

John SARRACINO

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SUMMARY

I'm a computer science PhD student at UC San Diego, co-advised by Nadia Polikarpova and Sorin Lerner, studying PL (with a bit of HCI) in the Programming Systems group. I'm currently working on addressing program composibility through targeted program synthesis. My research interests are in language techniques to enable correct and compositional software, namely *program synthesis*, *program verification*, and *domain-specific languages*.

EDUCATION

- 2020 (expected) Ph.D, Computer Science, **UCSD**.
2018 M.S, C.Phil, Computer Science, **UCSD**.
Thesis: Targeted Program Synthesis for Programming with Invariants.
Advisors: Sorin Lerner and Nadia Polikarpova.
2014 B.S, Mathematics and Computer Science, **Harvey Mudd College**.
Thesis: Concurrent, Moving Garbage Collection using Transactional Memory.
Advisor: Ben Wiedermann.

PUBLICATIONS

Conference

Sarracino, J., Barrios-Arciga, O., Zhu, J., Marcus, N., Lerner, S. and Wiedermann, B. *User-Guided Synthesis of Interactive Diagrams*. CHI Conference on Human Factors in Computing Systems, May 2017 (**CHI '17**).

Leung, A., **Sarracino, J.** and Lerner, S. *Interactive parser synthesis by example*. 36th ACM SIGPLAN Conference on Programming Language Design and Implementation, June 2015 (**PLDI '15**).

Kashyap, V., Dewey, K., Kuefner, E.A., Wagner, J., Gibbons, K., **Sarracino, J.**, Wiedermann, B. and Hardekopf, B. *JSAl: A static analysis platform for javascript*. 22nd ACM SIGSOFT International Symposium on Foundations of Software Engineering, November 2014 (**FSE '14**).

Workshop

Anderson, T.A.[†], O'Neill, M.[†] and **Sarracino, J.**[†]. *Chihuahua: A concurrent, moving, garbage collector using transactional memory*. 10th ACM SIGPLAN Workshop on Transactional Computing, June 2015 (**TRANSACT '15**).

Kashyap, V., **Sarracino, J.**, Wagner, J., Wiedermann, B. and Hardekopf, B. *Type refinement for static analysis of JavaScript*. 9th Symposium on Dynamic Languages, October 2013 (**DLS '13**).

In Submission

Sarracino, J., Barke, S., Polikarpova, N., and Lerner, S. *Targeted Program Synthesis for Programming with Invariants*.

[†]All authors contributed equally to this work

RESEARCH PROJECTS

- JULY '17-PRESENT Main author: **Spyder**
Targeting invariant specifications to invariant-agnostic code.
Talks: [UCSD thesis proposal](#).
- JULY '15-JULY '17 Main author: **Eddie**
Synthesizing interactive physical diagrams.
Talks: SoCalPLs '16, [CHI '17](#).
- AUGUST '14-JULY '15 Contributor: **Parsify**
Interactively synthesizing GLL parsers from examples.
Talks: SoCalPLs '15.
- AUGUST '13-MARCH '15 Co-author: **Chihuahua**
Garbage collection using Intel Transactional Memory.
Talks: TRANSACT '15.
- AUGUST '12-AUGUST '13 Contributor: **JSAI**
Abstract interpretation of JavaScript.
Talks: DLS '13.

PROGRAMMING LANGUAGES

Advanced Knowledge: JavaScript, TypeScript, Haskell, Scala
Intermediate Knowledge: Python, OCaml, Java, C/C++, \LaTeX , HTML5/CSS
Basic Knowledge: Bash, Go, SQL

TEACHING ASSISTANTSHIPS

Fall 2018	UCSD CSE 130-230	Undergraduate and Graduate Programming Languages
Fall 2017	UCSD CSE 130-230	Undergraduate and Graduate Programming Languages
Fall 2016	UCSD CSE 130	Undergraduate Programming Languages
Winter 2016	UCSD CSE 130	Undergraduate Programming Languages

PROFESSIONAL SERVICE

Artifact Evaluation Committee member: PLDI '18, OOPSLA '18
Student Research Competition Committee member: SPLASH '18

AWARDS

CRA Outstanding Undergraduate Researchers Award Honorable Mention, 2014