEPRI, COLCIENCIAS

Poirot is a text search, a package, and analysis platform programmed in Mathematica®, designed for retrieval, analysis and systematization of large textual data (in the order of tens of thousands of files). Poirot is tailored for the needs of qualitative researchers, journalists, and state officials (in the judiciary, for example), that need to find specific textual bits in big masses of unstructured text.

## Languages

- English B2
- · Spanish Native speaker

#### **Achievements**

- Scholarship. Agda Implementors' Meeting XXV at Chalmers University. Gotenburg, Sweden.
- · Scholarship to study the master program in applied mathematics at EAFIT University
- Financial support to study mathematics at Sergio Arboleda University
- Member of the the program for talent young of high school. Sergio Arboleda University
- ACM-ICPC 2013 Regional Programing Contest. 9th Place, WTF Team
- ACM-ICPC 2013 National Programing Contest. 11th Place. WTF Team
- Honor mention. Colombian Math Contest 2010
- · Scholarship. Symposium ANTS X. San Diego, California. EEUU
- Early promotion at high school. 5th grade to 6th grade
- Early promotion at high school. 7th grade to 8th grade
- Honors Academic Excellence, 10 and 11 degree in the school
- · National high school qualification exam ICFES. 4th place/group
- McDonald's drawing contest for schools. 1th Place 1997

# References

- Phd. Andrés Sicard-Ramírez. asr@eafit.edu.co. Computer Science. EAFIT University
- Phd(c). Paola Lizarralde-Bejarano. dlizarra@eafit.edu.co. Mathematics. EAFIT University
- Phd. Camilo Argoty. argoty7@gmail.com. Mathematics. Sergio Arboleda University
- Phd. Esteban Hernández. Computer Science. eshernan@gmail.com Universidad Distrital de Bogotá.