

## **Jun 2004**

- FFT, DFT
- Upper/Lower bounds for sorting, counting sort - Same as May 2018
- Network Flows, Ford-Fulkerson algorithm, Min/Max-Flow Theorem

## **April 2005**

- Sorting - Quicksort
- Minimum Spanning Tree - Kruskal's Algorithm
- Convex Hull - Graham's scan

## **April 2006**

- Sorting - upper/lower bounds
- Dynamic Programming - Matrix Chain Multiplication
- Network Flow - Ford Fulkerson

## **Aug 2006**

- Strassen's Algorithm
- Dynamic Programming - Longest Common Subsequence
- Minimum Spanning Tree - Kruskal's Algorithm, Linked List implementation of Disjoint set

## **April 2007**

- Strassen's Algorithm
- Dynamic Programming - Formatting words on screen
- Minimum Spanning Tree - Prim's Algorithm, Priority Queue Implementation

## **April 2008**

- Fourier Transform - Discrete Fourier Transform / Fast Fourier Transform
- Network Flow - Ford Fulkerson and Edmonds-Karp Heuristic
- Convex Hull - Graham's scan

## **April 2009**

- Sorting - Counting Sort
- Network Flow - Ford Fulkerson
- Fast Exponentiation

## **Aug 2009:**

- Minimum Spanning Tree - Kruskal's Algorithm

- Fourier Transform - Discrete Fourier Transform / Fast Fourier Transform
- Sorting - comparison based sorting

### **May 2010**

- Minimum Spanning Tree - Prim's Algorithm
- Fourier Transform - Discrete Fourier Transform / Fast Fourier Transform
- Dynamic Programming - Matrix Chain Multiplication

### **Aug 2008**

- Strassen's Algorithm
- Sorting - Quicksort
- Dynamic Programming - Knapsack problem

### **May 2011**

- Sorting - Merge Sort
- Minimum Spanning Tree - Prim's Algorithm
- Dynamic Programming - Longest Common Subsequence

### **Aug 2011**

- Sorting - comparison based sorting
- Network Flow - Ford Fulkerson
- Convex Hull - Graham's scan, online convex hull

### **May 2012**

- Fourier Transform - Discrete Fourier Transform / Fast Fourier Transform
- Network Flow - Ford Fulkerson
- Sorting - Quicksort

### **April 2015**

- Fourier Stuff
- Sorting (not counting, radix?)
- Flow Network - Ford-Fulkerson

### **May/Aug 2016**

- Sorting (lowerbound), decision tree
- DP and changepoint problem
- MST and Kruskal

## **May 2017**

- QuickSort, FFT
- MST
- Flow network

## **Aug 2017**

- Fourier Transform
- Convex Hull
- Upper/Lower bounds for sorting & Radix Sort

## **May 2018**

- Sorting (upper, lower bounds), Counting sort,
- Matrix Chain Multiplication problem, optimal parenthesisation
- Minimum spanning tree, disjoint set, Krukskai

## **Aug 2018**

- Matrix Chain Multiplication
- Fourier Transform
- Convex Hull

## **2019**

- MST and Convex Hull