

○ Concept

● Prior foundational work

● Work in this dissertation

Implicit Computational Complexity

“A Flow Calculus of mwp-Bounds
for Complexity Analysis”
Jones & Kristiansen (2009)

“Loop Quasi-Invariant Chunk Detection”
Moyen, Rubiano & Seiller (2017)

✎ “mwp-Analysis Improvement
and Implementation: Realizing
Implicit Computational Complexity”
Aubert, Rubiano, Rusch & Seiller (2022)

🏗 “Distributing and Parallelizing
Non-canonical Loops”
Aubert, Rubiano, Rusch & Seiller (2023)

✎ “pymwp: A Static Analyzer
Determining Polynomial Growth Bounds”
Aubert, Rubiano, Rusch & Seiller (2023)

🛡 “An Information Flow
Logic for Non-Interference”
*Aubert & Rusch (2025)**

✓ “Polynomial Postconditions
via mwp-Bounds”
*Rusch (2025)**

✓ “Certifying Complexity Analysis”
Aubert, Rubiano, Rusch & Seiller (2023)
Rusch (2023 – ?)

Related Topics

- ✎ Static Program Analysis
- 🏗 Program Optimization
- ✓ Verification/Formal Methods
- 🛡 Security