ICPC Sessions
OR
How to Solve Problems

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- The most prestigious global programming competition (since 1977)!

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- We are part of the Northwestern European region
- Top 3 teams will qualify for the Finals in St. Petersburg
- This means we will make Germany, Belgium, the Netherlands and others cry!

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- Algorithms; more than you did in previous years (if any)!
- Actually using algorithms to solve problems!
- Beating Cambridge (and everyone else)!

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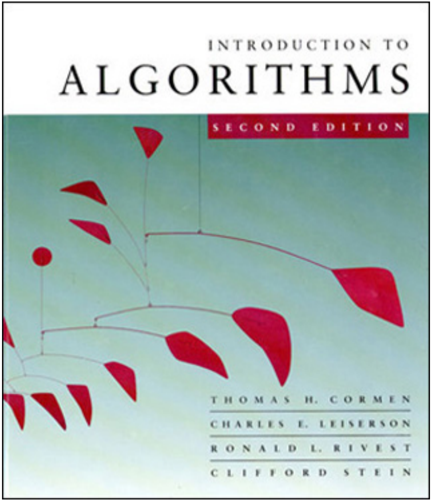
  - Infoarena

Recommended Book(s)

- **Introduction to Algorithms**
  - Thomas Cormen, Charles Leiserson, Ronald Rivest, Clifford Stein
- **Algorithms in C/C++/Java/**
  - Robert Sedgewick



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Can you?

Binary Search

```c
int binary_search(int *array, int n, int x)
{
  int lo = 0, hi = n - 1;
  // what most people get wrong
  while (lo < hi) {
    int mid = lo + (hi - lo) / 2;
    if (array[mid] < x)
      lo = mid + 1;
    else hi = mid;
  }

  if (lo == hi && array[lo] == x)
    return lo;
  return -1;
}
```

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- Don't require any special knowledge of algorithms
- There is always at least one in competitions

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- However, most ad-hoc problems require careful reading and carefully sequencing the instructions given in the problem is usually enough to solve them.
- Some require reasonable optimisations, and some degree of analysis to prune unnecessary steps.
- If it's not obvious, then there's only one piece of advice I can give you:

Don't Panic!