The problem

- **Processors are gaining more cores, but sequential programs cannot take advantage of this.**
- **Writing parallelised programs is more difficult than sequential programs**
- **Would like a way to convert sequential code into parallelised code**

What am I doing?

- Writing a compiler plugin for rust
- Access the abstract syntax tree of a rust program
- Looking for areas which can be parallelised safely
- Modify the abstract syntax tree to run suitable areas in parallel

What am I NOT doing?

- **Generating the most efficient optimisations**
  - Instead focusing more on safe parallelisms
- **Parallelising a functional language**
- **Cancelling Threads**

Work so far

- **Written some example rust programs**
  - Password Cracker
  - Naive Fibinacci
- **Manually parallelised these programs**
- **Started the rust plugin**
  - Communication between stages
  - Trying to understand the AST structure
- **Written the scientific paper**

What I still need to do

- Continue examining rust compiler
- Decide how to analyse for parallelisms
- Write the automated analysis and modification stages
- Decide what performance metric to use and implement
- Find more example programs to test