Long-term Goal: Ability to design and analyze algorithms

1. **Algorithms** (1st year)
   Dr Christian Konrad

2. **Data Structures and Algorithms** (2nd year)
   Dr John Lapinskas

3. **Advanced Algorithms** (3rd year, optional)
   Dr Raphael Clifford

4. **Advanced Topics in Theoretical CS** (4th year, optional)
   Dr Christian Konrad and Dr Raphael Clifford

Projects:
- Final projects, Bsc/MEng theses
- Summer internships (after the second year)
- PhD theses
Take-away from this Unit

Skills:
- $O$, $\Omega$, $\Theta$-notation and proofs
- Loop invariants
- Divide and Conquer
- Solving recurrences
- Dynamic programming

Key Knowledge:
- Insertionsort, Mergesort, Heapsort, Quicksort
- Sorting lower bound
- Binary search
- Fibonacci numbers
Midterm Feedback

Overall Evaluation:
- 74 feedback submissions
- Average: 3.74

Discussion Points:
- Too fast, too slow
- Exercise sheets too hard, not enough hard exercises on sheets
- Slides unclear, excellent slides
- Stop recapping induction at length!
- Release solutions to worksheets quicker
- Small exercise class groups
Please do not hesitate to apply for TAing for the next edition of the Algorithms unit!
I was pleased with…:
- Exercise classes, discussions
- Drop-in sessions
- Discussion board
- Midterm results

Outlook:
- No exam
- No more lectures
- Solutions to exercise sheet 7 next week

All the best for the future!