

○ 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)*



“A Logic for Anytime 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