

COCS 6323: Statistical Methods in Research  
Group Project

Group <number>  
Department of Computer Science  
University of Houston  
March 6, 2019

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# 1 Figure 2A

Giant Component

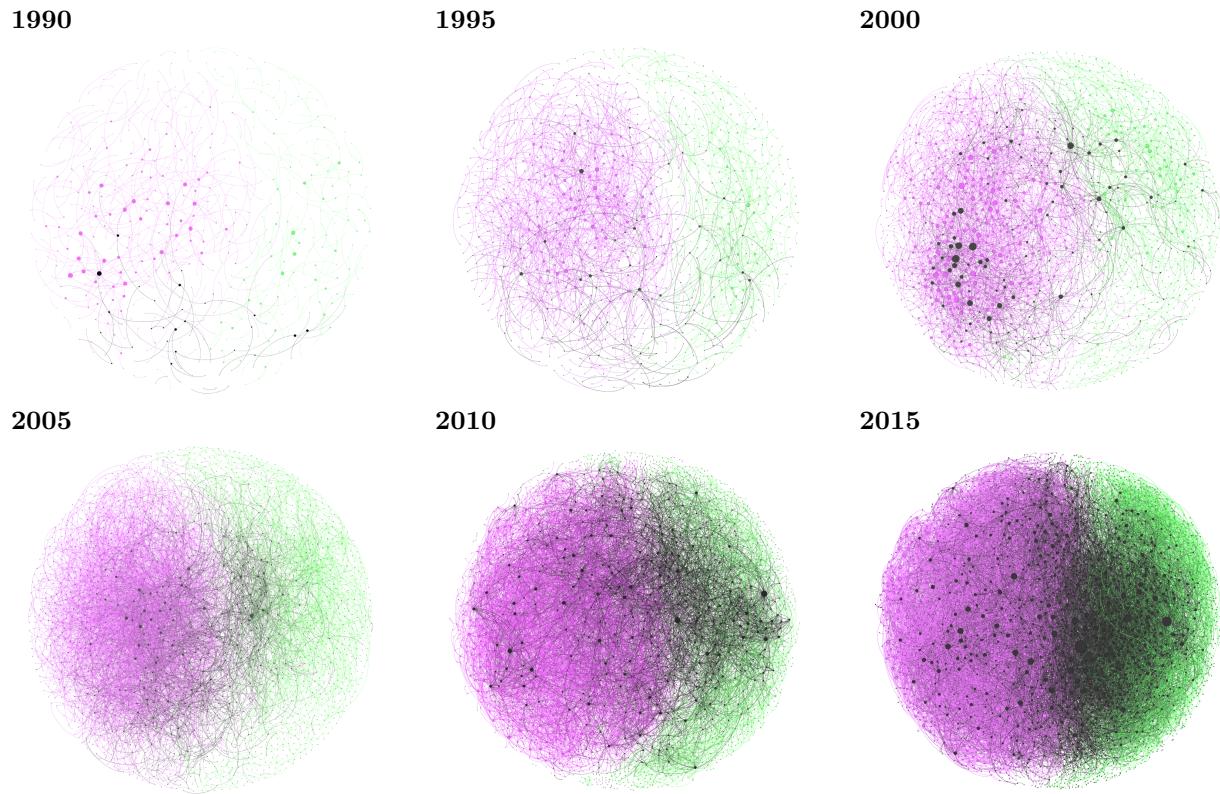


Figure 1: Growth of cross-disciplinary social capital

Evolution of the giant component in the U.S. biology-computing network. Green and magenta nodes represent faculty  $F_i$  with BIOF and CSF affiliation, respectively; black nodes represent faculty  $F_i$  that, by time  $t$ , published at least one cross-disciplinary publication and joined the XDF group; node size is proportional to the logarithm of the degree centrality,  $\ln C_{Di}$ , of  $F_i$  at time  $t$ .

## 2 Figure 2B

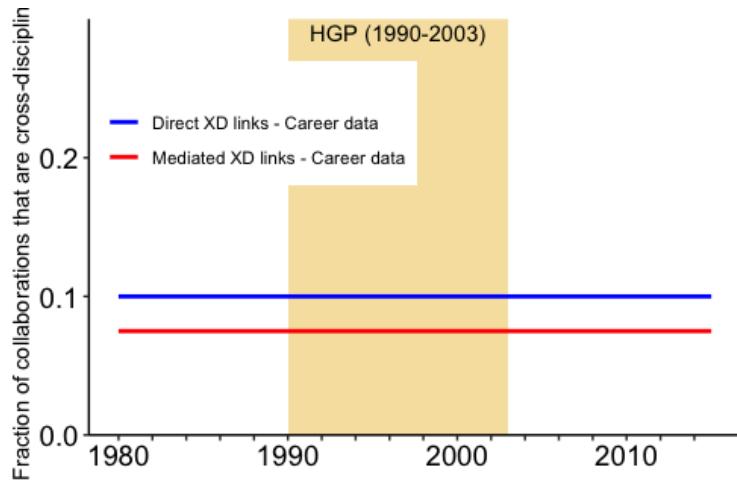


Figure 2: Growth of cross-disciplinary social capital

### **3    Figure 3A**

Add the content of this section

## **4   Figure 3B**

Add the content of this section

## **5    Figure 3C**

Add the content of this section

## 6 Figure 3D

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## **7   Figure 3E**

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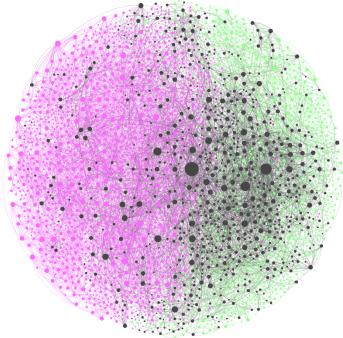
## **8    Figure 3F**

Add the content of this section

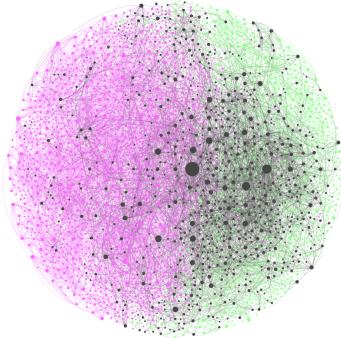
## 9 Supplementary S3

Centrality

Degree



PageRank



Betweenness

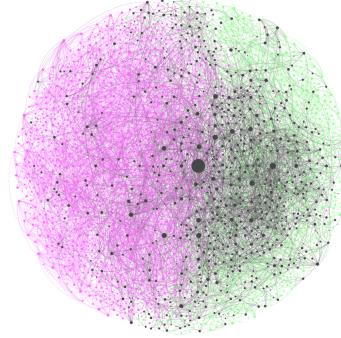


Figure 3: Three perspectives on the centrality of Fi in the direct collaboration network

Shown is the giant connected component of the faculty network  $F$  using all data up to 2015. The nodes and links across each network are fixed, only the node sizes vary according to the indicated centrality measure. Notably, the most central according to each of the three measures is Eric Lander, one of the leaders of the HGP.

## 10 Supplementary S4

Dismishing of Giant Component

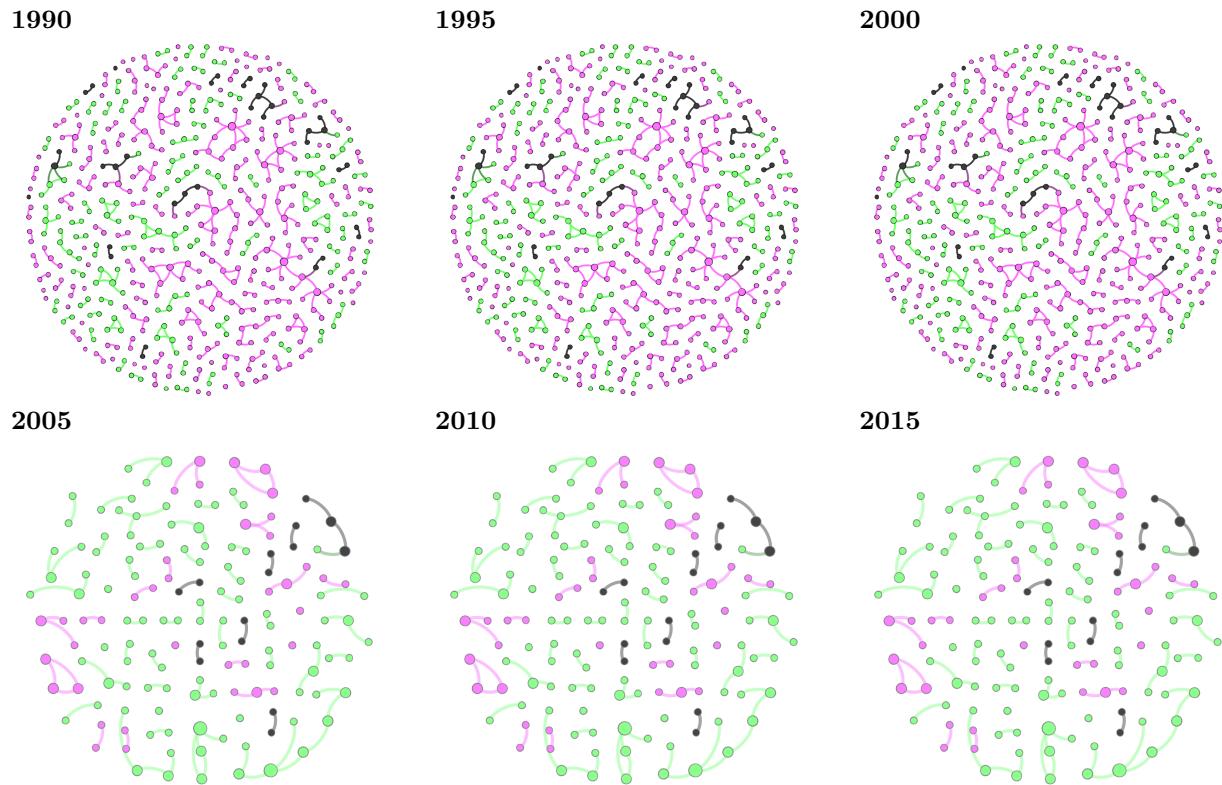


Figure 4: Growth of cross-disciplinary social capital

Green and magenta nodes represent faculty  $F_i$  with BIO and CS affiliation, respectively; black nodes represent faculty  $F_i$  that by time  $t$  collaborated with at least one faculty from the opposite department and thus joined the XD group.