

**Supplemental file: all clusters and keywords for each map**  
**-for reviewers-**

**Table 1. The 2012-2016 clusters with authors' keywords**

<b>Cluster rank</b>	<b>Cluster theme</b>	<b>No. of keywords</b>	<b>Keywords' list</b>
1	Public sphere, new media, and social movements (red cluster)	24	2012 election; activism; Arab spring; communication; cyberactivism; echo chambers; framing; homophily; Israel; Middle East; mobilization; new media; online activism; polarization; political activism; protest; public sphere; selective exposure; social change; social movements; social network analysis; webometrics; youth; youtube
2	Internet, social networks, and political participation (green cluster)	19	Celebrity politics; citizenship; civic engagement; deliberation; digital activism; digital media; e-democracy; e-government; e-participation; icts; internet; news; political discussion; political engagement; political participation; political parties; protests; social networks; young people
3	Social media, gender, and public opinion (blue cluster)	19	Australia; collective action; Egypt; elections campaigns; gender; Indonesia; Iran; network analysis; online political participation; opinion leadership; political efficacy; public debate; public opinion; revolution; social media; social networking sites; social networking sites (sns); spiral of silence; women
4	Twitter, elections, and journalism (yellow cluster)	16	Agenda setting; citizen journalism; debate; election campaign; elections; gatekeeping; journalism; mainstream media; newspapers; Norway; participation; political discourse; second screen; technology; television; twitter
5	Politics, Big Data, and privacy (purple cluster)	15	Big Data; Canada; capitalism; China; google; media studies; news media; photography; political economy; politics; privacy; social networking; surveillance; United States; web 2.0
6	Media, Spain, and emotions (turquoise cluster)	10	Emotions; identity; indignados; Malaysia; media; networks; political; rhetoric; social movement; Spain
7	Facebook, social network sites, and ethics (orange cluster)	8	Algorithms; discourse; ethics; Facebook; information; mass media; networked publics; social network sites
8	Political communication, content analysis, and	7	Affect; content analysis; election; normalization; online media; political communication; politicians

	election (brown cluster)		
9	Sentiment analysis, digital methods, and diffusion (pink cluster)	6	Computational social science; diffusion; digital methods; machine learning; microblogging; sentiment analysis
10	Interactivity and democracy (pink powder cluster)	4	Democracy; interactivity; political campaigns; public relations
11	Campaigns and social network (light green cluster)	2	Campaigns; social network

**Table 4. The 2017-2021 clusters with authors' keywords**

Cluster rank	Cluster Theme	No. of keywords	Keywords' list
1	Twitter, Trump, and public opinion (red cluster)	42	<b>Brexit</b> ; Canada; Catalonia; computational social science; computer-mediated communication; critical discourse studies; digital communication; digital politics; discourse analysis; <b>far-right</b> ; framing; hashtag; identity; internet memes; Iran; Italy; leadership; local government; <b>migration</b> ; multiculturalism; <b>narrative</b> ; <b>nationalism</b> ; networks; online activism; opinion leaders; political campaigning; political discussion; political leaders; political news; political protest; public discourse; public opinion; referendum; <b>refugee crisis</b> ; refugees; regional elections; social media analysis; topic models; <b>Trump</b> ; Turkey; <b>Twitter</b> ; twitter data
2	Social media, gender, and Big Data (green cluster)	40	Activism; affect; affordances; <b>alt-right</b> ; <b>authoritarianism</b> ; Big Data; civic engagement; collective action; comparative research; connective action; deliberation; democracy; digital journalism; digital media; Facebook groups; feminism; gatekeeping; gender; Hong Kong; icts; incidental exposure; incivility; media; media studies; mediation; network analysis; news media; online discussion; political discourse; political ideology; political talk; protest; resistance; <b>social media</b> ; social media platforms; social movements; surveillance; technology; Thailand; young people

3	Facebook, internet, and algorithms (blue cluster)	32	Accountability; Africa; algorithms; artificial intelligence; authenticity; celebrity; citizenship; Colombia; content moderation; digital activism; education; ethics; Ethiopia; <b>Facebook</b> ; google; governance; infrastructure; internet; Kenya; Latin America; Nigeria; online communities; platform; platform governance; platforms; political economy; popular culture; race; regulation; religion; violence; Zimbabwe
4	Social networks, political parties, and Spain (yellow cluster)	31	Agenda; alternative media; Arab spring; campaigns; citizen journalism; civil society; communication; Egypt; <b>electoral campaigns; electoral debates; general election</b> ; Indonesia; information; interaction; journalists; mass media; neoliberalism; new media; newspapers; participation; political behavior; political information; political participation; political parties; political science; power; social networks; South Africa; Spain; television; youth
5	Covid-19, fake news, and disinformation (purple cluster)	24	Affective polarization; altmetrics; Australia; campaigning; Chile; climate change; coronavirus; Covid-19; credibility; crisis communication; disinformation; fact-checking; fake news; filter bubble; infodemic; news; pandemic; pandemics; post-truth; public health; sentiment; social network; social networking sites; South Korea
6	Political communication, populism, and election (turquoise cluster)	23	Automated content analysis; campaign; comparative; content analysis; election; election campaign; Hungary; Instagram; interactivity; issue ownership; normalization; Norway; online communication; personalization; political communication; populism; populist communication; presidential elections; Sweden; text mining; United States; user engagement; virality
7	Polarization, misinformation, and emotions (orange cluster)	22	Agenda setting; congress; echo chamber; emotions; filter bubbles; intersectionality; misinformation; motivated reasoning; news consumption; news sharing; online news; online political participation; partisanship; polarization; political advertising; political campaigns; political interest; political knowledge; political polarization; right-wing populism; selective exposure; survey
8	Sentiment analysis, social network analysis, and machine learning (brown cluster)	21	Classification; computational methods; data mining; deep learning; digital diplomacy; digital platforms; election prediction; engagement; journalism; machine learning; natural language processing; online social networks; Pakistan; political elections; political marketing; privacy; public diplomacy; sentiment analysis; social network analysis; text analysis; topic modeling
9	Public sphere, hate	21	Corpus linguistics; Denmark; European parliament;

	speech, and propaganda (pink cluster)		European Union; hashtag activism; hate speech; identity politics; influencers; islamophobia; misogyny; online deliberation; political conversation; politicians; propaganda; public sphere; racism; representation; social influence; social network sites; violence against women; youtube
10	Memes, rhetoric, and hashtags (pink powder cluster)	16	Argumentation; digital methods; election campaigns; hashtags; humor; humour; India; influence; infotainment; irony; memes; Narendra Modi; politics; rhetoric; terrorism; tweets
11	Elections, Russia, and agenda-setting (light green cluster)	13	Agenda-setting; bots; Brazil; China; elections; Germany; homophily; political journalism; Russia; spiral of silence; UK; Ukraine; Weibo
12	Discourse, ideology, and emotion (light blue cluster)	12	Collective identity; critical discourse analysis; discourse; emotion; ideology; influencer; media agenda; Mexico; online campaigning; political engagement; social movement; women
13	Immigration, censorship, and voting (light yellow cluster)	10	#metoo; censorship; e-democracy; Fiji; immigration; Israel; mobilization; voting, web 2.0; whatsapp
14	Donald Trump, and presidential election (lilac cluster)	4	Donald Trump; electoral campaign; Hillary Clinton; presidential election

**Table 5. All the cluster and keywords for Facebook publications (2012-2021)**

Cluster rank	Cluster theme	No. of keywords	Keywords' list
1	Fake news, disinformation, and misinformation (red cluster)	29	Bangladesh; Brexit; censorship; collective identity; corpus linguistics; critical discourse analysis; Denmark; diaspora; discourse; discourse analysis; disinformation; e-democracy; fact-checking; fake news; Fiji; hate speech; ideology; immigration; islamophobia; Mexico; misinformation; motivated reasoning; persuasion; propaganda; racism; right-wing populism; social movement; university students; voting
2	Social media, politics, and social movements (green cluster)	27	Activism; Arab Spring; citizenship; civil society; contentious politics; digital activism; human rights; identity; indignados; Malaysia; media; Middle East; neoliberalism; occupy; online participation; online politics; participation; political activism; political behavior; politics; protest; social change; social media; social movements; Thailand; Ukraine; youth
3	Facebook, political participation, and election (blue cluster)	26	Affective polarization; cross-cutting exposure; echo chambers; election; emotion; <b>Facebook</b> ; filter bubbles; framing; incidental exposure; media use; network analysis; online campaigning; online engagement; political disagreement; political discussion; political expression; political interest; political knowledge; political participation; political polarization; Russia; selective exposure; social influence; social network sites; social networking sites; spiral of silence
4	Big Data, algorithms, and privacy (yellow cluster)	25	Accountability; algorithm; algorithms; apps; big data; capitalism; classification; content moderation; data protection; ethics; Germany; google; infrastructure; online comments; platform; platform capitalism; platform governance; platforms; political advertising; political economy; power; privacy; regulation; surveillance; United States
5	Political parties, democracy, and political discourse (purple cluster)	23	Democracy; digital journalism; homophily; interactivity; New media; New Zealand; news media; normalization; online media; polarization; political campaigns; political conversation; political discourse; political marketing; political parties; politicians; public sphere; Singapore; sns; topic modeling; Turkey; unfriending; user engagement
6	Content analysis, online news, and news sharing (turquoise cluster)	22	Civility; comparative research; content analysis; disagreement; experiment; government; in-depth interviews; incidental news exposure; Indonesia; interaction; mass media; nationalism; news consumption; news sharing; newspapers; online news; online political expression; personalization; political public relations; public relations; social network analysis; strategy

7	Gender, online activism, and Hong Kong (orange cluster)	21	Agenda setting; alternative media; Arab uprisings; audience; citizen journalism; counterpublics; Egypt; Egyptian revolution; gender; Hong Kong; internet memes; intersectionality; online activism; political efficacy; political mobilization; political protest; public opinion; social media activism; social networking sites; Spain; survey
8	Affect, digital media, and technology (brown cluster)	20	Affect; affordances; Australia; authoritarianism; China; deliberation; digital media; everyday politics; Facebook groups; feminism; identity politics; incivility; intimacy; Latin America; online deliberation; online discussion; political talk; popular culture; queer theory; technology
9	Political communication, populism, and elections (pink cluster)	19	Automated content analysis; campaign; campaigns; digital literacy; elections; emotions; ethos; higher education; Hungary; Israel; negativity; online communication; political communication; populism; populist communication; refugee crisis; rhetoric; text mining; virality
10	Social networks, internet, and memes (pink powder cluster)	18	Civic engagement; credibility; digital culture; education; electoral campaigns; humor; icts; internet; memes; online campaigns; online communities; political information; post-truth; protests; social networks; television; whatsapp; young people
11	Election campaigns, engagement, and e-participation (light green cluster)	14	Canada; e-government; e-participation; election campaigns; engagement; Italy; local government; Norway; political engagement; political news; social network; social networking; Sweden; web 2.0
12	Journalism, information, collective action (light blue cluster)	13	Collective action; communication; digital platforms; governance; information; Iran; journalism; media consumption; mobilization; online political participation; refugees; social media use; women
13	Election campaign, and political leaders (light yellow cluster)	12	Africa; election campaign; Ethiopia; ict; internet governance; Kenya; Nigeria; political leaders; presidential elections; regional elections; South Africa; Zimbabwe
14	Covid-19, twitter, and Instagram (lilac cluster)	12	Chile; computational social science; coronavirus; Covid-19; digital methods; Instagram; Karl Marx; news; political campaigning; sentiment analysis; twitter; youtube

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**Table 6. All the clusters and keywords for Twitter publications (2012-2021)**

<b>Cluster rank</b>	<b>Cluster theme</b>	<b>No. of keywords</b>	<b>Keywords' list</b>
1	Social media, gender, and social movements (red cluster)	41	Activism; affect; agenda setting; <b>alt-right</b> ; collective action; connective action; corpus linguistics; critical discourse studies; cyberactivism; diffusion; e-democracy; echo chamber; Egypt; emotion; emotions; European elections; European parliament; feminism; gender; hashtag activism; images; intersectionality; Iran; Kenya; misogyny; networked framing; networked publics; online activism; online communication; opinion mining; political elections; political protest; protests; representation; revolution; social media; social movements; survey; text analysis; Venezuela; violence
2	Political communication, social networks, and elections (green cluster)	39	Agenda; audience; campaigns; candidates; cyberpolitics; debate; debates; <b>election campaign; elections; electoral campaign; electoral campaigns; electoral debates; general election</b> ; hybridization; information; interaction; journalism; journalists; mass media; media agenda; newspapers; participation; Podemos; political agenda; political communication; political information; political parties; power; presidential debates; press; public agenda; second screen; social networks; social tv; sources; Spain; television; TV; users
3	Social network analysis, Trump, and sentiment analysis (blue cluster)	38	Canada; classification; community detection; computational methods; computational social science; computer-mediated communication; critical discourse analysis; data mining; deep learning; digital communication; digital diplomacy; election prediction; foreign policy; identity; influencer; machine learning; Malaysia; mediatization; meme; migration; mixed methods; narrative; natural language processing; online social networks; Pakistan; political discourse analysis; president; public discourse; public opinion; refugees; sentiment analysis; social influence; social network; social network analysis; text analytics; text mining; <b>Trump</b> ; Turkey

4	Fake news, disinformation, and misinformation (yellow cluster)	32	Australia; authenticity; campaigning; Catalonia; celebrity politics; comparative research; digital methods; disinformation; election campaigns; engagement; Europe; fake news; filter bubble; influencers; misinformation; New Zealand; news; personalization; political advertising; political campaigns; political engagement; political knowledge; political marketing; politician; politicians; post-truth; privacy; self-presentation; sentiment; social media analytics; social media and politics; South Korea
5	Framing; political discourse; political polarization (purple cluster)	32	#metoo; affordances; blogs; bots; campaign; communication; conflict; congress; echo chambers; election; framing; Indonesia; information diffusion; Instagram; Israel; language; Middle East; mobilization; partisanship; polarization; political discourse; political ideology; political polarization; Qatar; resistance; selective exposure; social bots; spiral of silence; topic modeling; voting; women; youtube
6	Populism; Brexit, and Russia (turquoise cluster)	31	Agenda-building; agenda-setting; Brazil; Brexit; far-right; Germany; hate speech; homophily; islamophobia; multiculturalism; nationalism; online abuse; opinion leaders; party competition; political discussion; political journalism; political leaders; populism; public diplomacy; referendum; regional elections; religion; Russia; social media analysis; soft power; Switzerland; topic models; twitter data; UK; webometrics; Zimbabwe
7	Twitter, internet, and public sphere (orange cluster)	25	Africa; agenda building; Austria; content analysis; digital activism; ideology; interactions; interactivity; international communication; internet; mediatization; methodology; network analysis; networks; normalization; online campaigning; opinion leadership; parties; political journalists; popular culture; public sphere; publics; quantitative; Twitter; United States
8	Facebook, gatekeeping, and news media (brown cluster)	24	Attitudes; automated content analysis; comparative; contentious politics; Facebook; gatekeeping; hyperlinks; image; indignados; intermedia agenda setting; leadership; mainstream media; news media; Norway; occupy; online news; online political participation; political campaign; political participation; presidential elections; social media use; social networking sites; sourcing; Sweden
9	Donald Trump, discourse, and race (pink cluster)	23	Algorithms; artificial intelligence; authority; automation; black twitter; citizen journalism; citizenship; Colombia; content moderation; democratization; discourse; <b>Donald Trump</b> ; google; <b>Hillary Clinton</b> ; <b>immigration</b> ; neoliberalism; platforms; political correctness; political homophily; political performance; presidential election; race; South Africa



10	Media, propaganda, and China (pink powder cluster)	23	Argumentation; China; civic engagement; credibility; digital; discourse analysis; e-participation; environment; influence; media; mediation; networked public sphere; photography; political; propaganda; protest; rhetoric; social movement; technology; tweets; visual; weibo; youth
11	New media, democracy, and authoritarianism (light green cluster)	21	Arab spring; authoritarianism; celebrity; civil society; conservation; crisis; democracy; digital politics; e-government; European Union; Habermas; hashtag; Kuwait; new media; political campaigning; political science; prediction; social change; social networking; topic modelling; web 2.0
12	Memes, irony, and digital media (light blue cluster)	14	Deliberation; digital media; hashtags; humor; humour; hybrid media system; India; infotainment; irony; memes; Narendra Modi; radicalization; terrorism; trending topics
13	Politics, Big data, and climate change (light yellow cluster)	13	Big Data; climate change; communication studies; ethics; icts; incivility; media studies; microblogging; political economy; politics; public engagement; science communication; social network sites
14	Covid-19, pandemic, and coronavirus (lilac cluster)	12	Altmetrics; coronavirus; Covid-19; crisis communication; fact-checking; infodemic; institutional communication; Latin America; nodexl; pandemic; pandemics; public health