## Recursos por tema

O todo lo que querías saber pero no te atrevías a preguntar (o no sabías donde buscar) sobre la programación competitiva.

#### Sitios web

- http://e-maxx-eng.appspot.com/
- https://www.topcoder.com/community/data-science/data-science-tutorials/
- https://discuss.codechef.com/questions/488
  77/data-structures-and-algorithms
- https://www.hackerearth.com/practice/
- https://algo.is/
- https://www.geeksforgeeks.org/how-to-prepare-for-acm-icpc/

### Videos

- https://www.youtube.com/channel/UC0Rha tS1pyxInC00YKjjBqQ
- https://www.edx.org/course/how-to-win-coding-competitions-secrets-of-champions
- https://www.youtube.com/channel/UCyZtj mvybLLlk2KZgLJL6ZA
- https://www.youtube.com/channel/UCRPMA qdtSgd0lpeef7iFsKw
- https://www.youtube.com/channel/UCZLJf R2sWyUtXSKiKlyvAw

### Libros

- http://www.comp.nus.edu.sg/~stevenha/myt eaching/competitive\_programming/cp1.pdf
- https://cses.fi/book.pdf
- https://omegaup.com/img/libropre3.pdf
- http://comscigate.com/Books/contests/icpc.pdf
- http://ressources.unisciel.fr/algoprog/s 00aaroot/aa00module1/res/%5BCormen-AL201 1%5DIntroduction\_To\_Algorithms-A3.pdf

### Jueces

- http://codeforces.com/
- https://www.codechef.com/
- https://uva.onlinejudge.org/
- https://icpcarchive.ecs.baylor.edu/
- https://open.kattis.com/
- https://www.urionlinejudge.com.br
- http://omegaup.com/
- http://matcomgrader.com/

## Introducción

- https://www.hackerearth.com/practice/basic-p rogramming/input-output/basics-of-input-outp ut/tutorial/ (Todas la secciones)
- https://algo.is/aflv16/aflv\_02\_data\_structure s.pdf
- Consulta: http://www.cplusplus.com/

#### Estructuras de Datos

- https://algo.is/aflv16/aflv\_03\_data\_structure s.pdf
- https://www.hackerearth.com/practice/notes/segment-tree-and-lazy-propagation/
- https://www.topcoder.com/community/data-sci ence/data-science-tutorials/binary-indexedtrees/
- https://www.hackerearth.com/practice/notes/ sparse-table/

## Búsquedas

- https://algo.is/aflv16/aflv\_04\_problem\_solv ing\_paradigms.pdf
- https://www.hackerearth.com/practice/algorit hms/searching/linear-search/tutorial/

## Greedy

- https://www.hackerearth.com/practice/algorit hms/greedy/basics-of-greedy-algorithms/tutorial/
- https://algo.is/wp-content/uploads/2015/01/ aflv\_05\_greedy\_algorithms.pdf

# Programación dinámica

- https://algo.is/aflv16/aflv\_06\_dynamic\_programming.pdf
- https://www.hackerearth.com/practice/algor ithms/dynamic-programming/introduction-todynamic-programming-1/tutorial/

## Gráficas

- https://www.hackerearth.com/practice/algori thms/graphs/graph-representation/tutorial/
- https://algo.is/aflv16/aflv\_07\_graphs\_1.pdf + https://algo.is/aflv16/aflv\_08\_graphs\_2.pdf + http://web.stanford.edu/class/cs97si/08-net work-flow-problems.pdf

### Matemáticas

- https://algo.is/aflv16/aflv\_10\_mathematics.p
  df
- https://www.hackerearth.com/practice/math/c ombinatorics/basics-of-combinatorics/tutori al/
- http://web.stanford.edu/class/cs97si/02-mat hematics.pdf
- http://web.stanford.edu/class/cs97si/05-com binatorial-games.pdf

### Geometría

- https://algo.is/aflv16/aflv\_12\_geometry.pdf
- http://web.stanford.edu/class/cs97si/09-com putational-geometry.pdf
- http://www.dcc.fc.up.pt/~pribeiro/estagio
  2008/usaco/3\_4\_Computational\_Geometry.htm

# Strings

- https://algo.is/aflv16/aflv\_11\_strings.pdf
- https://www.hackerearth.com/practice/algorith ms/string-algorithm/basics-of-string-manipula tion/tutorial/

https://www.hackerearth.com/practice/data-st ructures/advanced-data-structures/trie-keywo rd-tree/tutorial/

## Más recursos

- http://codeforces.com/blog/entry/23054#books
- https://www.tutorialspoint.com/java/math/java\_math\_biginteger.htm