Network Science
Project 1

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Network summary

Each node has the following attributes:

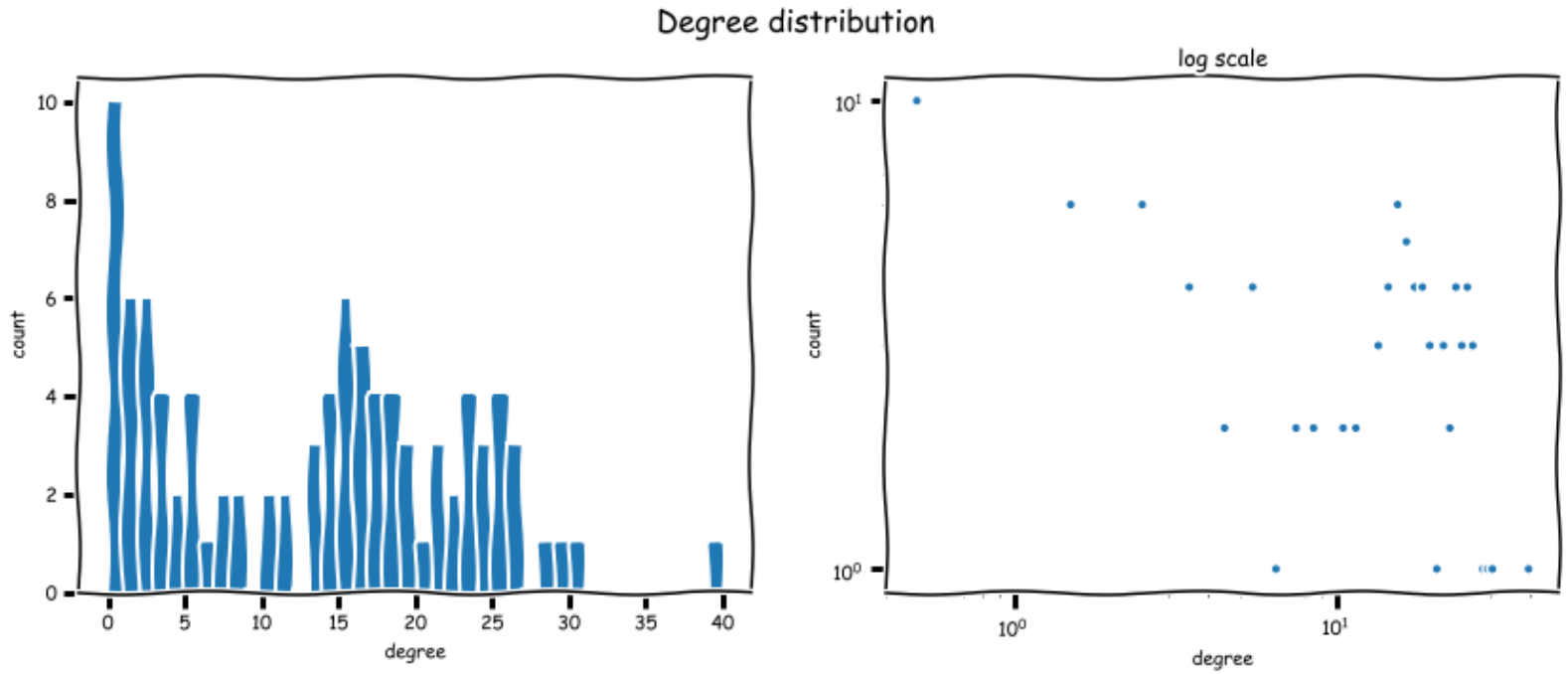
Name, sex, city, count (total number of friends)

Number of nodes: 94

Number of edges: 597

Diameter: 7

Clustering coefficient: 0.53



Visualization

green - school friends

purple - MIPT (university) friends

blue - family

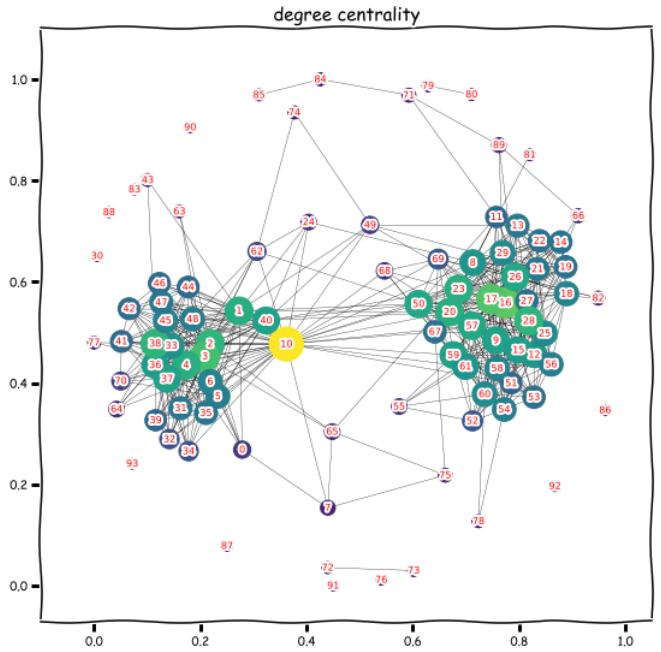
orange - others

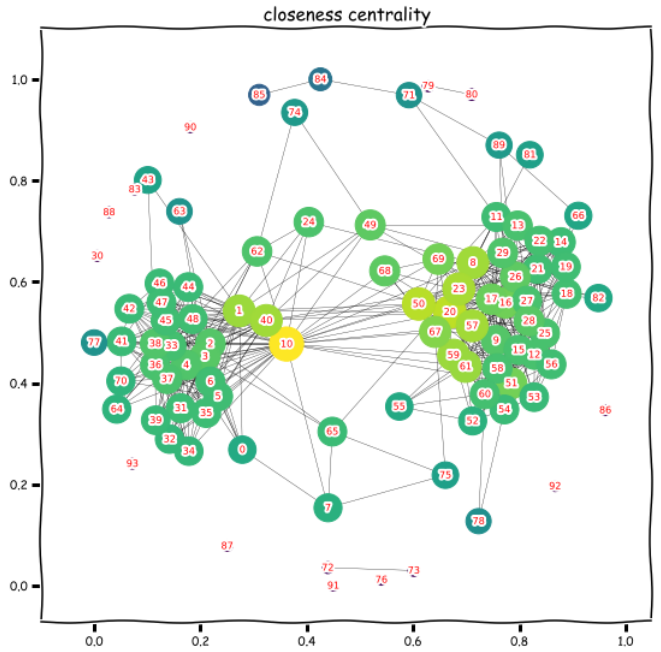
Centralities and Page-Rank

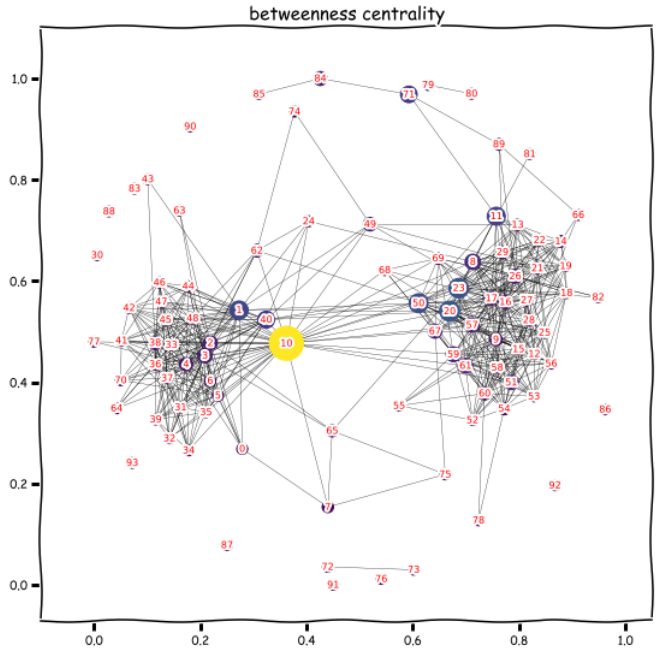
10 – Anna Ardel

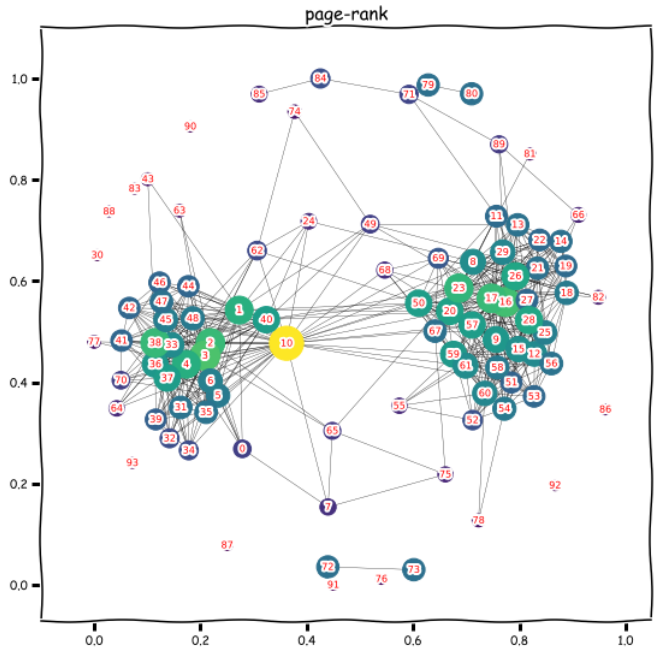
20 – Anton Zeleneev

50 – Igor Vilkin

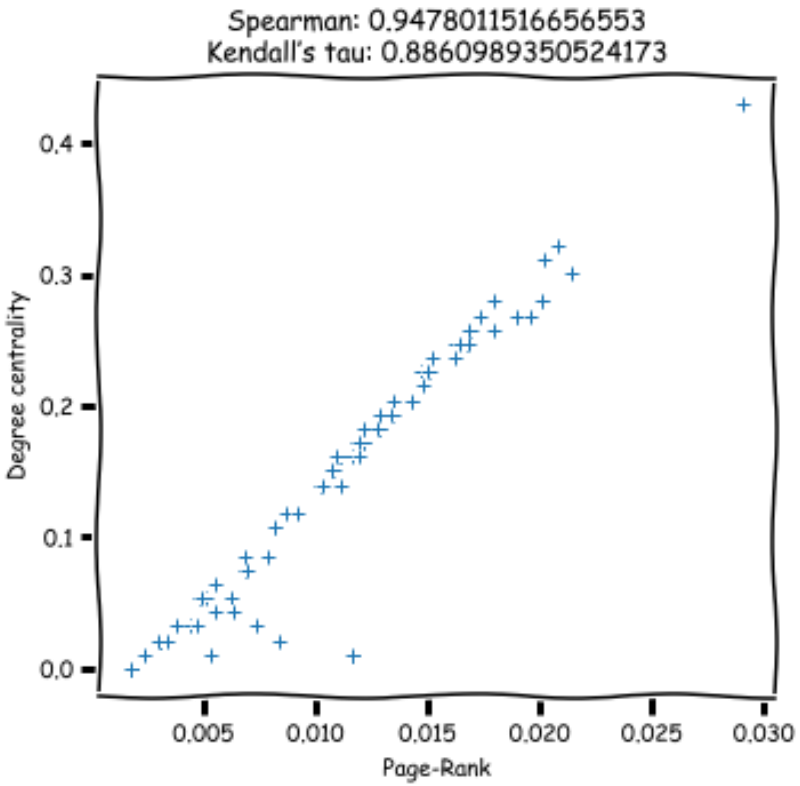


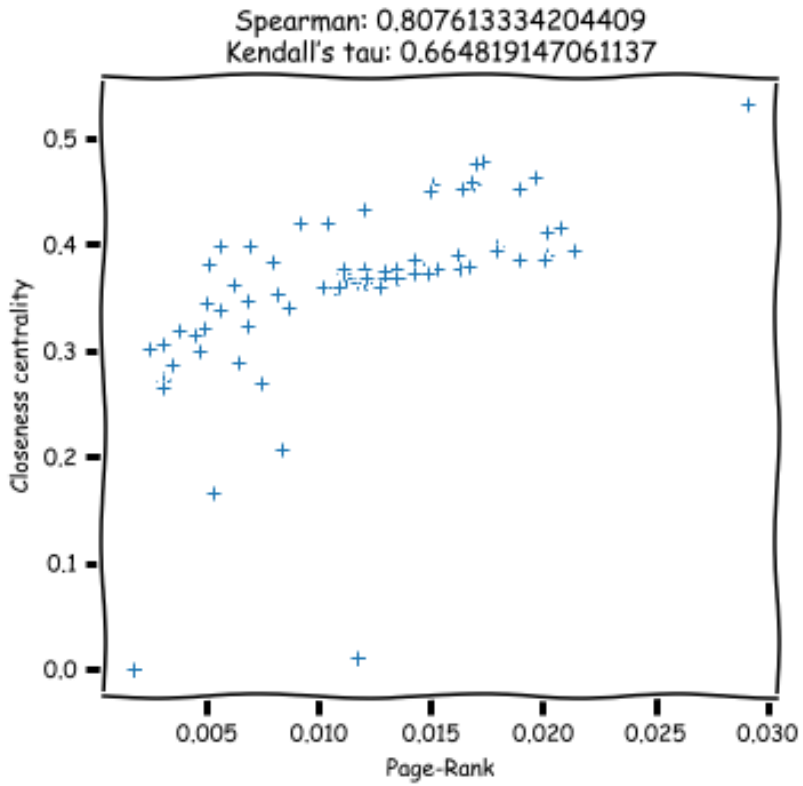


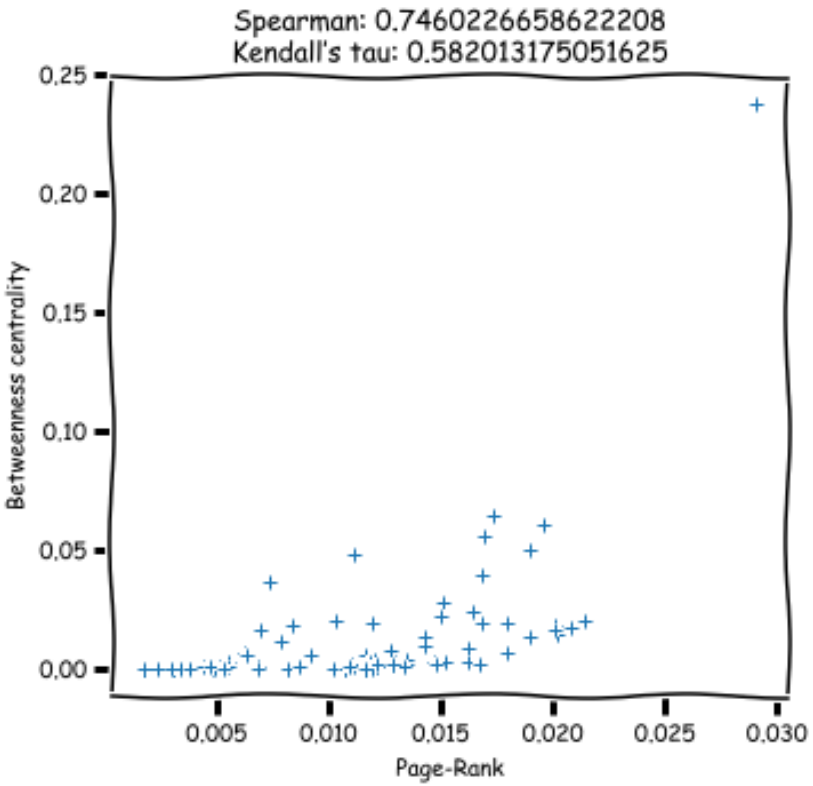




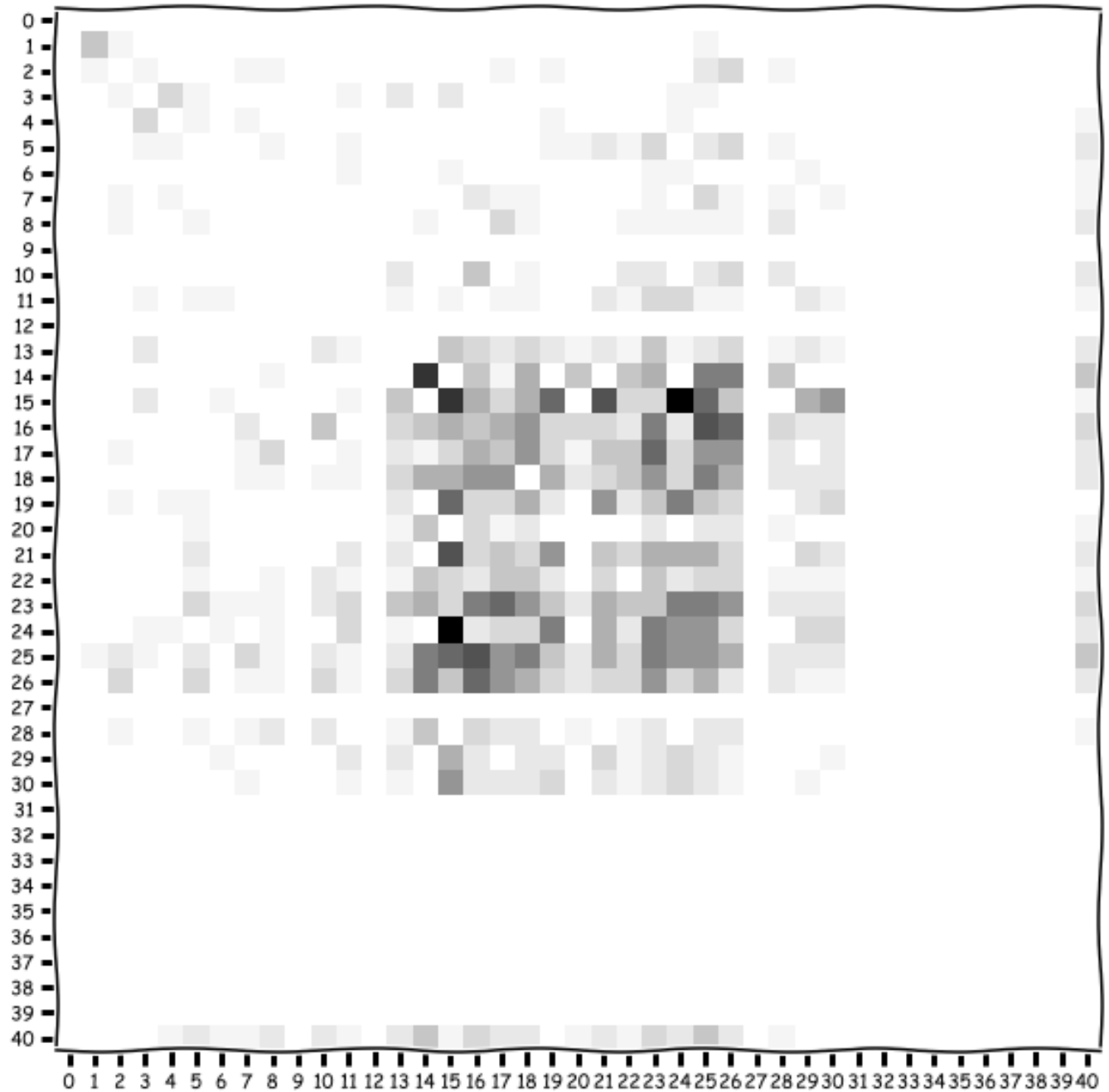
Comparison Page-Rank with centralities



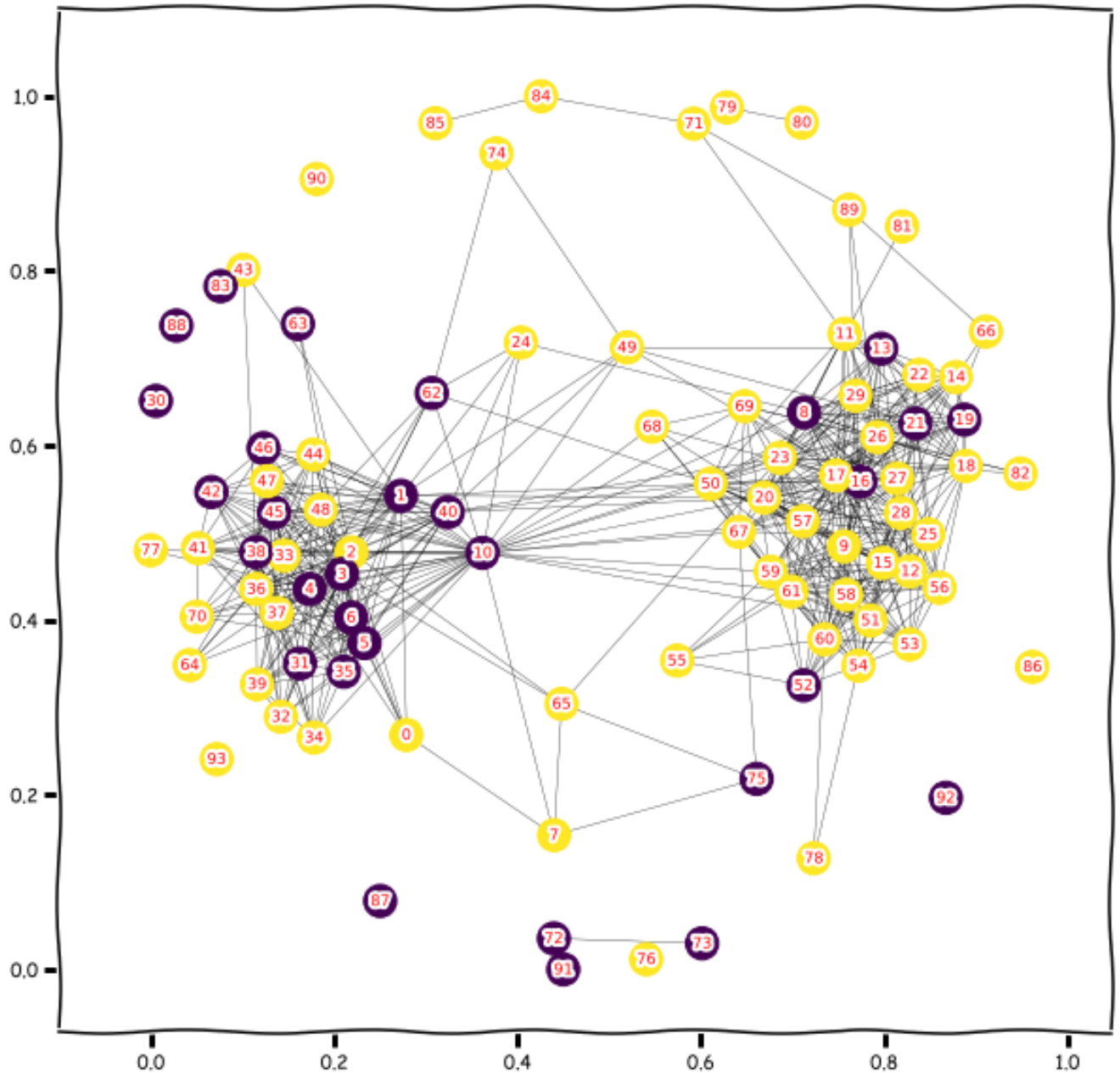




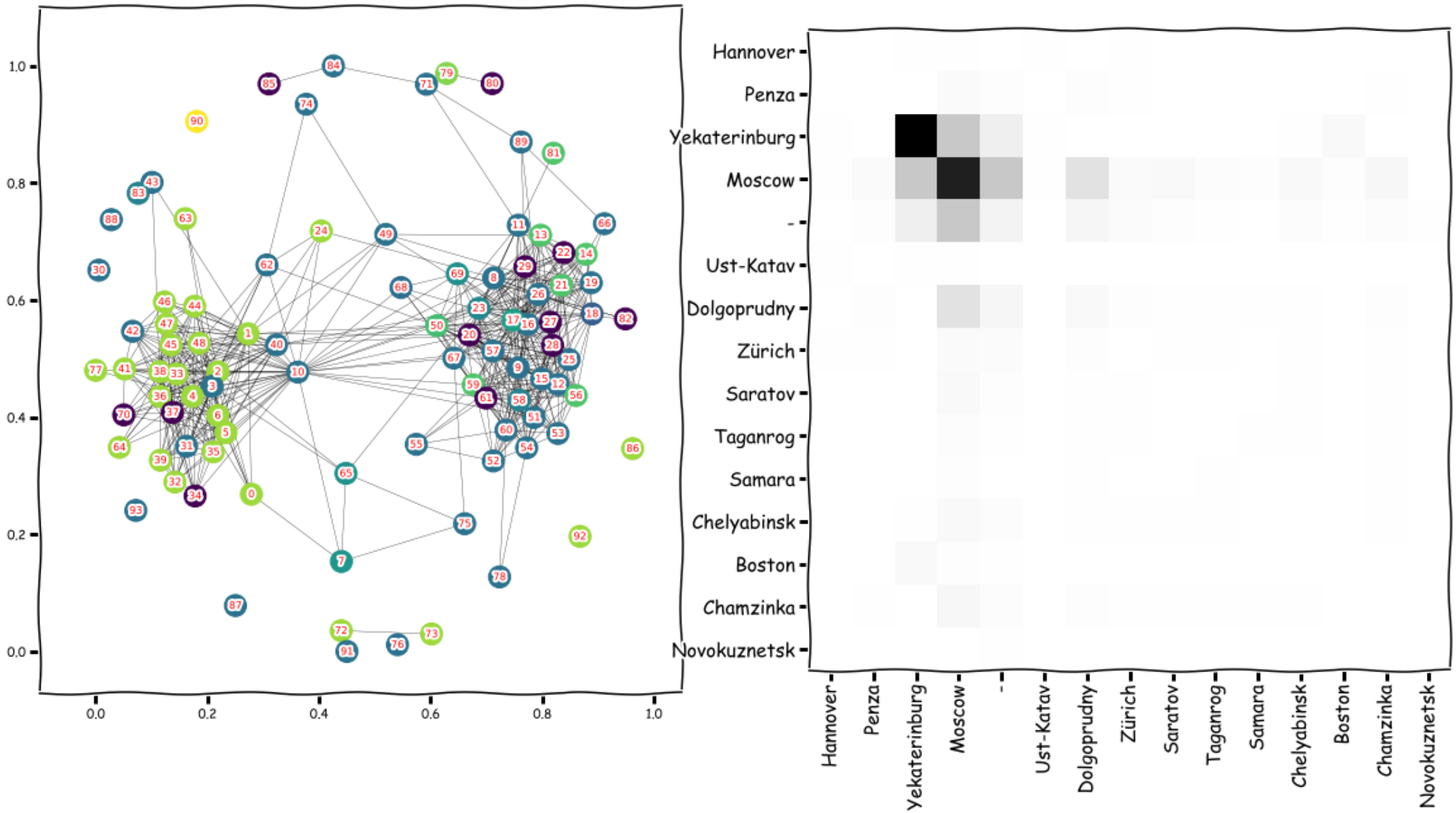
Assortative coefficient for node degree: -0.07



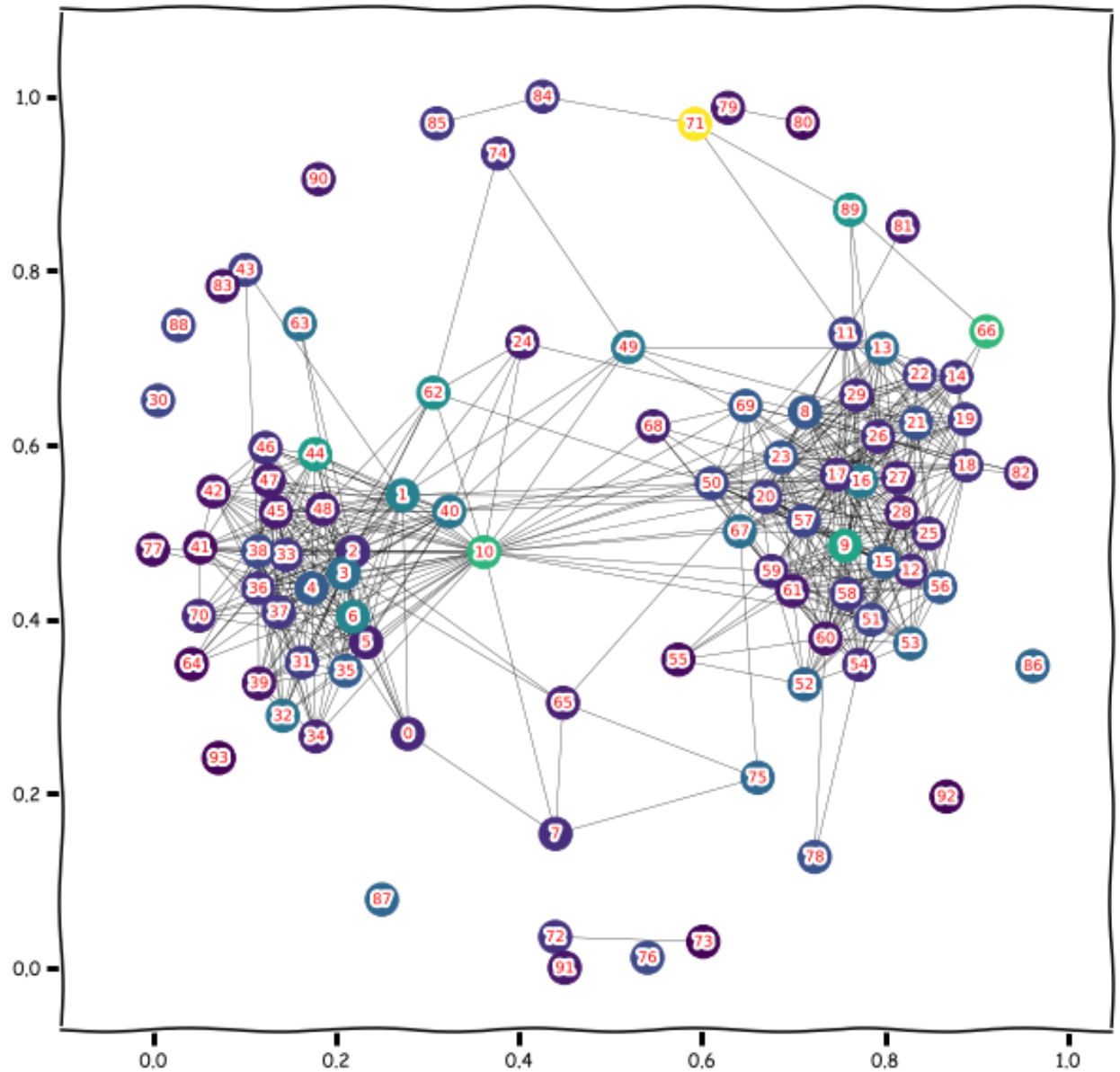
Assortative coefficient for sex: 0.09



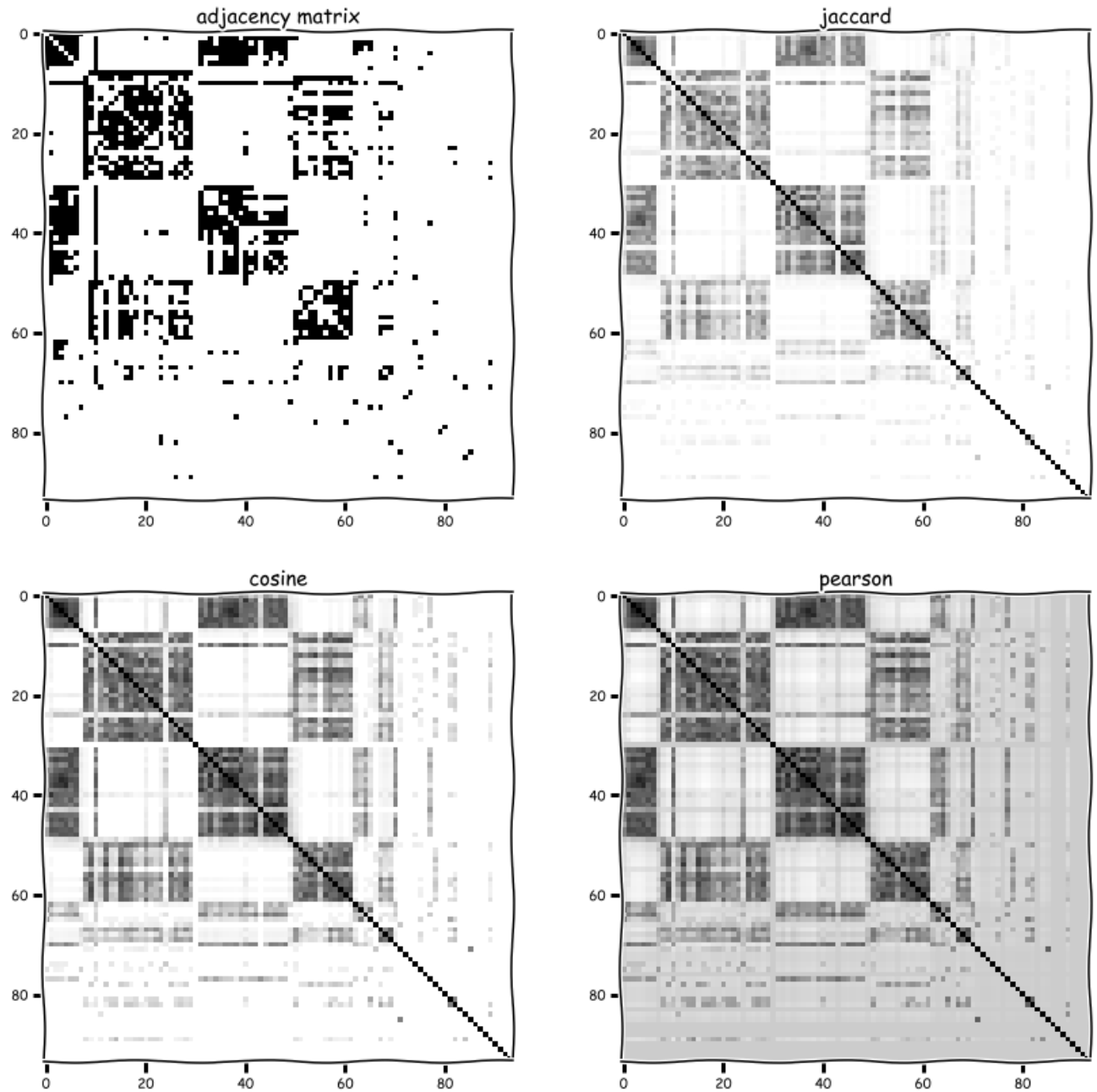
Assortative coefficient for city: 0.17



Assortative coefficient for total number of friends: -0.02

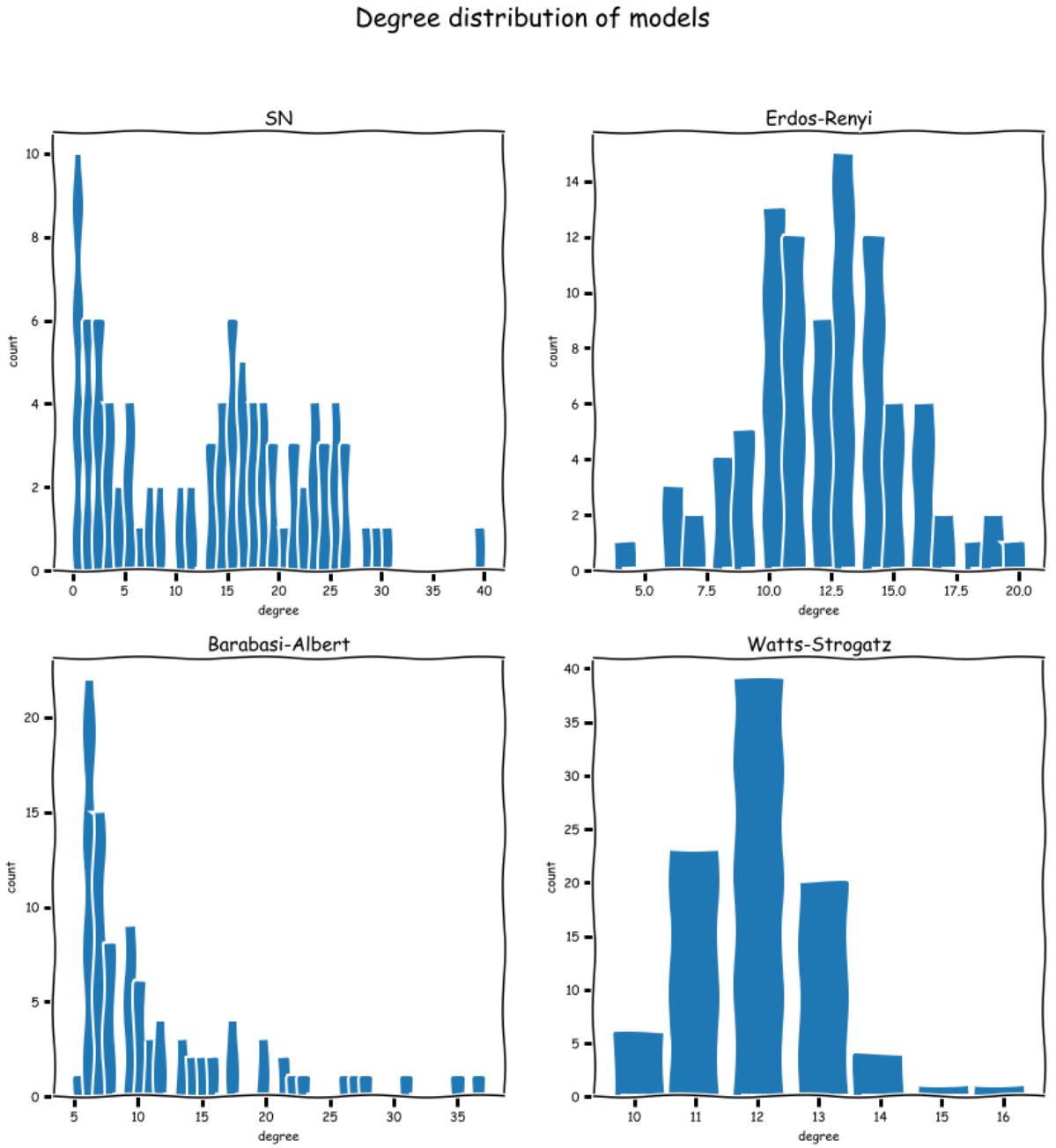


Structural similarity



The closest random graph model

	edges	clustering coefficient	diameter
SN	597	0.534638	7
Erdos-Renyi	571	0.123333	3
Barabasi-Albert	528	0.207418	3
Watts-Strogatz	564	0.551816	5



Community detection

Modularity for all algorithms: 0.46