Andrew **Rodriguez**

Computer Science Researcher

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Education

University of Texas Rio Grande Valley *Edinburg, Texas*

M.S. in Computer Science *August 2021 - May 2023*

GPA 3.33

University of Texas at Austin *Austin, Texas*

B.S. in Computer Science *August 2017 - May 2021*

GPA 3.22

Publications

Building Squares with Optimal State Complexity in Restricted Active Self-Assembly *SAND '22*

Robert M. Alaniz, David Caballero, Sonya C. Cirlos, Timothy Gomez, Elise Grizzell, Andrew Rodriguez, et al.

- Received the best student paper award.

Reachability in Population Protocols is PSPACE-Complete (Short Abstract) *JCDCG3 '22*

Bin Fu, Timothy Gomez, Elise Grizzell, Andrew Rodriguez, Robert Schweller, Tim Wylie

Reachability in Pikmin Cave Sublevels is PSPACE-Complete (Short Abstract) *JCDCG3 '22*

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Experience

Algorithmic Self-Assembly Research Group (ASARG) *Edinburg, Texas*

Research Assistant *September 2021*

- Conducting research in algorithmic self-assembly; the process in which a disordered system of pre-existing components forms an organized structure or pattern.

UTRGV — Department of Computer Science *Edinburg, Texas*

Teaching Assistant *August 2021*

- Administering help hours to assist students with their assignments.

Projects

AutoTile

Tile Automata Simulator

Software created to assist in self-assembly research, written in Python.

Pascal Compiler

Written Using C, Lex, and Yacc

A Pascal Compiler that implements most of the language features. Includes the lexical analyzer, parser, and code generator.

PintOS

Operating System Written in C

Expanded on a toy OS to include priority scheduling, argument passing on the stack, system calls for user programs, virtual memory, and a multi-level indexed file system.

JOS-On-JOS Para-Virtual Hypervisor

Hypervisor Written in C

Designed a hypervisor that ran JOS as a guest on top of a JOS host. Implemented Guest OS bootstrapping, extended page tables, and hyper calls.