

Mathematical Models – Analysis of Algorithms

((online short course - 10 hrs))

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Topics:

- *Find*
 - Dynamic Connectivity
 - Quick Find
 - Quick Union
 - Quick-Union Improvements
 - Union–Find Applications

- *Analysis*
 - Observations
 - Mathematical Models
 - Order-of-Growth Classifications
 - Theory of Algorithms
 - Memory

- *Stacks and Queues*
 - Stacks
 - Resizing Arrays
 - Queues
 - Generics
 - Iterators

- *Sorting*
 - Selection Sort
 - Insertion Sort
 - Shellsort
 - Shuffling
 - Convex Hull
 - Mergesort
 - Quicksort
 - Priority Queues
 - Elementary Symbol Tables