



Broccoli, LLC

Capability Statement

Broccoli is developing a novel reconfigurable array architecture for signal processing. We specialize in the design of custom timed and non-deterministic control structures to optimize compute architecture using irregular workload characteristics.

Core Competencies

- Self Timed Circuit Design
- VLSI Design
- Reconfigurable Array Architectures
- Signal Processing
- Pre and Post Silicon Validation
- Chip Tapeout
- Logic Synthesis
- Compiler Design

Differentiators

- Self-Timed Circuits Expertise
- Non-Deterministic Control Expertise

Company Information

Broccoli, LLC est. Indiana 2021

Web: <https://www.broccolimicro.io>

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DUNS: 118489606

CAGE: 9B2J7

UEI: XYJSR51DYM49

NAICS: 334413, 541512, 541715

PSC: AC33, AJ13

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Past Performance

- Open Source Automated Cell Layout Engine [github.com/broccolimicro/floret]
- Open lecture series on Self-Timed Circuits [broccolimicro.io/courses.py]
- Self-Timed Length Adaptive Arithmetic
Supported by CCF-1065307, CCF-1617945, N00014-13-1-0419, FA8750-15-1-0173
- A Systematic Approach for Arbitration Expressions [doi.org/10.1109/TCSI.2020.3011552]
- Self-Timed Adaptive Digit-Serial Addition [doi.org/10.1109/TVLSI.2019.2918441]
- QDI Constant Time Counters [doi.org/10.1109/TVLSI.2018.2867289]
- Open source tools for Synthesis of Self-Timed Circuits [github.com/nbingham1/haystack]
- Contributions to open source tools for Self-Timed Circuit Design [github.com/asyncvlsi/act]