



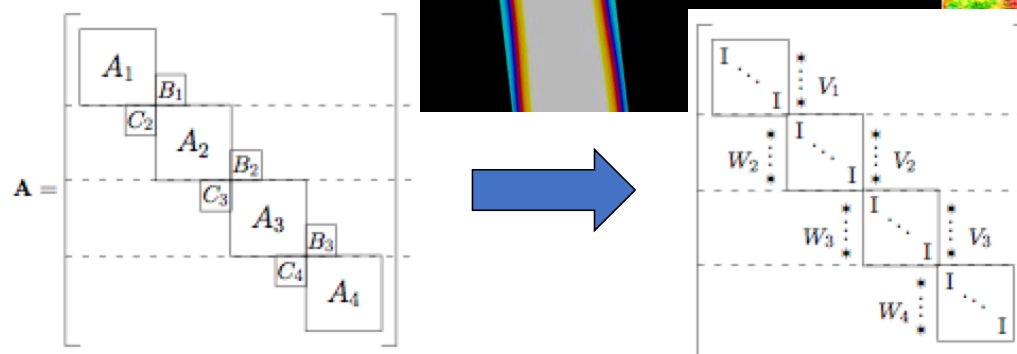
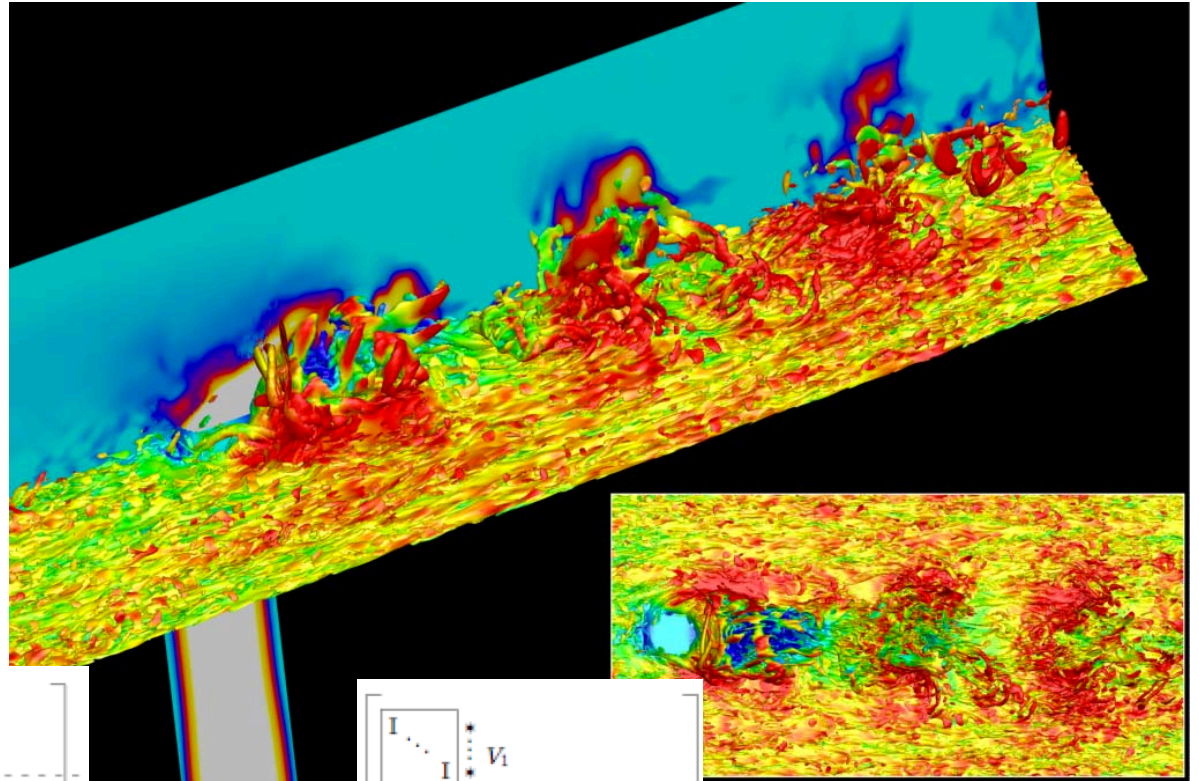
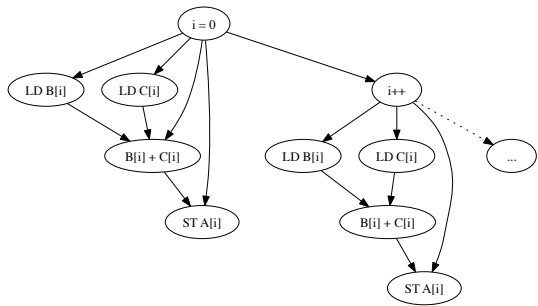
CS 225

Data Structures

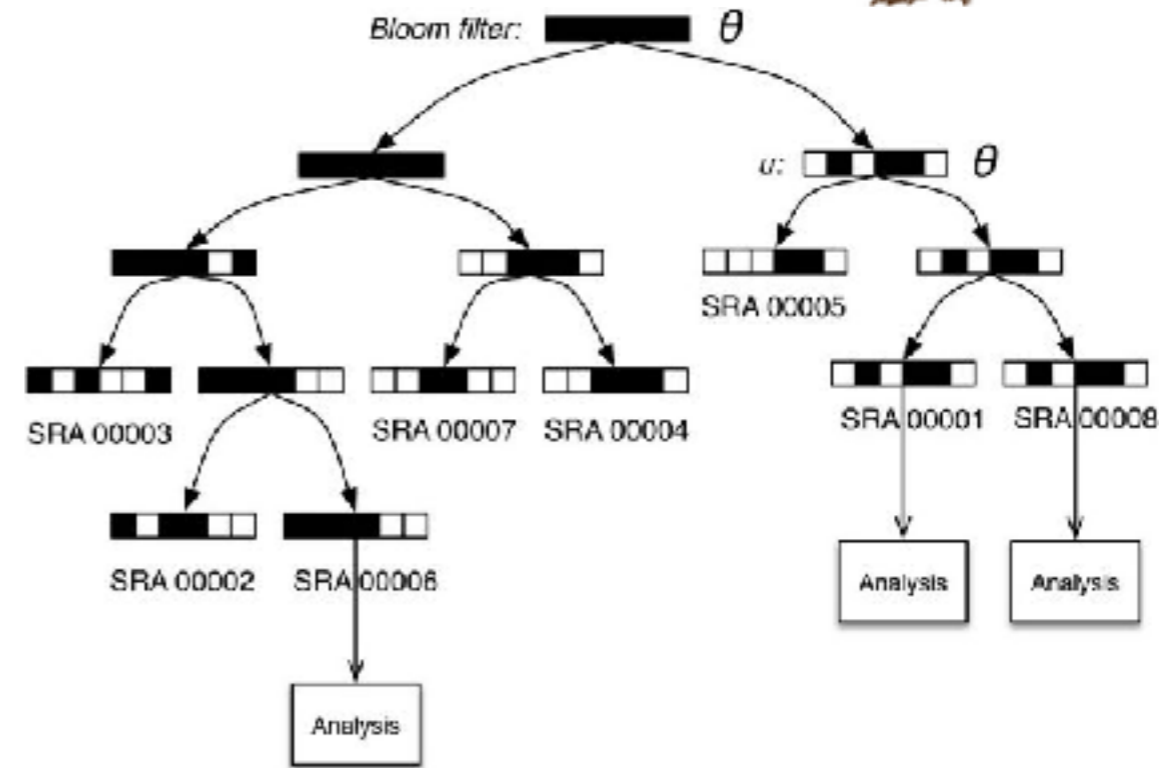
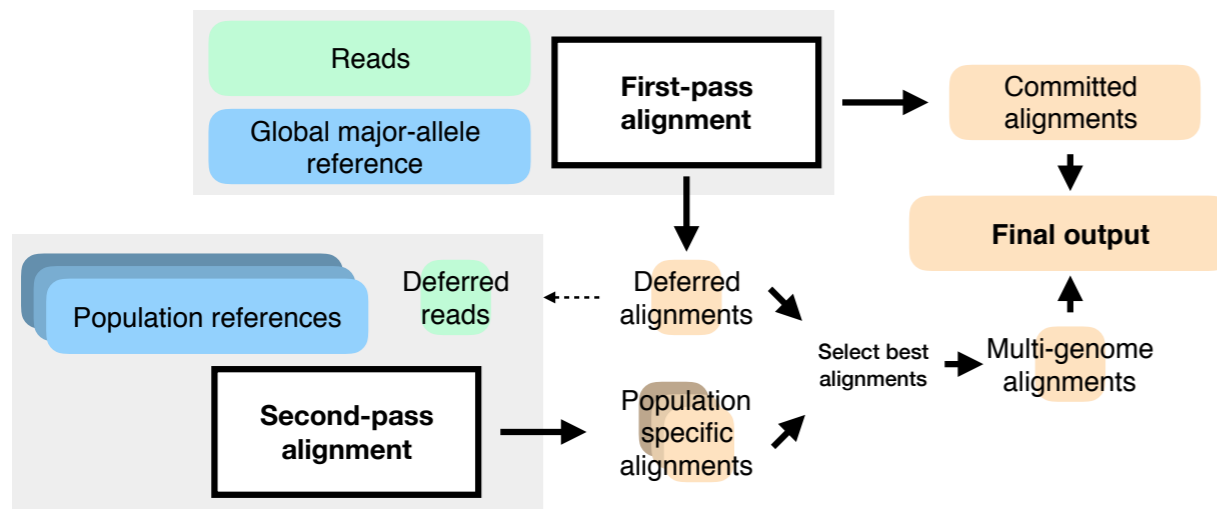
August 24 – Introduction

G Carl Evans & Brad Solomon

G Carl Evans



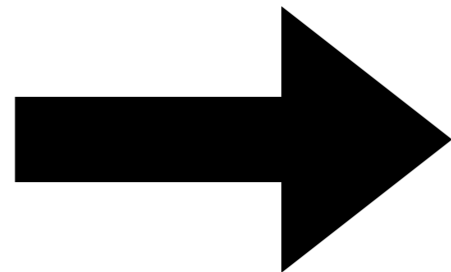
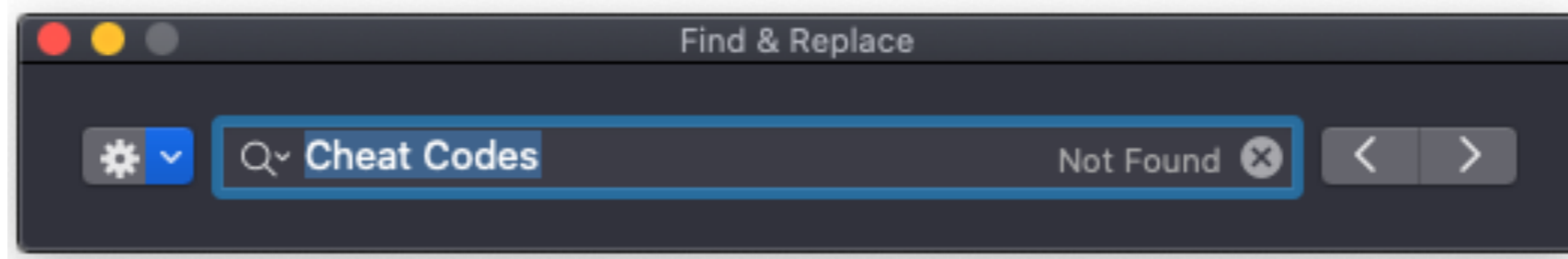
Who am I?



Fast search of thousands of short read sequencing experiments. Brad Solomon and Carl Kingsford. *Nature Biotech* 2016.

Reducing reference bias using multiple population reference genomes. Chen et al. Submitted 2020


CS 296-25: String Algorithms and Data Structures



```
GATCACAGGTCTATCACCTATTAACCACTCACGGGAGCTCTCCATGCATTTGGTA
CGTCTGGGGGGTATGCACGCGATAGCATTGCGAGACGCTGGAGCCGGAGCACCCTA
GCAGTATCTGTCTTTGATTCTGCCTCATCCTATTATTTATCGCACCTACGTTCAA
ACAGGCGAACATACTTACTAAAGTGTGTTAATTAATTAATGCTTGTAGGACATAAT
ACAATTGAATGTCTGCACAGCCACTTTCCACACAGACATCATAACAAAAAATTTCC
AACCCCCCTCCCCGCTTCTGGCCACAGCAATAAACAGACTCTGCCAAACCCC
ACAAAGAACCCTAACACCAGCCTAACCAATTTCAAATTTTATCTTTGGCGGTAT
TTTTAACAGTCACCCCCCACTAACCAATTATTTTCCCCTCCCCTCCACTCCATACTAC
CTCATCAATACAACCCCCGCCATCTTACCCAGCACACACACACCCCTCTAACCC
CCCCGAACCAACCAACCCCAAAGCCACCCCCACAGTTTATGTAGCTACCTCCT
GCAATACACTGACCCGCTCAAACCTCTGGATTTTGGATCCACCCAGCGCTTTGGCC
CTAGCCTTTCTATTAGCTCTTAGCAAGATTACACATGCAAGCATCCCCGCTCCAGT
TCACCCTCTAAATCACCACGATCAAAAGGAACAAGCATCAAGCACGCAGCAATGCA
AAAACGCTTAGCCTAGCCACACCCTCACGGGAAACAGCAGTGATTAACCTTAGCA
ACGAAAGTTTAACTAAGCTATACTAACCCAGGGTTGGTCAATTTCTGCTCCAGCCA
GGTCACACGATTAACCAAGTCAATGAAGCCGGCGTAAAGAGTGTTAGATCAC
TCCCAATAAAGCTAAAACCTCACCTGATTTGTAAAAAACTCCAGTTCACAAAAT
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CCGCCATCTTCAGCAAACCTGATGAAGGCTACAAAGTAAGCGCAAGTAC
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AAGTATACTTCAAAGGACATTTAACTAAAACCCCTACGCATTTATATAGAGGAGAC
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AAGCACCCAACTTACACTTAGGAGATTTCAACTTAACTTGACCGCTCTGAGCTAAA
GCCCAAACCCACTCCACCTTACTACCAGACAACCTTAGCCAAACCATTTACCCAA
AGTATAGGCGATAGAAATTGAAACCTGGCGCAATAGATATAGTACCGCAAGGGAAA
AAAAATTATAACCAAGCATAATATAGCAAGGACTAACCCCTATACCTTCTGCATAA
TTAACTAGAAATAACTTTGCAAGGAGAGCCAAAGCTAAGACCCCGAAACCAGACG
ACCTAAGAACAGCTAAAAGAGCACACCCGCTCTATGTAGCAAAATAGTGGGAAGATT
CCTAGACCCCGAAGCTAGCCAGCCCTGCTCATAGCTGCTTCTGCAACATAGAAAT
```




Course Staff



ECE 220

CS 126

CS 125

INFO 490
(+others)

CS 225

CS 173

MATH 213



Everything about CS 225

<https://courses.engr.illinois.edu/cs225/>

Information on:

Staff

Communications

Lab Sections

MPs

Exams

Grading

Academic Integrity



What is this course about?





Variables in C++

```
int myFavoriteInt;
```

```
char grade = 'A';
```

```
double gamma = 0.653;
```

```
Cat fiona, mia;
```

```
Cube rubix;
```

```
Person wade;
```




Encapsulation



Encapsulation

Cube.h

Cube.cpp



```
1 #pragma once Cube.h
2
3 class Cube {
4     public:
5
6
7
8
9
10
11     private:
12
13
14 };
15
16
17
18
19
20
```


Cube.cpp

```
1 #include "Cube.h"
2
3 double Cube::getVolume() {
4
5
6 }
7
8
9
10
11
12
13
14
15
16
17
18
19
20
```

Cube.h

```
4 class Cube {
5     public:
6         double getVolume();
```