

Miguel Angel Piña Avelino

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Research Interests

I'm interested in theoretical and applied computer science. My doctorate studies are focusing on concurrent computing and data structures, in particular, I want to understand if using relaxed semantics in concurrent data structures and using weakest operations, we can provide solutions with good performance; or if this is not possible, say why it is not possible.

I have an affinity for software engineering, cryptography, programming languages, and distributed computing. I like problems where I can propose a theoretical solution followed by an applied solution.

Education

2020-actual PhD in Computer Science and Engineering - IIMAS, UNAM

Advisor: Dr. Armando Castañeda Rojano (Institute of Mathematics).

Topics: *Concurrent computing, distributed computing*

2017-2019 Master of Computer Science and Engineering, with honours - IIMAS, UNAM

Advisor: Dr. Armando Castañeda Rojano (Institute of Mathematics).

Topics: *Criptography, Blockchains, Distributed computing, Programming languages*

2008-2012 Bachelor of Computer Science - Faculty of Sciences, UNAM

Advisor: Dr. Humberto Carrillo Calvet (Faculty of Science).

Topics: *Neural networks, Software Engineering, Computer graphics*

Research

2021 Article: *Fully Read/Write Fence-Free Work-Stealing with Multiplicity.*

Authors: *Castañeda, Armando & Piña, Miguel.*

Professional experience

Nov. 2019 - Educacion Práctica Para la Vida A.C

Nov. 2021 *Independent Software Developer - Software Front-End*

Development of user interfaces with javascript.

Tech Stack Javascript, React.js, Node.js, Express.js, Sequelize. Ramdajs

Nov. 2013 - Faculty of Sciences, Coordination of Computer Services

Jul. 2017 *Full-time associated academic technician*

Development of many administrative services for the web.fciencias.unam.mx. Maintenance and updating of registration services, course assignment, course planning, student grants, etc. Database design for different administrative services.

Tech Stack Java SE/EE, Clojure, PostgreSQL, MySQL, Tomcat, Jetty, Tapestry Framework, GIT.

2012 - TMS
2013 *Software Developer*
Databases design and application development
Tech Stack: Java SE/EE, C#, MySQL.

Teaching

Faculty of Sciences, UNAM
Assistant profesor

Courses:

- Logic and Functional Programming
- Distributed computing

Faculty of Sciences, UNAM
Teaching assistant

Courses:

- Introduction to Computer Science
- Data-Structures
- Distributed computing
- Neural networks
- Software Engineering
- Numerical Analysis

Computing skills

■ Programming languages

Java, Clojure, Javascript, Python, C++, Haskell, Emacs-Lisp

■ Web development

HTML5, CSS3, JavaScript/ClojureScript, React.js, JSE, Spring, Tapestry, JUnit, Clojure.test.check, Haskell QuickCheck, Apache/Tomcat, Jetty, Glassfish Web Servers

■ Miscellaneous

PostgreSQL, MySQL Server, git, subversion, Bash