

○ 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