

Inspec Analytics user guide:

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Inspec Analytics home page

<https://inspec-analytics-app.theiet.org>

On the home page there are links to the different analytics sets you can explore, with a description of the kind of insights you can find in each.

The screenshot shows the Inspec Analytics home page. At the top left is the Inspec logo. At the top right is the text 'Inspec Analytics'. Below this is a dark purple navigation bar containing four links: 'About', 'What's new', 'User guide', and 'Contact us'. The main heading is 'Welcome to Inspec Analytics'. Below the heading is a short paragraph: 'Explore the interconnected data within Inspec to uncover patterns and trends in engineering, computing & physics research to understand your place in a global landscape. With these precision research analytics, you can set the direction for your research outputs and monitor their impact.' There are three large cards, each with a network visualization background. The first card is titled 'Organisations' and shows '26,584 Organisations'. The second card is titled 'Subject classifications' and shows '3,567 Subject classifications'. The third card is titled 'Controlled terms' and shows '9,967 Controlled terms'. Each card has a brief description and a search button. At the bottom of the page is a dark blue 'News' section with the text 'Find out everything you need to know about the latest features in Inspec Analytics' and a right-pointing arrow.

- a) Organisations: Click on the organisations box to view and search all organisations on the [organisations list page](#).
- b) Subject classifications: Click on the subject classifications box to view and search all subject classifications on the subject classifications list page.
- c) Click on the controlled terms box to view and search all controlled terms on the [controlled terms list page](#).

At the top of each page, you'll also find links to useful information about Inspec Analytics:

- d) About: Find out more about Inspec Analytics.
- e) What's new: Take a look at the latest features from Inspec Analytics.

- f) User guide: Download or browse the Inspec Analytics user guide.
 - g) Contact us: Find contact details for your regional representative and technical support.
-

Organisations

Organisations List Page

The screenshot displays the 'Organisations' page in the IET Inspec Analytics interface. The page includes a navigation bar with 'About', 'What's new', 'User guide', and 'Contact us'. The main content area is titled 'Organisations' and features a search bar, a date range filter (From 2013 To 2018), and an 'Export as PDF' button. The data is presented in two main sections: a list of organisations and a table of Inspec Classification Counts.

#	Organisation	Articles	Inspec Classification Counts							
			A - Physics		B - Electrical engineering and electronics		C - Computers and control		E - Mechanical and production engineering	
			Count	Coverage	Count	Coverage	Count	Coverage	Count	Coverage
1	Tsinghua University Beijing, China Academic	41951	19016	79.7%	21175	91.2%	14174	87%	7477	98.1%
2	Harbin Institute of Technology Harbin, China Academic	30109	12829	66%	12578	87.5%	11322	84.5%	7658	96.8%
3	Shanghai Jiao Tong University Shanghai, China Academic	28494	12731	71.6%	13443	88.6%	10220	83.3%	6202	95.6%
4	Zhejiang University Hangzhou, China Academic	27565	12460	68.5%	12853	87.3%	9642	84.2%	6330	96.2%

Understanding the view

- Click on an organisation name to go to the corresponding [organisation profile page](#). Organisations appear listed in order of research output indexed in Inspec with the highest total number of articles at the top.
- The number of articles is also shown by Inspec classifications: A- Physics, B- Electrical engineering and electronics, C- Computers and control, E- Mechanical and production engineering.
- The coverage column indicates the breadth of coverage the articles cover under each classification e.g. If the articles cover half of the Physics classification codes in Inspec, the coverage will be 50%. This is a good indicator of how specialised an organisation's research output is; two organisations may publish the same number of articles within 'Physics' but one could be a general research organisation, whereas the other only publishes on, for example, astronomy.

Reordering your results

The screenshot shows the 'Organisations' page in IET Inspec Analytics. The table displays data for four organisations. Annotations 'a)' and 'b)' point to the 'Articles' and 'A - Physics' columns respectively.

#	Organisation	Inspec Classification Counts									
		Articles	A - Physics	B - Electrical engineering and electronics		C - Computers and control		E - Mechanical and production engineering			
		Count	Coverage	Count	Coverage	Count	Coverage	Count	Coverage	Count	Coverage
1	Tsinghua University Beijing, China Academic	41951	19016 (79.7%)	21175	91.2%	14174	87%	7477	98.1%		
2	Harbin Institute of Technology Harbin, China Academic	30109	12829 (66%)	12578	87.5%	11322	84.5%	7658	96.8%		
3	Shanghai Jiao Tong University Shanghai, China Academic	28494	12731 (71.6%)	13443	88.6%	10220	83.3%	6202	95.6%		
4	Zhejiang University Hangzhou, China Academic	27565	12460 (68.5%)	12853	87.3%	9642	84.2%	6330	96.2%		

- Click on "Articles" to reverse the order of your results with the lowest number of articles at the top.
- Click on the one of the subject classification counts to reorder your results by that subject e.g. A- Physics.

Navigating your results

The screenshot shows a single row for the University of Michigan. Annotations 'a)', 'b)', and 'c)' point to the 'Show rows' dropdown, the 'Go to' box, and the navigation arrows respectively.

25	University of Michigan Ann Arbor, USA Academic	16352	10177 (79.1%)	6173 (85.3%)	4928 (80.8%)	2268 (93.7%)
----	--	-------	---------------	--------------	--------------	--------------

Navigation controls: Show rows: 25, Go to: 1, 1 - 25 of 26,584

- Reveal more results per page using the drop-down at the bottom of the table
- or jump to a row by typing a row number in the "Go to" box.
- Click through to the next page using the arrows.

Filtering your search

The screenshot shows the 'Organisations' page with a search bar at the top containing 'Harvard'. A dropdown menu is open, listing various Harvard-related institutions. Annotations are as follows:

- a)** Points to the search bar containing 'Harvard'.
- b)** Points to the date range filter 'From 2013 To 2018'.
- c)** Points to the 'Advanced' search options button.

#	Organisation	Articles	A - Physics	Coverage
1	Tsinghua University Beijing, China Academic	27565	12460	68.5%
2	Harbin Institute of Technology Harbin, China Academic	12853	87.3%	96.8%
3	Shanghai Jiao Tong University Shanghai, China Academic	9642	84.2%	95.6%
4	Zhejiang University Hangzhou, China Academic	6330	96.2%	

- Search for an organisation using the search box at the top of the table. Start typing to see suggestions or click search to see results including your search term.
- Filter the date range of your results using the "From" and "to" drop-down selections.
- Click "Advanced" to see advanced search options:

The screenshot shows the 'Advanced' search options for 'Imperial'. Annotations are as follows:

- i.** Points to the 'Include' dropdown menu.
- ii.** Points to the 'Organisation name' dropdown menu.
- iii.** Points to the '+ Add another condition' button.
- iv.** Points to the search results dropdown menu.
- v.** Points to the 'Advanced' search options button.
- vi.** Points to the 'Apply' button.

#	Organisation	Articles	A - Physics	Coverage
1	Tsinghua University Beijing, China Academic	41951	19016	79.7%
2	Harbin Institute of Technology Harbin, China Academic	30109	12829	66%

- Use the drop-down to select "Include" or "Exclude" search terms.

- ii. Search with an organisation name, location or organisation type.
 - iii. Add multiple conditions. Each condition will be treated as "OR".
 - iv. Search for whole words, partial words or start typing to see suggestions and select an organisation.
 - v. Remove conditions by clicking on the corresponding "X" or by clicking "remove all".
 - vi. Click "Apply" to see your results.
-

Comparing organisations

Organisations Export as PDF

From 2013 To 2018

Compare selected organisations Search for an organisation Advanced

#	Organisation	Articles	Inspec Classification Counts							
			A - Physics		B - Electrical engineering and electronics		C - Computers and control		E - Mechanical and production engineering	
			Count	Coverage	Count	Coverage	Count	Coverage	Count	Coverage
<input checked="" type="checkbox"/>	1 Tsinghua University Beijing, China Academic	41951	19016	79.7%	21175	91.2%	14174	87%	7477	98.1%
<input checked="" type="checkbox"/>	2 Harbin Institute of Technology Harbin, China Academic	30109	12829	66%	12578	87.5%	11322	84.5%	7658	96.8%
<input checked="" type="checkbox"/>	3 Shanghai Jiao Tong University Shanghai, China Academic	28494	12731	71.6%	13443	88.6%	10220	83.3%	6202	95.6%
<input checked="" type="checkbox"/>	4 Zhejiang University Hangzhou, China Academic	27565	12460	68.5%	12853	87.3%	9642	84.2%	6330	96.2%
<input type="checkbox"/>	5 Beihang University Beijing, China Academic	26541	9643	66.7%	10682	88.4%	12422	84.9%	6796	96.2%
<input checked="" type="checkbox"/>	6 Max-Planck-Gesellschaft zur Forderung der Wissenschaften Munchen, Germany Academic	23991	22180	83.7%	3357	70.5%	2109	67.6%	458	75.9%

- a) Select up to five organisations from your results.
- b) Click "Compare selected organisations" to open the [organisation comparison page](#).

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Organisation Profile

About What's new User guide Contact us

Home > Organisations > Massachusetts Institute of Technology

Massachusetts Institute of Technology

Cambridge, USA

Academic

a) [Export as PDF](#)

Organisations

Massachusetts Institute of Technology

Subject classifications

Controlled terms

Collaborating organisations

Compare organisations g)

Controlled terms

Subject classifications

Articles per year

Total : 20221

c) Rank & Articles

Rank

15 of 26,584

organisations by article output, based upon

20,221

articles published from 2013 - 2018

d) Subject classifications

Subject Classification	Coverage	Articles	Global rank (Rank applicable from 2013 - 2018)
A - Physics	82.5%	12629	12 of 20918
B - Electrical engineering and electronics	88.7%	7683	22 of 18811
C - Computers and control	81.7%	5924	18 of 19000
E - Mechanical and production engineering	95.6%	1862	113 of 16275

e) Collaborations ii.

Organisation	Collaborations
1. Harvard University Cambridge, USA Academic	932
2. California Institute of Technology Pasadena, USA Academic	707
3. University of California Berkeley Berkeley, USA Academic	691
4. Istituto Nazionale di Fisica Nucleare Frascati, Italy Academic	652

Total collaborating organisations : 2615

f) Top controlled terms

Controlled term	Articles	Global rank (Rank applicable from 2013 - 2018)
1. learning (artificial intelligence) iii.	652	12 of 7147
2. optimisation	533	30 of 7776
3. silicon	482	7 of 4649
4. proton-proton inclusive interactions	448	5 of 744
5. elemental semiconductors	422	9 of 4114
6. computational complexity	415	5 of 4610
7. high-energy elementary particle interactions	407	5 of 730
8. probability	377	13 of 6364
9. cellular biophysics	371	18 of 6628

Total terms : 6745

Inspec Analytics may be unavailable every Wednesday from 11am - 12pm GMT while we provide scheduled maintenance updates and enhancements.

Inspec Analytics

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Homepage

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Subject Classification Drill Down

Trend Chart

Concept Pages

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FAQs

Contact

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Understanding the view

- a) For each tile on the page, you'll see an "i" icon. Hover over the icon for a description of the information displayed.
- b) Articles per year graph: This line graph shows the total number of articles indexed for each year in the last five years. Hover over each point to see the figures.
- c) Rank and articles tile: The overall organisation ranking is displayed in a dedicated tile so you can see the total number of articles at a glance and where this output ranks the organisation among the others indexed in Inspec. The ranking is currently based on the total number of articles.
- d) Subject classifications table: This shows the subject coverage, number of articles and global ranking for each top-level Inspec subject classification. Click on the heading to go to the [subject classifications page](#) for your selected organisation. You can also find a link in the left-hand navigation.
- e) Collaboration table: This shows the top 20 organisations that have co-authored items with the organisation you are viewing.
 - i. Click on the organisation name to go to the [organisation profile](#) for that organisation
 - ii. Click on the heading to explore all collaborations for your selected organisation on the [collaborations page](#). You will also find a link in the left-hand navigation.
- f) The Top controlled terms table: this shows the most popular controlled terms from the Inspec thesaurus associated with articles from the organisation you are viewing.
 - i. For each term, you can see the number of articles and the institution's global ranking. The global ranking is based on the number of articles published.
 - ii. Click on a term to visit the [concept page](#) for that term.
 - iii. Click on the heading to explore all control terms for your selected organisation on the [controlled terms page](#). You will also find a link in the left-hand navigation.
- g) In the left-hand navigation you can go straight to the [organisation comparison page](#) by clicking "Compare Organisations".

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Organisation Subject Classifications page

Subject classifications for Massachusetts Institute of Technology

From 2013 To 2018

Legend: A8000 - Cross-disciplinary physics and related areas of science and technology, A0000 - General, A4000 - Fundamental areas of phenomenology

#	Subject classification	Articles	Global rank (Rank applicable from 2013 - 2018)
1	A8000 - Cross-disciplinary physics and related areas of science and technology - (drill down)	3915	34 of 17803
2	A0000 - General - (drill down)	3290	4 of 13638
3	A9000 - Geophysics, astronomy and astrophysics - (drill down)	3150	19 of 11030
4	A4000 - Fundamental areas of phenomenology - (drill down)	2126	12 of 10155
5	A6000 - Condensed matter: structure, thermal and mechanical properties - (drill down)	2081	54 of 11412
6	A7000 - Condensed matter: electronic structure, electrical, magnetic, and optical properties - (drill down)	1575	42 of 9282
7	A1000 - The physics of elementary particles and fields - (drill down)	1231	8 of 3115
8	A2000 - Nuclear physics - (drill down)	836	27 of 4667
9	A5000 - Fluids, plasmas and electric discharges - (drill down)	712	16 of 4696
10	A3000 - Atomic and molecular physics - (drill down)	238	40 of 5356

Annotations: a) Update graph button; b) Breadcrumb trail; c) Chart area; d) Export as PDF button; i. Global rank; ii. Drill down link.

Understanding the view

- a) The table displays all the subject classifications associated with research from your selected organisation.
- i. For each subject you will see the total number of articles and where this output ranks the organisation among all organisations publishing on that subject.
- ii. Click "drill down" to explore the next level of detail. You can drill down up to five levels through the Inspec subject classification thesaurus.
 - An example of this is:
 - Electrical engineering and electronics
 - Power systems and applications
 - Generating stations and plants
 - Thermal power stations and plants
 - Gas-turbine power stations and plants

- b) The "breadcrumb" at the top shows your path. You can click any point in the "breadcrumb" to drill back up to return to higher levels of detail.
- c) To compare output for a number of subjects, select your chosen subjects and click "update graph". The line graph at the top will display the research output for each of your selected subjects over time. Hover over the points to display the number of articles for each year.
- d) Filter the date range of your results using the "From" and "to" drop-down selections.

The galaxy chart

Home > Organisations > Massachusetts Institute of Technology > Subject classifications > A - Physics > Condensed matter: electronic structure, electrical, magnetic, and optical properties > Magnetic properties and materials

Subject classifications for Massachusetts Institute of Technology

Export as PDF

From 2013 To 2018

Trend Chart Galaxy Chart

A7510 - General theory and models of magnetic ordering
Article count : 42
Rank : 70 of 1065 organisations

Update graph

#	Subject classification	Articles	Global rank (Rank applicable from 2013 - 2018)
<input type="checkbox"/> 1	A7550 - Studies of specific magnetic materials - (drill down)	175	78 of 4364
<input type="checkbox"/> 2	A7530 - Magnetically ordered materials, other intrinsic properties - (drill down)	173	80 of 3804
<input type="checkbox"/> 3	A7560 - Magnetic domain effects, magnetization curves, and hysteresis - (drill down)	163	68 of 4377

You can also explore subject classifications for your selected organisation using the galaxy chart view.

- a) Switch to the galaxy chart using the toggle.
- b) Hover over each subject to see the full classification name and number of articles.
- c) A grey circle indicates there are no further levels to view.
- d) The "breadcrumb" at the top shows your path. You can click any point in the "breadcrumb" to drill back up to return to higher levels of detail.

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Collaborating Organisations page

The screenshot shows the 'Organisations collaborating with Imperial College London' page in the IET Inspec Analytics tool. The page includes a navigation menu on the left, a breadcrumb trail, and a main content area. The main content area features a line graph (labeled 'd') showing the number of activities over time (2013-2018) for five organisations. Below the graph is a table (labeled 'a') listing the organisations and their collaboration counts. The table is as follows:

#	Organisation	Collaborations
1	University of Oxford Oxford, UK Academic	622
2	Science and Technology Facilities Council Swindon, UK Academic	616
3	University of Cambridge Cambridge, UK Academic	573
4	University College London London, UK Academic	532
5	University of Bristol Bristol, UK Academic	465
6	University of Manchester Manchester, UK Academic	428
7	Massachusetts Institute of Technology Cambridge, USA	425

Annotations in the image point to various UI elements: 'c)' points to the 'Update graph' button; 'b)' points to the search bar; 'd)' points to the date range selector (From 2013 To 2018).

Understanding the view

- The table displays all the organisations who have collaborated on research with your selected organisation. For each organisation you will see the total number of collaborations.
- Search for an organisation using the search box, or click "Advanced" for advanced search options:

The screenshot shows the advanced search interface. It includes a search form with the following elements:

- i.** A dropdown menu set to 'Include'.
- ii.** A dropdown menu for 'Organisation name'.
- iii.** A search input field containing 'council'.
- iv.** A dropdown menu for 'Organisation type' with 'Academic' selected.
- v.** A search button.
- vi.** 'Apply', 'Cancel', and 'Remove All' buttons.

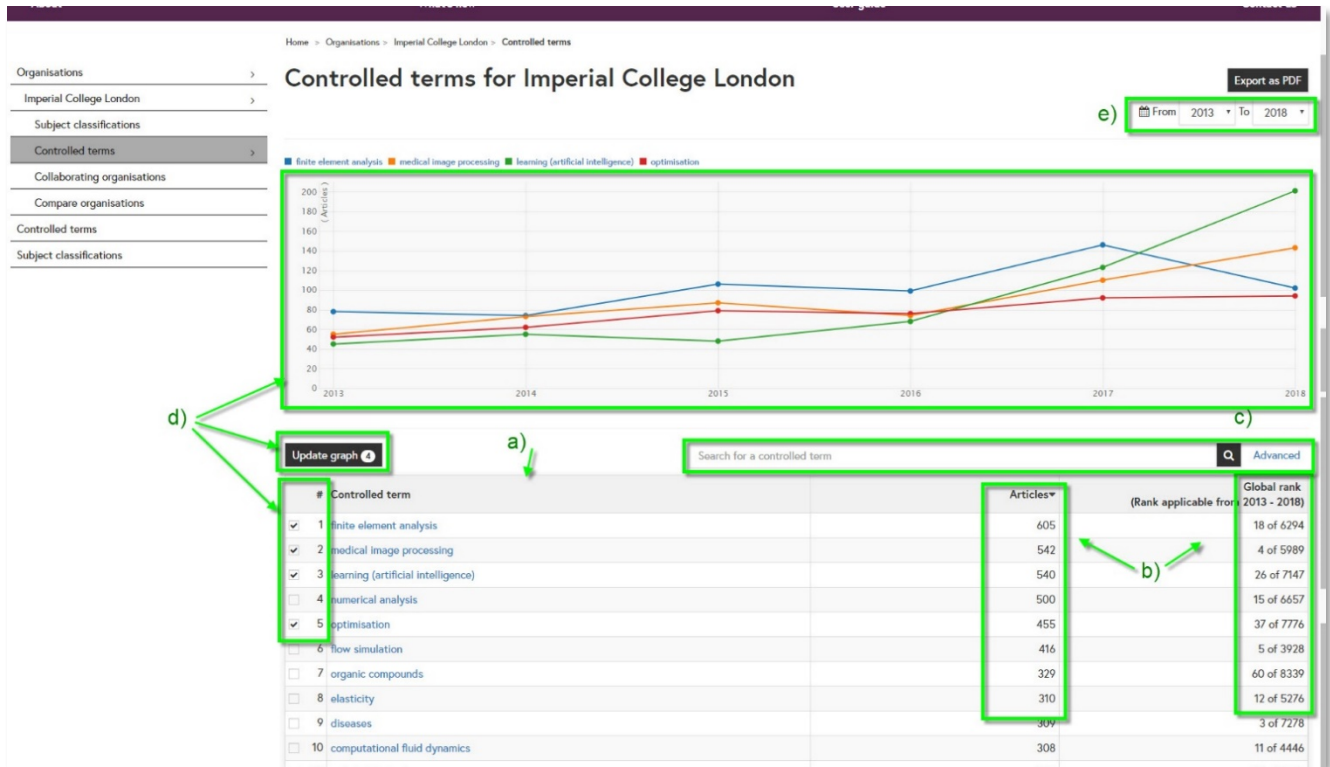
- Use the drop-down to select "Include" of "Exclude" search terms.
- Add multiple conditions. Each condition will be treated as "OR".
- You can filter by the type of organisation to focus on academic or industry collaborations.

- iv. Search for whole words, partial words or start typing to see suggestions and select an organisation.
 - v. Remove conditions by clicking on the corresponding X or by clicking "remove all".
 - vi. Click "Apply" to see your results.
- c) To compare output for a number of collaborations, select your chosen organisations and click "update graph". The line graph at the top will display the research output for each of your selected collaborations over time. Hover over the points to display the number of articles for each year.
- d) Filter the date range of your results using the "From" and "to" drop-down selections.
-

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Organisation Controlled Terms page



Understanding the view

- The table displays all the controlled terms associated with research from your selected organisation.
- For each term you will see the total number of articles and where this output ranks the organisation among all organisations publishing on that subject.
- Search for a term using the search box, or click "Advanced" for advanced search options:

Controlled terms matching: graphene, power, electr

Controlled terms matching: electrochemical electrodes, scanning electron microscopy, transmission electron microscopy, electrical conductivity, electroencephalography, biomedical electronics, electrolytes, electromyography, electron backscattering, biomedical electrodes

Showing 10 of 225 records

#	Controlled term	Articles	Global rank 2013 - 2018
1	finite element analysis	605	18 of 6294
2	medical image processing	542	4 of 5989
3	learning (artificial intelligence)	540	26 of 7147

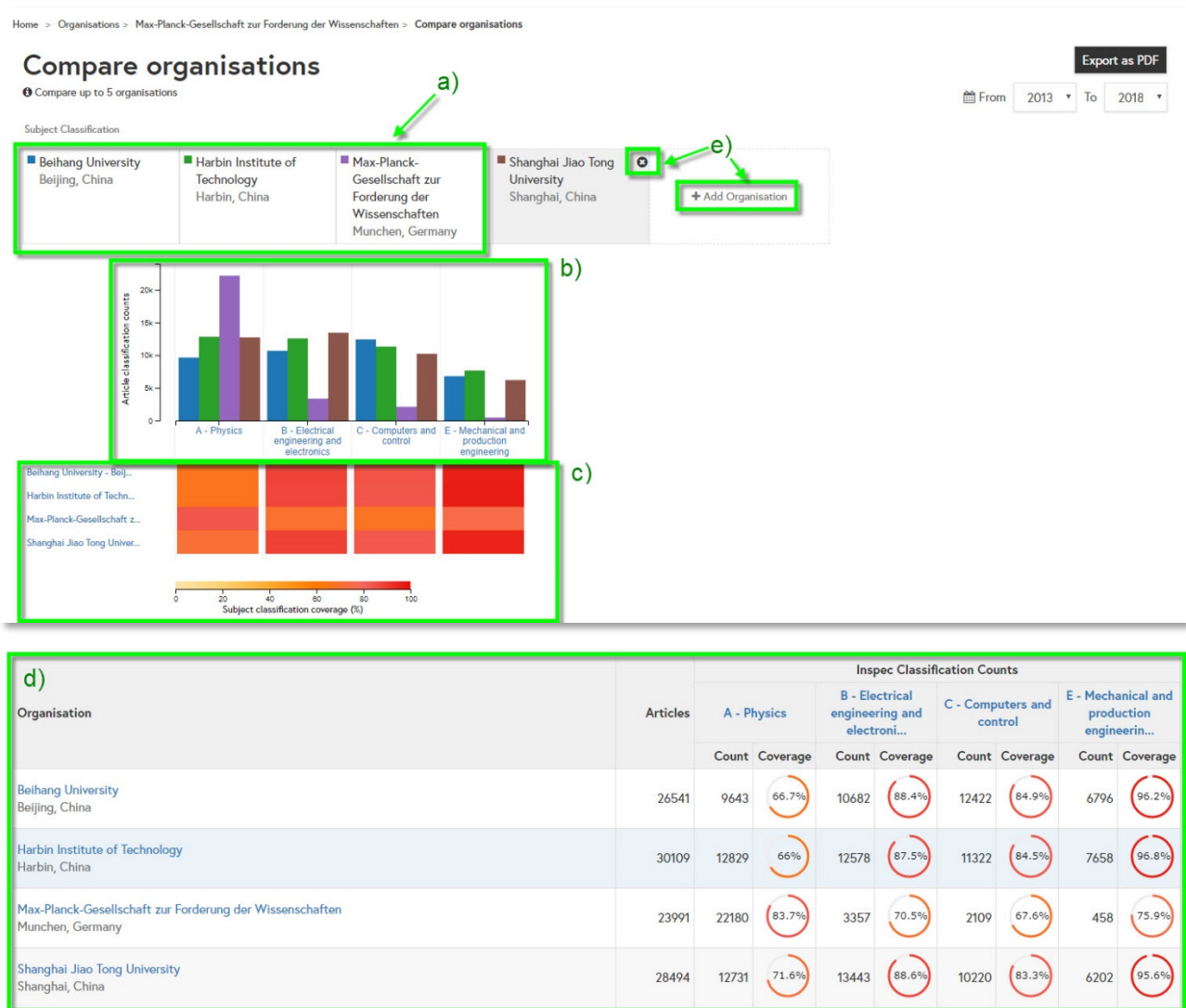
- Use the drop-down to select "Include" of "Exclude" search terms.
- Add multiple conditions. Each condition will be treated as "OR".
- Search for whole words, partial words or start typing to see

- suggestions and select a controlled term.
 - iv. Remove conditions by clicking on the corresponding X or by clicking "remove all".
 - v. Click "Apply" to see your results.
- d) To compare output for a number of terms, select your chosen subjects and click "update graph". The line graph at the top will display the research output for each of your selected subjects over time. Hover over the points to display the number of articles for each year.
- e) Filter the date range of your results using the "From" and "to" drop-down selections.
-

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Organisation Comparison page

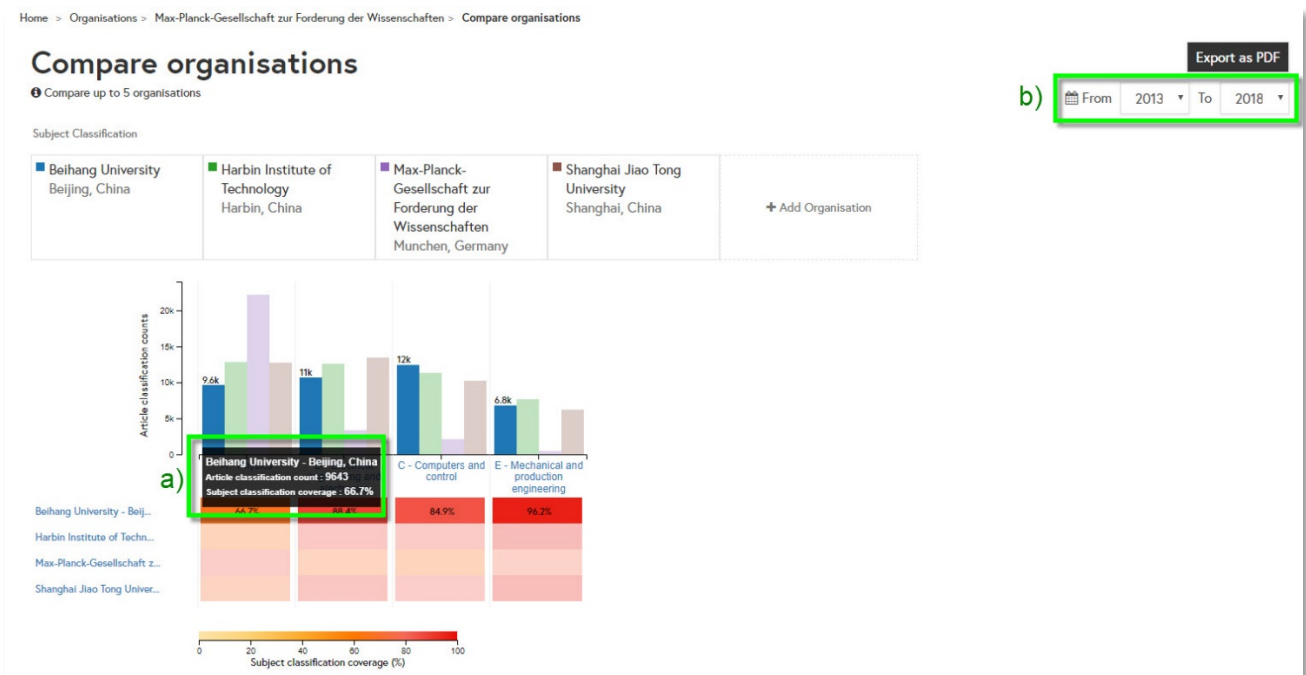


Understanding the view

- A key detailing the organisation name and their corresponding chart colour is shown at the top.
- The histogram shows the total number of articles for each of your selected organisations within each subject classification.
- A heatmap below shows the subject classification coverage for each organisation. The warmer colours indicate a broader coverage within the subject.
- The table below shows the full figures including total number of articles, articles by subject and subject coverage.
- Remove organisations from your comparison by hovering over an organisation name and clicking on the X. Add a new organisation by clicking "Add organisation" and searching for your chosen organisation in the search box. Click on your chosen organisation name to add it to the comparison.

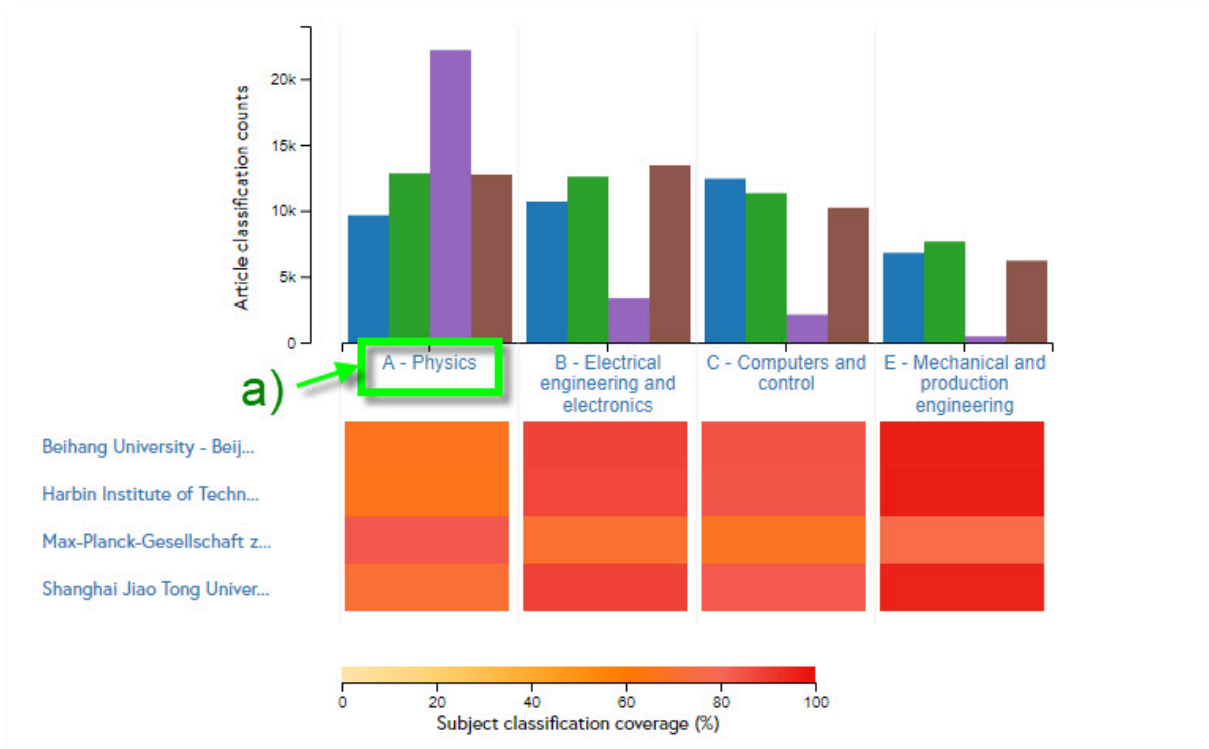
N.B. "Add organisation" only appears when there are less than five organisations in the organisation comparison.

Filtering your view



- Hover over each organisation to highlight it within the charts.
- Filter the date range of your results using the "From" and "to" drop-down selections.

Drilling down through Inspec subject classifications



- a) Click on one of the subject classifications to view the next level of detail:
 You can drill down through up to 5 levels of classification codes to compare organisations at broad or niche levels.

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Controlled terms

Controlled terms list page

Home > Controlled terms

Controlled terms Export as PDF

d) Search for a controlled term Q Advanced

a) #	Controlled term	b) Articles	Co-occurring controlled terms	Co-occurring subject classifications	c) Organisations	Journals	Conferences
1	nanofabrication	150231	4603	1980	7146	1628	891
2	X-ray diffraction	149902	4721	2138	7450	1730	732
3	scanning electron microscopy	134373	5053	2215	7580	1920	974
4	organic compounds	127343	5793	2589	8339	2173	1097

e) [nanofabrication](#)

Understanding the view

- Controlled terms appear listed in order of research output indexed in Inspec with the highest total number of articles at the top.
- For each controlled term you can see the number of articles indexed with the term and the number of co-occurring controlled terms and subject classifications.
- You can also see the number of organisations, journals and conferences associated with articles indexed under each controlled term.
- Search for a controlled term using the search box at the top of the table. Start typing to see suggestions or press "enter" to see results including your search term. Click "Advanced" to see advanced search options:

i.

ii.

v.

Controlled terms matching communication

Controlled terms matching

iii.

iv.

#	Controlled term	Articles	Conferences
1	nanofabrication	150231	891
2	X-ray diffraction	149902	732

Showing 10 of 26 records

- Use the drop-down to select "Include" of "Exclude" search terms.
- Add multiple conditions. Each condition will be treated as "OR".
- Search for whole words, partial words or start typing to see suggestions and select a controlled term.
- Remove conditions by clicking on the corresponding X or by clicking "remove all".
- Click "Apply" to see your results.

- Click on a term to go to the [concept page](#) for that term.

Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Controlled terms concept pages

The concept pages tell you everything you need to know about an Inspec controlled term:

All Inspec articles are assigned several 'controlled terms' – subject keywords – which the article is about. Additionally, several 'subject classification codes' are assigned, which are generally more specific than controlled terms, and also place it on a detailed hierarchy - differentiating between, for example 'Statistics' for differential geometry, within Physics, or 'statistics' for Electrical Engineering, or Computing, or Mechanical Engineering. This contextualisation gives far greater meaning to a keyword than just a single controlled term.

IET Inspec Inspec Analytics

Home > Controlled terms > 4G mobile communication

4G mobile communication Export as PDF

a) Controlled term over time

Year	Count
2013	~500
2014	~600
2015	~550
2016	~500
2017	~550
2018	~450

b) Articles published

2,352 articles published with this controlled term between 2013 - 2018

c) Co-occurring concepts

Controlled term	Count
1. Long Term Evolution	875
2. 3G mobile communication	458
3. cellular radio	405
4. 5G mobile communication	226
5. MIMO communication	211
6. quality of service	203
7. OFDM modulation	202

Total terms: 1270

d) Subject classifications

Subject classification	Count
1. B6000 - Communications	1979
2. B6200 - Telecommunication	1972
3. B6250 - Radio links and equipment	1958
4. B6250F - Mobile radio systems	1942
5. B4100 - Information and communication theory	754
6. B5000 - Electromagnetic fields	556
7. B5300 - Electromagnetic waves	554

Total classifications: 544

e) Top organisations

Organisation	Count
1. Beijing University of Posts and Telecommunications Beijing, China Academic	39
2. Xidian University Xi'an, China Academic	29
3. Samsung Group Seoul, South Korea Corporate	24

Total organisations: 1317

f) Journals

Journal	Count
1. Wireless Personal Communications Letters	50
2. Microwave and Optical Technology Letters	41
3. IEEE Access	30
4. IEEE Communications Magazine	22
5. IEEE Transactions on Vehicular Technology	22
6. Applied Mechanics and Materials	21

Total journals: 273

g) Conferences

Conference	Count
1. 2013 IEEE 77th Vehicular Technology Conference (VTC Spring)	9
2. 2013 IEEE International Conference on Communications (ICC)	8
3. 2013 Fourth International Conference on Computing, Communications and Networking Technologies (ICCCNT)	7
4. 2014 8th European Conference on Antennas and Propagation (EuCAP)	7

Total conferences: 1019

g) Related controlled terms

Broader terms	Narrower terms	Related terms
mobile radio	No records	3G mobile communication 5G mobile communication cellular radio code division multiple access Long Term Evolution packet radio networks WiMax
Total terms: 1	Total terms: 0	Total terms: 7

h) Related Subject classifications

Subject classification
B6250F - Mobile radio systems
E3644L - Communications equipment manufacturing

Total classifications: 2

Understanding the view

- a) The controlled term you are currently viewing.
 - b) This tile shows the number of articles indexed under your selected controlled term.
 - c) This line graph shows the number of articles indexed with your selected controlled term over time. Hover over each point to see the number of articles.
 - d) These tiles show the other controlled terms and subject classifications that are frequently applied alongside your selected term. The number shows how many articles are indexed under both terms and the bar indicates this as a proportion. Click on a term to jump to its concept page.
 - e) The top organisations tile shows which organisations have published the most articles in your selected controlled term. The ranking is based on number of articles indexed in Inspec.
 - i. Click on an organisation name to visit the [organisation profile](#).
 - ii. Click on the heading to see all organisations publishing on this term on the [controlled terms organisations page](#).
 - f) The Journal and Conference tiles show which journals and conferences have published the most articles on this concept.
 - g) The Related controlled terms tables show other related terms such broader terms (less specific), narrower terms (more specific) and related terms. Click on a term to jump to the concept page for that term.
 - h) The Related classification codes table shows related subject areas that may also be of interest.
-

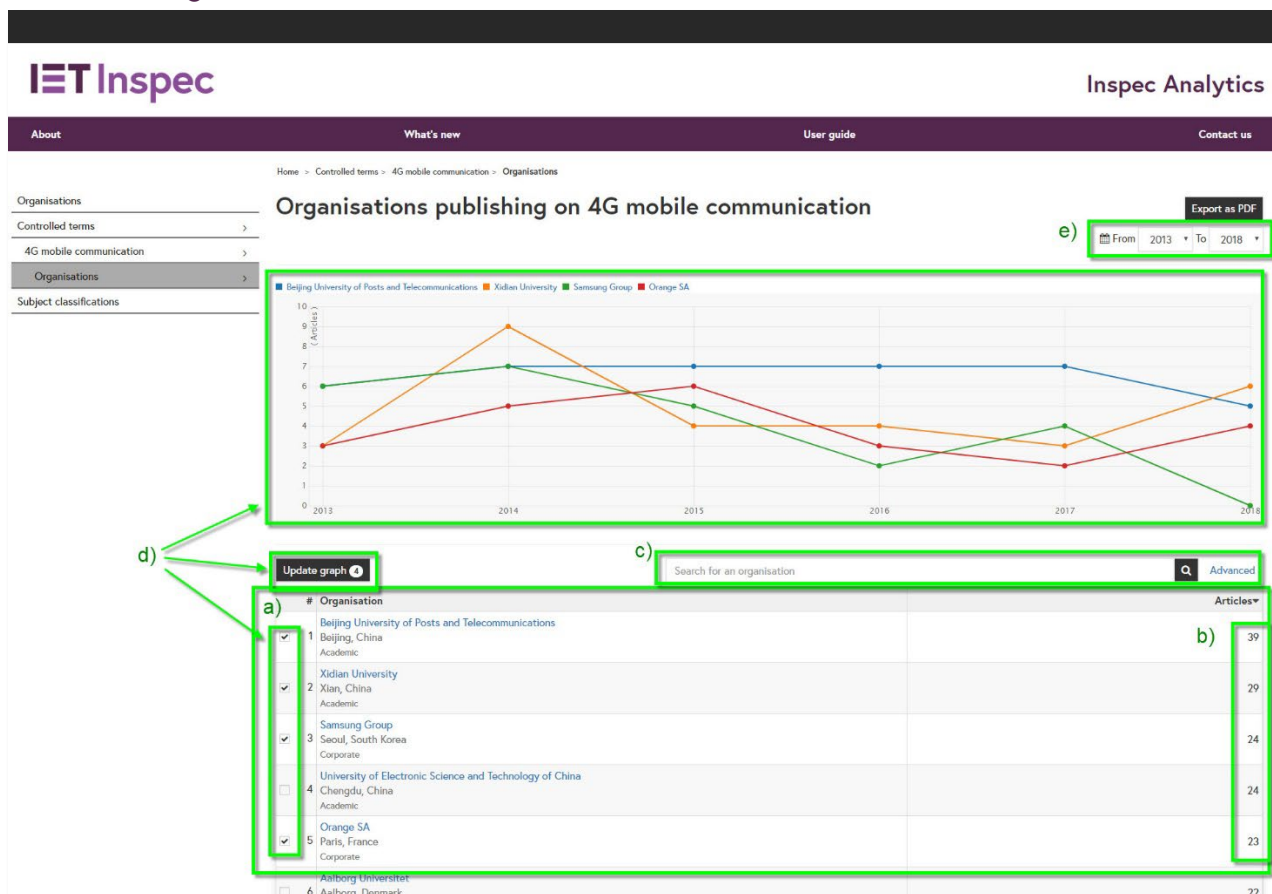
Exporting your insights

Click on "Export as PDF" at the top of the page to download your current view. The PDF includes a link to your view so you can return directly to the data in the future.

Controlled terms organisation pages

The controlled terms organisation pages show you all organisations that have published on your selected controlled term:

Understanding the view



- a) The table displays all the organisations associated with research for your selected controlled term. Organisations appear listed in order of research output indexed in Inspec with the highest total number of articles at the top.
- b) For each organisation you will see the total number of articles.
- c) Search for an organisation using the search box, or click "Advanced" for advanced search options:

The screenshot shows the advanced search interface. On the left, there are three search conditions, each with an 'Include' dropdown and an 'Organisation name' input field. Below these are buttons for '+ Add another condition', 'Apply', 'Cancel', and 'Remove All'. On the right, there is a search box containing 'samsung' and a list of matching results. The results include 'Imperial College London - London, UK', 'MIT', 'Massachusetts Institute of Technology - Cambridge, USA (MIT)', 'Marathwada Mitra Mandal - Pune, India', and 'Mitsubishi Denki Kabushiki Kaisha - Chiyoda-ku, Japan'. There are also buttons for 'Load More' and 'Showing 3 of 3 records'.

- i. Use the drop-down to select "Include" of "Exclude" search terms.
 - ii. Add multiple conditions. Each condition will be treated as "OR".
 - iii. Search for whole words, partial words or start typing to see suggestions and select an organisation.
 - iv. Remove conditions by clicking on the corresponding X or by clicking "remove all".
 - v. Click "Apply" to see your results.
- d) To compare output for a number of organisations, select your chosen organisations and click "update graph". The line graph at the top will display the research output for each of your selected organisations over time. Hover over the points to display the number of articles for each year.
- e) Filter the date range of your results using the "From" and "to" drop-down selections.
-

Exporting your insights

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Subject classifications

Subject classification codes list page

Home > Subject classifications

Subject classifications

Export as PDF

d) Search for a subject classification

#	Subject classification	a)	b)	Articles	Co-occurring controlled terms	Co-occurring subject classifications	c)	Organisations	Journals	Conferences
1	A8000 - Cross-disciplinary physics and related areas of science and technology			1113096	8828	3234		17803	4275	8882
2	B6000 - Communications			721115	8023	2666		13508	3904	11574
3	A6000 - Condensed matter: structure, thermal and mechanical properties			652879	6824	2793		11412	2687	1885
4	C1000 - Systems and control theory			641750	7781	2642		13314	4355	12044
5	B0000 - General topics, engineering mathematics and materials science			628039	8810	3072		13531	4304	11300

Understanding the view

- Subject classifications appear listed in order of research output indexed in Inspec with the highest total number of articles at the top.
- For each subject classification you can see the number of articles indexed with the subject and the number of co-occurring controlled terms and subject classifications.
- You can also see the number of organisations, journals and conferences associated with articles indexed under each subject classification.
- Search for a subject classification using the search box at the top of the table. Start typing to see suggestions or press "enter" to see results including your search term. Click "Advanced" to see advanced search options:

Subject classifications

Export as PDF

Search for a subject classification

i.

ii.

v.

iii. Subject classifications matching

iv.

communications

control

matter

A6000 - Condensed matter: structure, thermal and mechanical properties

A7000 - Condensed matter: electronic structure, electrical, magnetic, and optical properties

A7800 - Optical properties and condensed matter spectroscopy and other interactions of matter with particles and radiation

A6200 - Mechanical and acoustic properties of condensed matter

A7880 - Infrared and Raman spectra and scattering (condensed matter)

A7100 - Electron states in condensed matter

A7200 - Electronic transport in condensed matter

A7855 - Photoluminescence (condensed matter)

A7820 - Optical properties of condensed matter

A7840 - Visible and ultraviolet spectra (condensed matter)

#	Subject classification	Articles	Co-occurring controlled terms	Co-occurring subject classifications	Organisations	Journals	Conferences
1	A8000 - Cross-disciplinary physics and related areas of science and technology	1113096	8828	3234	17803	4275	8882
2	B6000 - Communications	721115	8023	2666	13508	3904	11574

- Use the drop-down to select "Include" of "Exclude" search terms.
- Add multiple conditions. Each condition will be treated as "OR".
- Search for whole words, partial words or start typing to see

- suggestions and select a subject classification.
 - iv. Remove conditions by clicking on the corresponding X or by clicking "remove all".
 - v. Click "Apply" to see your results.
- e) Click on a term to go to the [concept page](#) for that subject classification.
-

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Subject classification codes concept pages

The concept pages tell you everything you need to know about an Inspec subject classification code:

All Inspec articles are assigned several 'controlled terms' – subject keywords – which the article is about. Additionally, several 'subject classification codes' are assigned, which are generally more specific than controlled terms, and also place it on a detailed hierarchy - differentiating between, for example 'Statistics' for differential geometry, within Physics, or 'statistics' for Electrical Engineering, or Computing, or Mechanical Engineering. This contextualisation gives far greater meaning to a keyword than just a single controlled term.

a) B6100 - Information and communication theory Export as PDF

Home » Subject classifications » B6100 - Information and communication theory

Subject classification over time

Year	Count
2013	~80k
2014	~80k
2015	~80k
2016	~80k
2017	~80k
2018	~80k

b) Articles published

547,179
articles published with this subject classification between 2013 - 2018

c) Articles

d) Co-occurring concepts

Controlled terms	Count
1. feature extraction	65131
2. medical image processing	55862
3. image classification	41258
4. learning (artificial intelligence)	39226
5. image segmentation	38109
6. object detection	28954
7. image reconstruction	28127

Total terms : 7697

Subject classifications	Count
1. B6000 - Communications	547179
2. C5000 - Computer hardware	349178
3. C5200 - Logic design and digital techniques	321021
4. C5260 - Digital signal processing	317999
5. B6135 - Optical, image and video signal processing	280964
6. C5260B - Computer vision and	245624

Total classifications : 2549

e) Top organisations

Organisations	Count
1. Tsinghua University Beijing, China Academic	6829
2. Xidian University Xi'an, China Academic	5767
3. University of Electronic Science and Technology of China Chengdu, China Academic	5282

Total organisations : 12414

f) Journals

Journal	Count
1. Proceedings of the SPIE	15613
2. arXiv	9463
3. Applied Mechanics and Materials	5782
4. Proceedings of the SPIE - Progress in Biomedical Optics and Imaging	5204
5. Multimedia Tools and Applications	3511
6. Sensors	3154
7. IEEE Access	3037

Total journals : 3444

g) Conferences

Conference	Count
1. 2013 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)	1480
2. 2014 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)	1293
3. 2014 IEEE International Conference on Image Processing (ICIP)	1053
4. 2016 IEEE International Conference on	998

Total conferences : 9091

g) Related controlled terms

Controlled terms
bandwidth allocation
bandwidth compression
Hadamard matrices
Hadamard transforms
memoryless systems
telecommunication security

Total terms : 6

h) Related subject classifications

Parent	Siblings	Children
B6000 - Communications Total classifications : 1	B6200 - Telecommunication B6300 - Radar and radionavigation B6400 - Radio, television and audio Total classifications : 3	B6110 - Information theory B6120 - Modulation and coding methods B6120B - Codes B6120C - Cryptography B6130 - Speech and audio signal processing B6130C - Speech and audio coding B6130E - Speech recognition and synthesis Total classifications : 20

Inspec Analytics may be unavailable every Wednesday from 11am - 12pm GMT while we provide scheduled maintenance updates and enhancements.

Understanding the view

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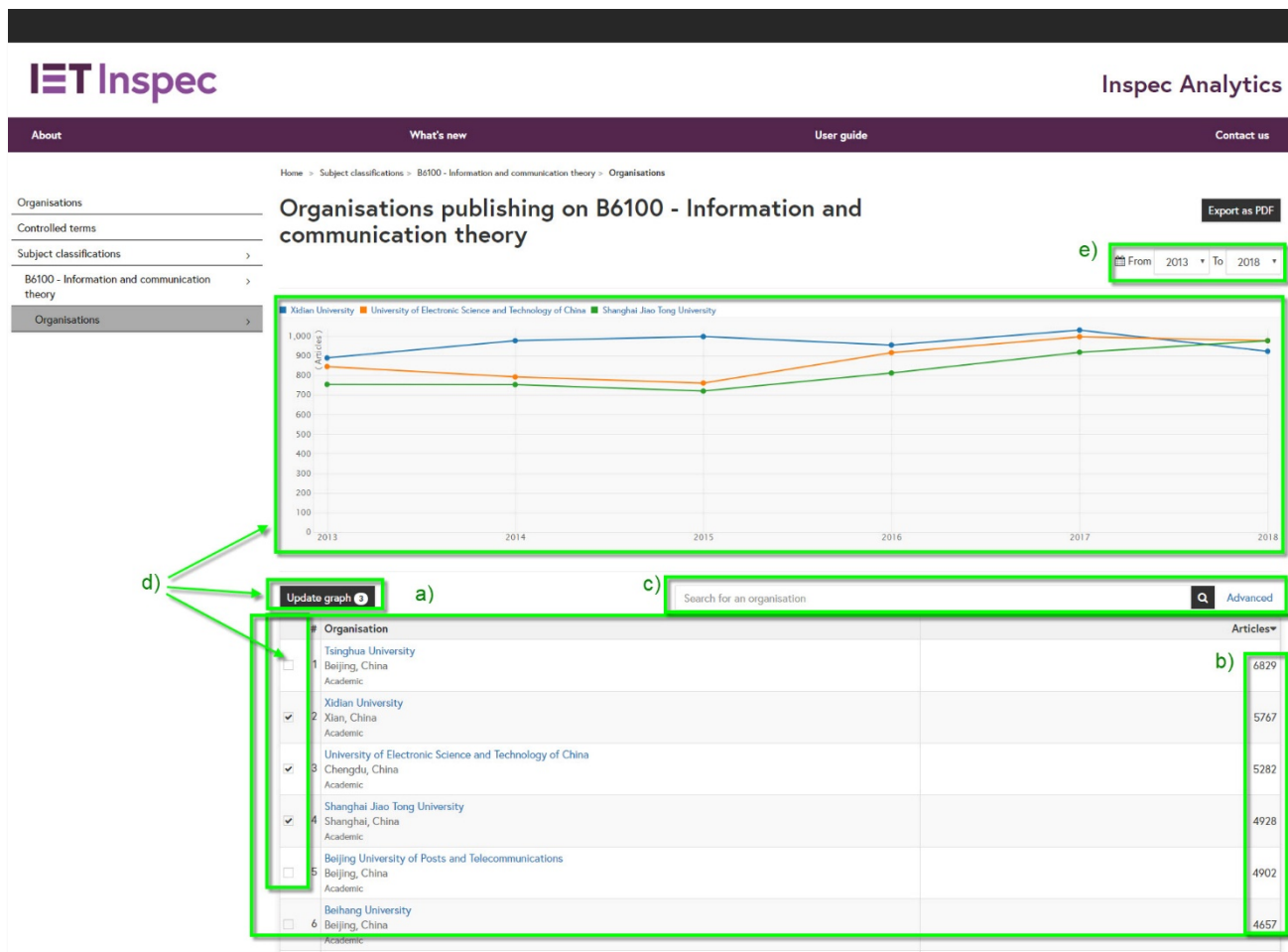
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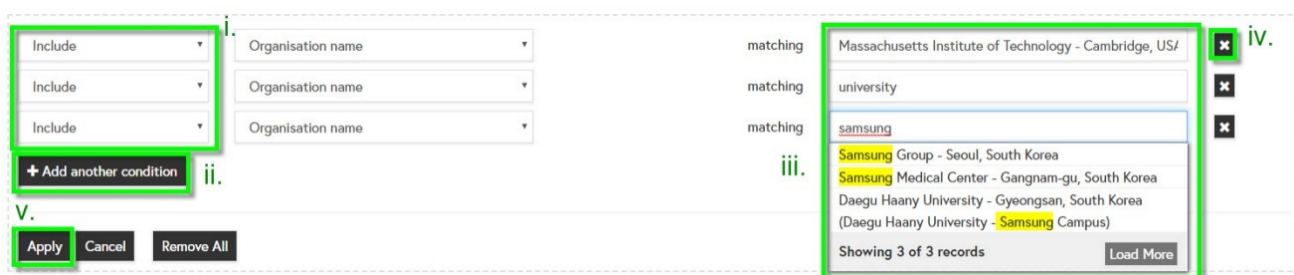
Subject classification codes organisation pages

The Subject classification code organisation pages show you all organisations that have published on your selected subject:

Understanding the view



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