

Analysis of bibliographic networks on “blockmodeling”

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Hits for the query

"block model*" or "network cluster*" or "graph cluster*" or
"community detect*" or "blockmodel*" or "block-model*" or
"structural equival*" or "regular equival*"
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number of works	=	80822
number of authors	=	46658
number of journals	=	9251
number of keywords	=	10299
number of records	=	3375
number of duplicates	=	86

Citation Weights: Search Path Count (SPC) Flow = 1.1264257E+19

	Size	Topic
island1A	143	BM, communities, stochastic BM
island1B	199	BM, communities, stochastic BM
island2	88	earthquake
island3	72	spectroscopy
island4	55	superconductivity
island5	47	electromagnetic, microwaves
island6	49	anesthesiology
island7	33	mining
island8	21	earthquake

Table 1: Input degrees

Rank	Vertex	Cluster	Id
1	52	505	GIRVAN_M(2002) 99:7821
2	295	472	NEWMAN_M(2004) 69:026113
3	163	368	FORTUNAT_S(2010) 486:75
4	727	280	FORTUNAT_S(2007) 104:36
5	84	270	NEWMAN_M(2006) 103:8577
6	213	267	PALLA_G(2005) 435:814
7	149	251	WASSERMA_S(1994) :
8	73	249	CLAUSET_A(2004) 70:066111
9	173	245	WATTS_D(1998) 393:440
10	174	233	ZACHARY_W(1977) 33:452
11	70	221	BLONDEL_V(2008) :P10008
12	28	184	NEWMAN_M(2006) 74:036104
13	399	184	NEWMAN_M(2003) 45:167
14	200	180	LANCICHI_A(2008) 78:046110
15	1592	179	ALBERT_R(2002) 74:47
16	158	177	BARABASI_A(1999) 286:509
17	217	171	RADICCHI_F(2004) 101:2658
18	745	170	LORRAIN_F(1971) 1:49
19	75	168	GUIMERA_R(2005) 433:895
20	1809	167	DANON_L(2005) :P09008
21	1692	162	WHITE_H(1976) 81:730
22	27	157	NEWMAN_M(2004) 69:066133
23	185	156	DUCH_J(2005) 72:027104
24	219	151	ROSVALL_M(2008) 105:1118
25	340	134	BURRIDGE_R(1967) 57:341
26	59	133	NEWMAN_M(2004) 38:321
27	865	127	REICHARD_J(2006) 74:016110
28	199	126	LANCICHI_A(2009) 11:033015
29	1105	126	LANCICHI_A(2009) 80:056117
30	1395	111	BREIGER_R(1975) 12:328
31	1454	110	HOLLAND_P(1983) 5:109
32	208	105	LUSSEAU_D(2003) 54:396
33	218	103	RAGHAVAN_U(2007) 76:036106
34	835	98	GOOD_B(2010) 81:046106
35	1378	96	AIROLDI_E(2008) 9:1981
36	733	95	GUIMERA_R(2004) 70:025101
37	341	93	CARLSON_J(1989) 40:6470
38	753	90	REICHARD_J(2004) 93:218701
39	1008	88	BOCCALET_S(2006) 424:175
40	197	88	KERNIGHA_B(1970) 49:
41	32	84	SHI_J(2000) 22:888
42	382	79	AHN_Y(2010) 466:761
43	788	77	ARENAS_A(2008) 10:053039
44	754	77	ROSVALL_M(2007) 104:7327
45	818	75	STROGATZ_S(2001) 410:268
46	812	75	RAVASZ_E(2002) 297:1551
47	726	75	FLAKE_G(2002) 35:66
48	1845	73	KARRER_B(2011) 83:016107
49	1496	72	NOWICKI_K(2001) 96:1077
50	3009	71	FREEMAN_L(1979) 1:215
51	4879	71	SCOTT_J(2000) 2ND:
52	1591	70	ALBERT_R(1999) 401:130
53	1583	70	NEWMAN_M(2001) 64:026118
54	1807	69	CLAUSET_A(2008) 453:98
55	3116	69	OLAMI_Z(1992) 68:1244
56	103	68	BURT_R(1987) 92:1287
57	728	68	FREEMAN_L(1977) 40:35
58	1398	68	BURT_R(1976) 55:93
59	391	67	LANCICHI_A(2009) 80:016118
60	162	67	ERDOS_P(1959) 6:290

Table 2: Input degrees

Rank	Vertex	Cluster	Id
61	137	67	NEWMAN_M(2010) :
62	2051	67	NEWMAN_M(2007)104:9564
63	1381	66	ARABIE_P(1978)17:21
64	85	66	NEWMAN_M(2001)98:404
65	334	66	BAK_P(1987)59:381
66	1453	64	HOLLAND_P(1981)76:33
67	2572	64	SNIJDERS_T(1997)14:75
68	117	63	GRANOVET_M(1973)78:1360
69	392	63	LANCICHI_A(2011)6:0018961
70	388	63	GUIMERA_R(2003)68:065103
71	1533	63	WHITE_D(1983)5:193
72	4889	63	JEONG_H(2000)407:651
73	1083	63	NEWMAN_M(2004)70:056131
74	14941	62	BAK_P(1989)94:15635
75	387	62	GLEISER_P(2003)6:565
76	717	62	ARENAS_A(2006)96:114102
77	17322	61	BAK_P(1988)38:364
78	9124	59	CARLSON_J(1989)62:2632
79	2027	58	BICKEL_P(2009)106:21068
80	230	58	BADER_G(2003)4:2
81	4460	57	CARTWRIG_D(1956)63:277
82	2156	57	WU_F(2004)38:331
83	2151	54	DONETTI_L(2004):P10012
84	958	53	SALES-PA_M(2007)104:15224
85	2860	53	BRANDES_U(2008)20:172
86	5109	53	SPIRIN_V(2003)100:12123
87	861	51	PORTER_M(2009)56:1082
88	1515	51	SAILER_L(1978)1:73
89	89	51	PALLA_G(2007)446:664
90	244	50	JEONG_H(2001)411:41
91	23229	50	BURT_R(1982) :
92	231	49	BARABASI_A(2004)5:101
93	216	49	POTHEN_A(1990)11:430
94	411	49	ZHANG_S(2007)374:483
95	22347	49	BROWN_S(1991)18:215
96	692	49	DOREIAN_P(2005) :
97	2621	49	SCHAEFFE_S(2007)1:27
98	2114	49	VANDONGE_S(2000) :
99	2050	49	NEWMAN_M(2002)89:208701
100	2217	48	HOFMAN_J(2008)100:258701
101	16958	48	BOORMAN_S(1976)81:1384
102	223	47	SHEN_H(2009)388:1706
103	8330	47	MOLLOY_M(1995)6:161
104	3805	46	KUMPULA_J(2007)56:41
105	1597	46	ERDOS_P(1960)5:17
106	743	46	LI_Z(2008)77:036109
107	261	46	ASHBURNE_M(2000)25:25
108	3777	45	ENRIGHT_A(2002)30:1575
109	1452	45	HOFF_P(2002)97:1090
110	2578	45	VONLUXBU_U(2007)17:395
111	3990	44	DAVIS_A(1941) :
112	1609	44	NEWMAN_M(2003)67:026126
113	187	44	FIEDLER_M(1973)23:298
114	974	43	ADAMIC_I(2005):36
115	5573	43	DAVIS_J(1967)20:181
116	4512	43	MILO_R(2002)298:824
117	841	42	KIRKPATR_S(1983)220:671
118	193	42	GREGORY_S(2010)12:103018
119	1463	42	KLEINBER_J(1999)46:604
120	2804	42	SHANNON_P(2003)13:2498

Table 3: Output degrees

Rank	Vertex	Cluster	Id
1	1008	863	BOCCALET_S (2006) 424:175
2	9139	456	TURCOTTE_D (1999) 62:1377
3	399	417	NEWMAN_M (2003) 45:167
4	163	399	FORTUNAT_S (2010) 486:75
5	30604	321	SIBLEY_C (2012) 12:505
6	65979	310	FRANK_K (1998) 23:171
7	8184	297	KAWAMURA_H (2012) 84:839
8	2239	281	DOROGOVT_S (2002) 51:1079
9	8401	275	ARENAS_A (2008) 469:93
10	10842	255	BURT_R (1980) 6:79
11	759	254	WU_F (1982) 54:235
12	1592	208	ALBERT_R (2002) 74:47
13	4965	204	JAIN_A (1999) 31:264
14	42301	200	GRABHER_G (2006) 30:163
15	66177	198	AXT_V (1998) 70:145
16	14176	186	FOGGIA_P (2014) 28:1450001
17	1546	178	ROSSI_R (2015) 27:1112
18	207	175	LU_L (2011) 390:1150
19	69171	174	DAHMEN_K (1996) 53:14872
20	10474	169	AGGARWAL_C (2014) 47:10
21	32083	168	MARKA_S (2012) 1260:55
22	57714	168	RUNDLE_J (2003) 41:1019
23	17049	168	ROBINS_G (2013) 57:261
24	66555	167	FOOKES_P (1997) 30:293
25	38192	166	PAVLOPOU_G (2011) 4:
26	29794	160	MARSDEN_P (1990) 16:435
27	802	158	MALLIARO_F (2013) 533:95
28	45680	155	XU_P (2009) 27:636
29	135	153	MCPHERSO_M (2001) 27:415
30	28532	152	GULATI_R (1999) 104:1439
31	1381	152	ARABIE_P (1978) 17:21
32	17447	150	JIMENEZ_A (2013) 61:1325
33	48084	148	WANG_J (2008) 19:183
34	47409	148	MYERS_J (2008) 45:909
35	5047	148	WANG_Y (2014) 362:53
36	22158	147	CAYLEY_R (2011) 58:113
37	22272	145	MOORE_D (2013) 23:1581
38	46772	141	LEYDESDO_L (2008) 17:611
39	16578	140	YEN_I (2009) 68:338
40	29499	136	IGNJATOV_J (2012) 26:1
41	54907	135	TALMUD_I (1994) 23:109
42	68587	133	TUCKER_D (1996) 70:400
43	67789	133	VANDEVIJ_F (1997) 47:263
44	926	131	BARABASI_A (2011) 12:56
45	11859	130	FRANZ_N (2014) 30:294
46	16441	129	ZHANG_S (2007) 7:2856
47	23045	127	KUSANO_M (2013) 63:31
48	22568	126	POLLITZ_F (2010) 181:665
49	22157	125	CAYLEY_R (2011) 19:628
50	52004	124	ROUNDS_J (1996) 43:310

Table 4: Cited only works with largest indegree

Rank	Vertex	Cluster	Id
1	124	251	WASSERMA_S (1994) :
2	597	170	LORRAIN_F (1971) 1:49
3	154	88	KERNIGHA_B (1970) 49:
4	4330	71	SCOTT_J (2000) 2ND:
5	112	67	NEWMAN_M (2010) :
6	134	67	ERDOS_P (1959) 6:290
7	680	51	PORTER_M (2009) 56:1082
8	21782	50	BURT_R (1982) :
9	1802	49	VANDONGE_S (2000) :
10	2267	49	SCHAEFFES (2007) 1:27
11	563	49	DOREIAN_P (2005) :
12	1355	46	ERDOS_P (1960) 5:17
13	3520	44	DAVIS_A (1941) :
14	785	43	ADAMIC_L (2005) :36
15	9285	42	BURT_R (1992) :
16	815	41	BORGATTI_S (2002) :
17	593	41	KNUTH_D (1993) :
18	6349	40	GAREY_M (1979) :
19	1344	40	NEWMAN_M (2006) :
20	20588	40	HARARY_F (1965) :
21	7398	39	DOROGOVT_S (2003) :
22	23282	39	HOMANS_G (1950) :
23	1182	36	CHUNG_F (1997) :
24	1867	34	FALOUTSO_M (1999) 29:251
25	9761	34	MEADE_B (2005) 110:2004JB003209
26	1875	33	PONS_P (2008) 10:191
27	6361	32	BOLLOBAS_B (1985) :
28	50648	32	NADEL_S (1957) :
29	4796	32	MASLOV_S (2002) 296:910
30	1630	31	LESKOVEC_J (2009) 6:29
31	49	30	LESKOVEC_J (2010) :631
32	8345	30	SCHOLZ_C (1990) :
33	2001	29	NG_A (2002) 14:849
34	3649	29	BREIGER_R (1976) 41:117
35	4343	29	WATTS_D (1999) :
36	5191	28	HARARY_F (1953) 2:143
37	14284	27	BATAGELJ_V (1998) 21:47
38	10354	27	MORENO_J (1934) :
39	1175	27	BURT_R (1983) :
40	17568	27	NEWCOMB_T (1961) :
41	3657	26	HANNEMAN_R (2005) :
42	6667	26	GOLDBERG_D (1989) :
43	21026	26	GUTENBER_B (1956) 9:1
44	2858	25	LESKOVEC_J (2008) :695
45	11203	25	FIENBERG_S (1981) :156
46	8085	24	HARTIGAN_J (1975) :
47	3945	24	BORGATTI_S (1992) 22:1
48	15247	24	COLEMAN_J (1966) :
49	1869	24	GFELLER_D (2005) 72:056135
50	1746	24	PASTOR-S_R (2001) 87:258701
51	10458	24	MCCAFFRE_R (2002) 30:101
52	41492	24	HARARY_F (1969) :
53	643	24	STREHL_A (2003) 3:583
54	630	24	DANON_I (2005) 2005:
55	10022	24	SAMPSON_S (1969) :
56	566	24	MACQUEEN_J (1967) 1:281
57	35477	24	HEIL_G (1976) 21:26
58	4104	24	VONMERIN_C (2002) 417:399
59	3996	23	SHEN-ORR_S (2002) 31:64
60	484	23	TURCOTTE_D (1997) :

Table 5: Cited only works with largest indegree

Rank	Vertex	Cluster	Id
61	3686	23	GAVIN_A(2006)440:631
62	907	23	LESKOVEC_J(2007)1:1232727
63	25049	23	GUTENBER_B(1954):
64	6153	23	JAIN_A(1988):
65	5729	23	ALTAF-UL_M(2006)7:207
66	43591	23	KANAMORI_H(1975)65:1073
67	163	23	PIZZUTI_C(2008)5199:1081
68	646	23	BLATT_M(1996)76:3251
69	10065	23	PRICE_D(1965)149:510
70	9758	23	MCCAFFRE_R(2005)110:2004JB003307
71	1154	23	SUN_J(2007):687
72	8425	23	PASTOR-S_R(2001)86:3200
73	4090	22	NICOSIA_V(2009):P03024
74	29240	22	HUANG_J(1990)17:223
75	1589	22	ROSVALL_M(2011)6:0018209
76	1286	22	SCHWARZ_G(1978)6:461
77	20589	22	HEIDER_F(1958):
78	149	22	ERIKSEN_K(2003)90:148701
79	4661	22	DENOY_W(2005):
80	1138	22	BACKSTRO_L(2006):44
81	4528	22	KROGAN_N(2006)440:637
82	17569	22	SAMPSON_S(1968):
83	2177	22	BULLMORE_E(2009)10:186
84	16048	21	SHAW_B(1992)97:479
85	922	21	KRAUSE_A(2003)426:282
86	16367	20	CALDAREL_G(2007):
87	15866	20	STRAUSS_D(1990)85:204
88	13882	20	FEDER_H(1991)66:2669
89	6693	20	LIBEN-NO_D(2007)58:1019
90	6663	20	BARRAT_A(2008):
91	2681	20	KANNAN_R(2004)51:497
92	9743	20	DEMETS_C(1990)101:425
93	19273	20	RICE_J(1993)98:9885
94	18	20	KARYPIS_G(1998)20:359
95	9037	20	RUAN_J(2008)77:016104
96	68	20	NEWMAN_M(2004)69:26113
97	3853	19	HUANG_D(2009)4:44
98	7688	19	MOKKEN_R(1979)13:161
99	7439	19	GRASSBER_P(1994)49:2436
100	7304	19	COHEN_R(2000)85:4626
101	7278	19	MILGRAM_S(1967)2:60
102	6783	19	FREY_B(2007)315:972
103	6622	19	OMORI_F(1894)7:111
104	5685	19	BRANDES_U(2006):
105	170	19	BU_D(2003)31:2443
106	632	19	JACCARD_P(1901)37:547
107	10016	19	HUBBELL_C(1965)28:377
108	9744	19	DEMETS_C(1994)21:2191
109	9644	19	DONGEN_S(2000):
110	9627	19	GAVIN_A(2002)415:141
111	585	19	DONATH_W(1973)17:420
112	2275	19	BRON_C(1973)16:575
113	4396	19	EISEN_M(1998)95:14863
114	4321	19	BOLLOBAS_B(1998):
115	33	19	WHITE_S(2005):
116	8341	19	LANGER_J(1991)67:1043
117	4088	18	GREGORY_S(2007)4702:91
118	8120	18	RICE_J(1983)50:343
119	912	18	XU_X(2007):824
120	6772	18	TRIVERS_J(1969)32:425

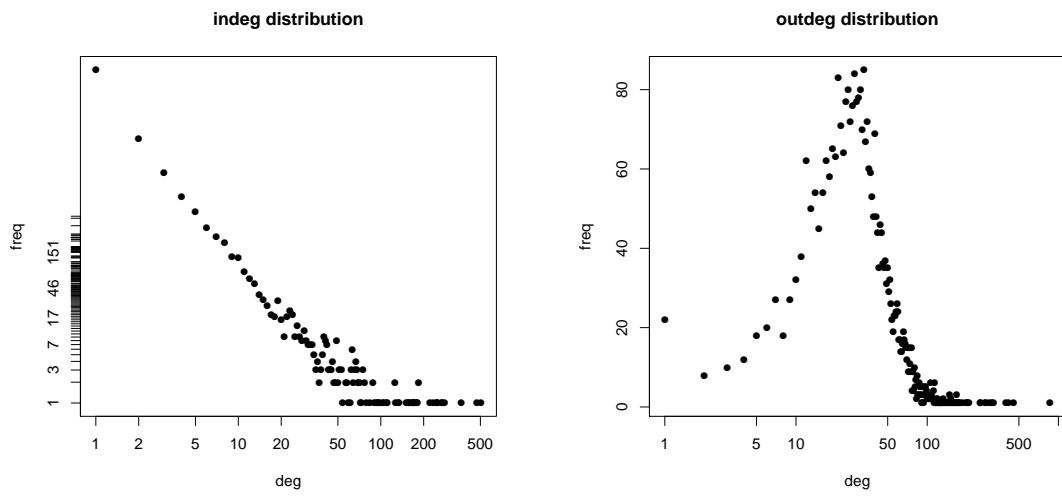


Figure 1: Indegrees and outdegrees in citation network.

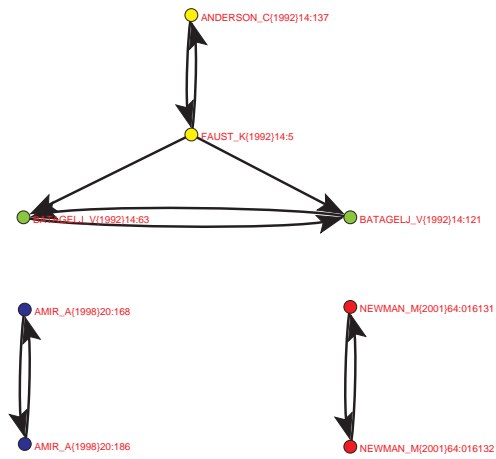


Figure 2: Cyclic part of citation network.

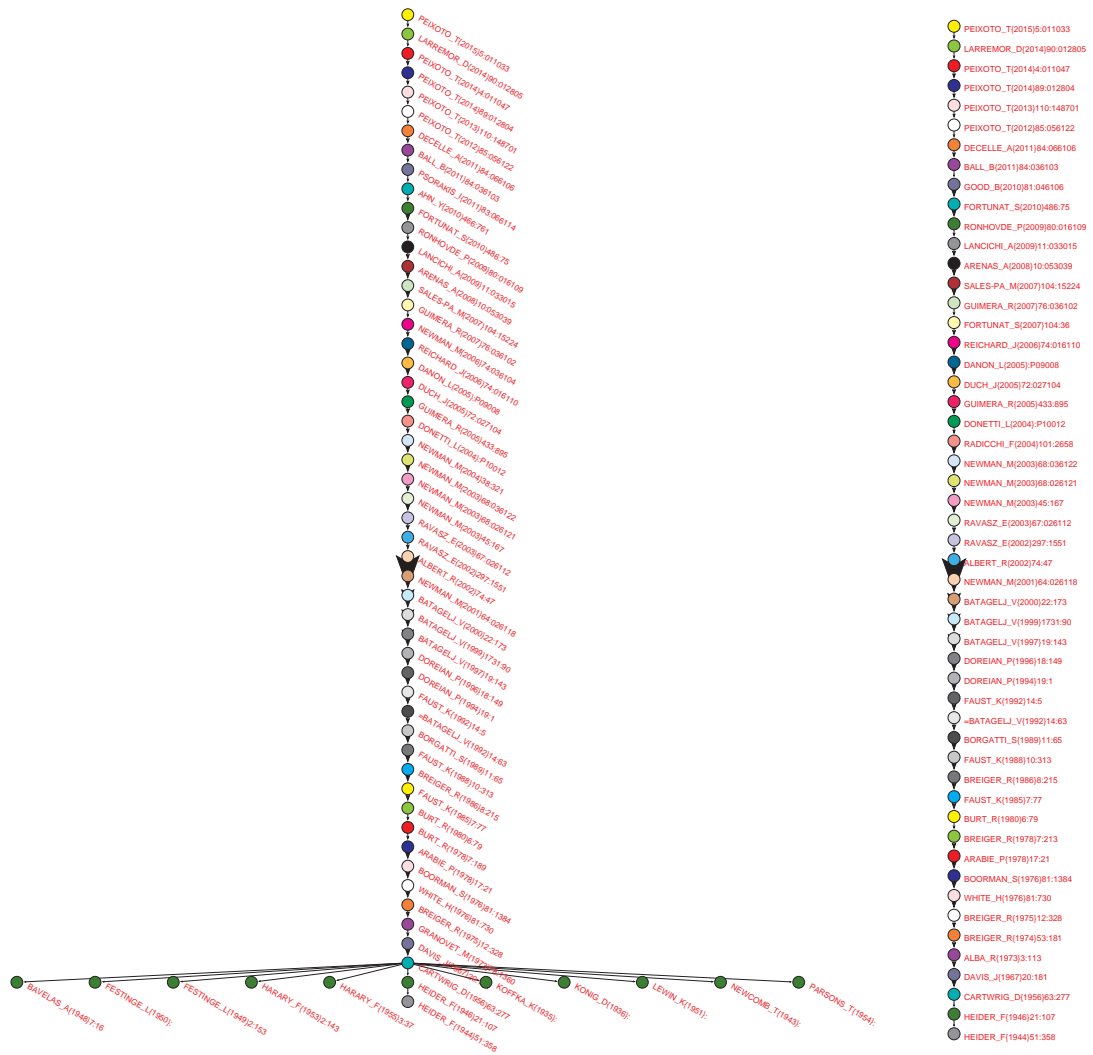


Figure 3: Main path and critical path.

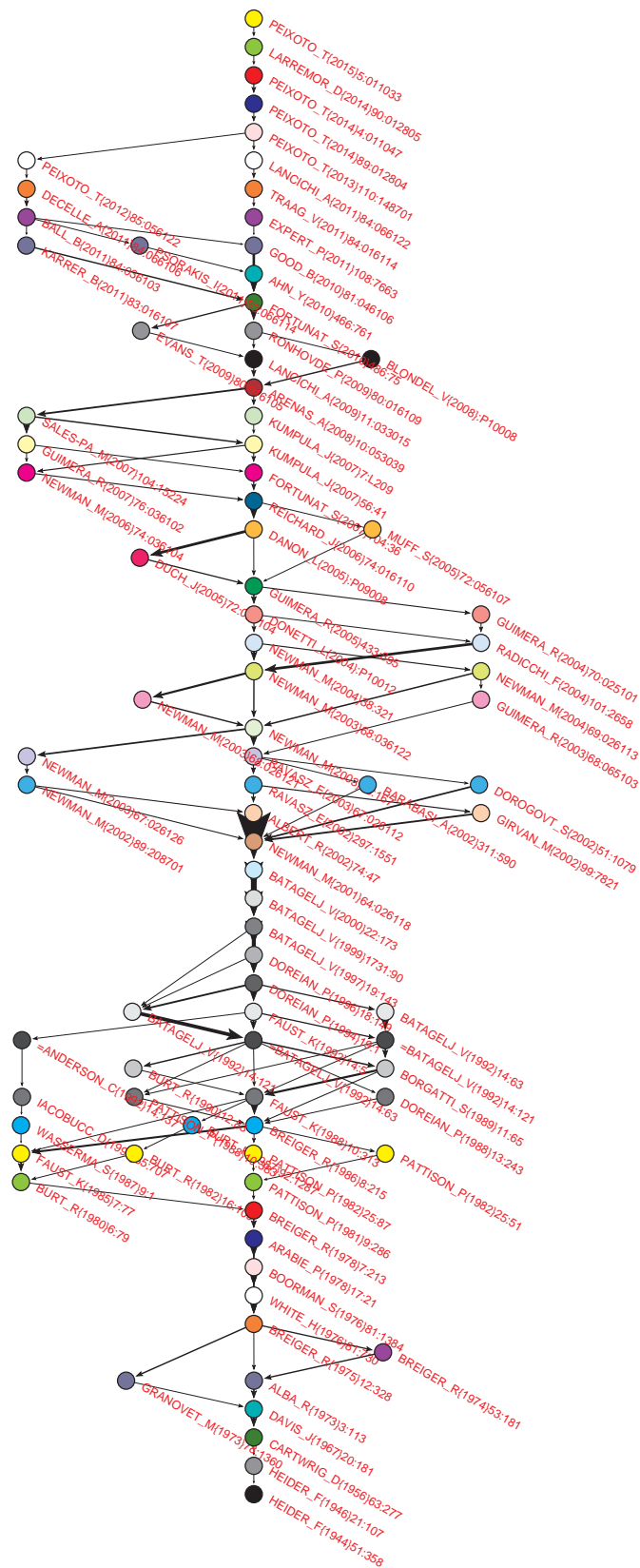


Figure 4: Main paths.

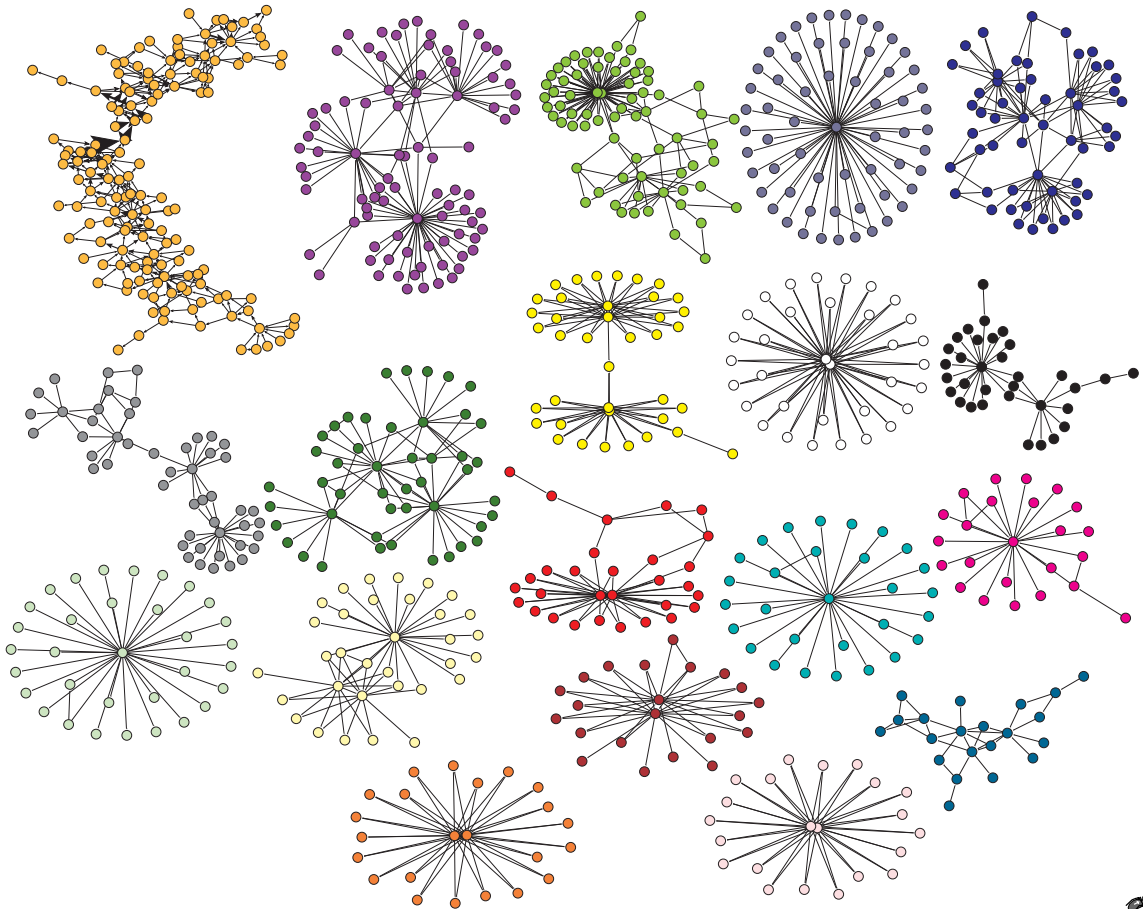


Figure 5: SPC islands.

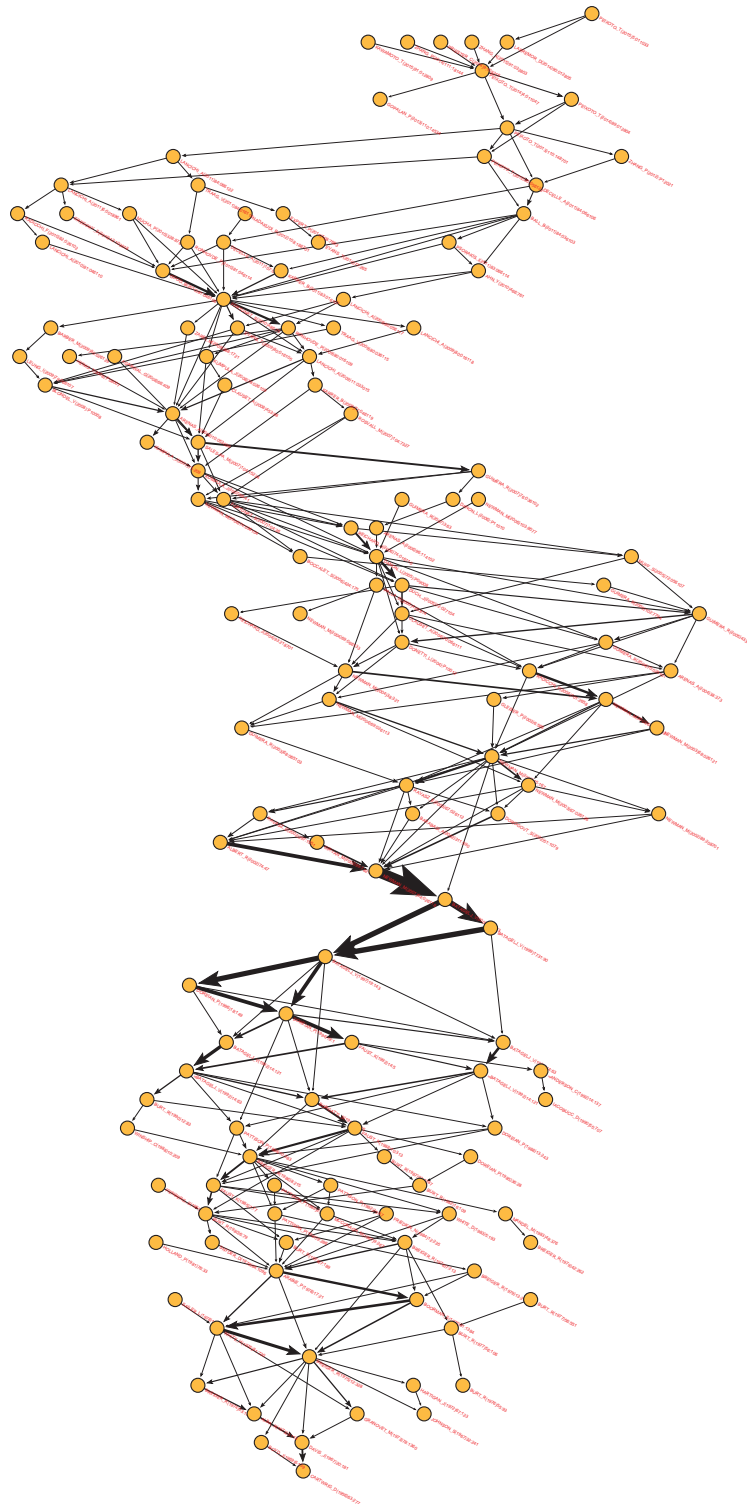


Figure 6: SPC island 1A (143 nodes).

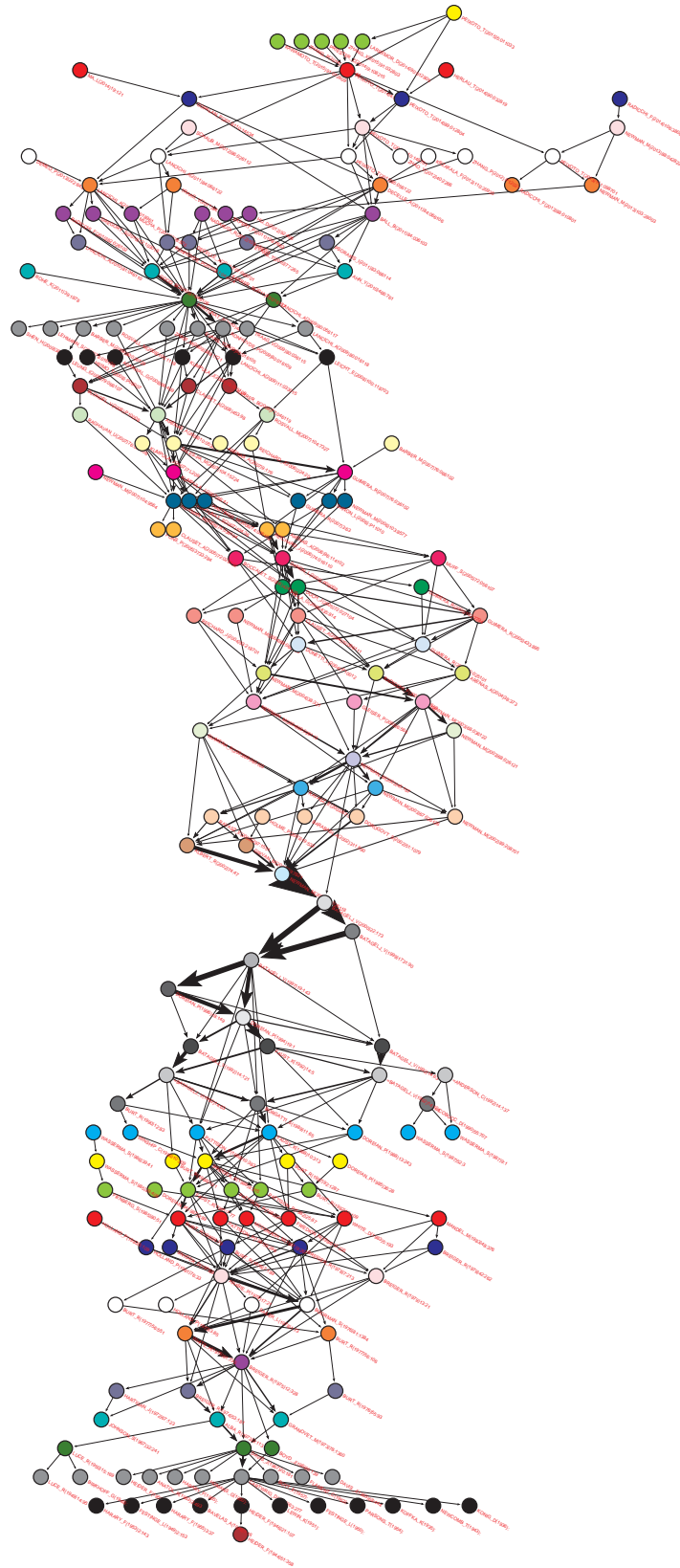


Figure 8: SPC island 1B (199 nodes).

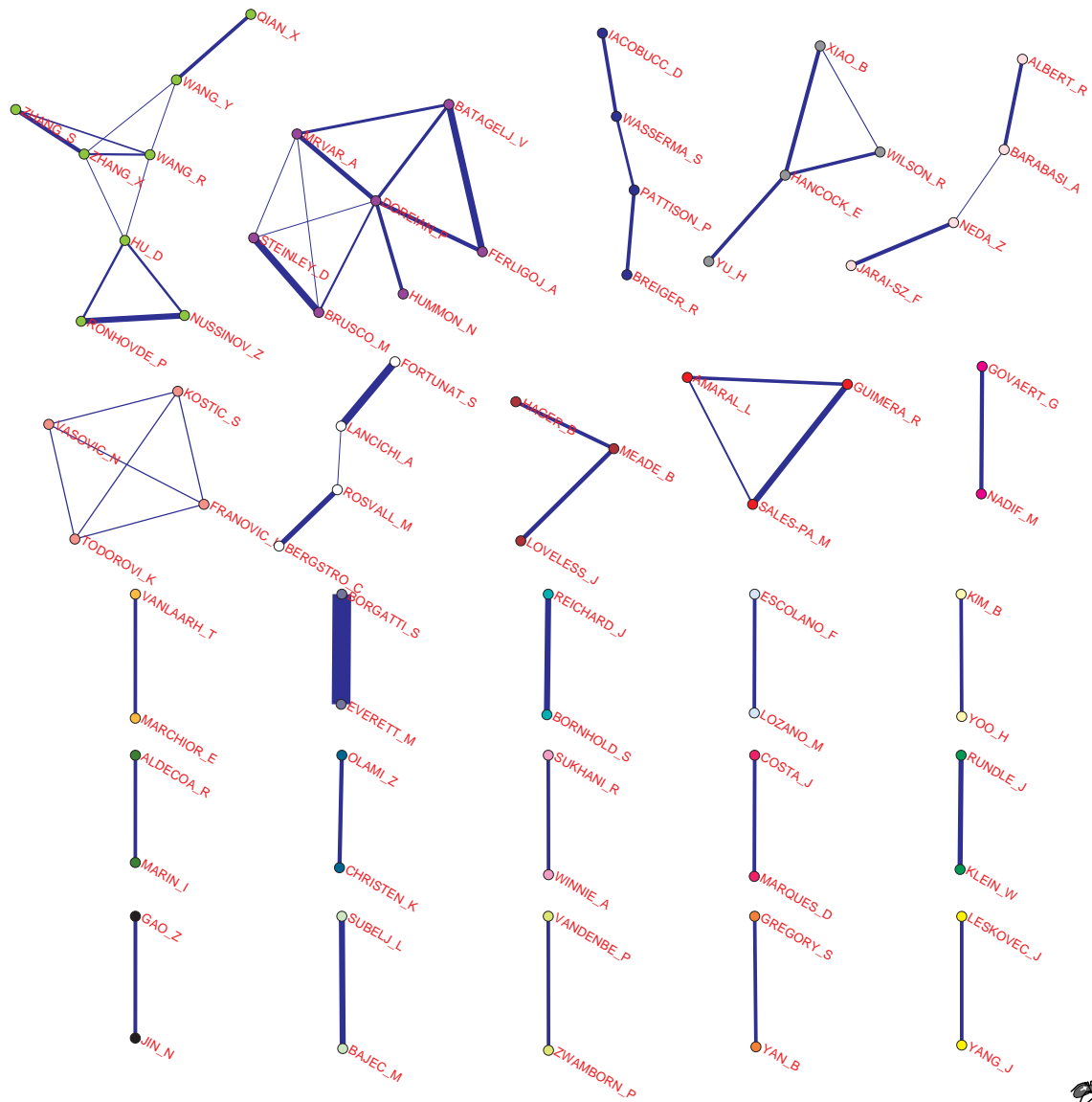


Figure 9: Collaboration / co-authorship.

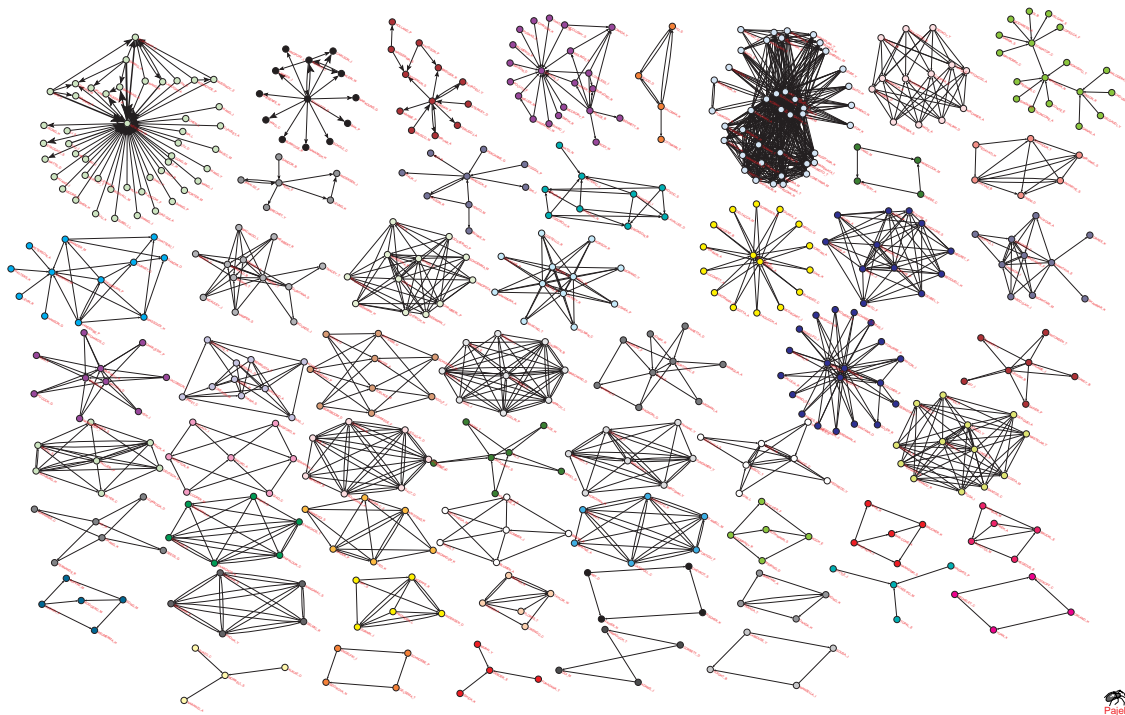


Figure 10: Author citations.

References

- [1] de Nooy, W., Mrvar, A., Batagelj, V.: *Exploratory Social Network Analysis with Pajek* (Structural Analysis in the Social Sciences), revised and expanded second edition. Cambridge University Press, Cambridge, 2012.