Transport Area of Advance

Seminar: Publication policies, strategies and ranking

Stina Johansson, Jakaria Rahman, Per-Eric Thörnström

Research Support, Bibliometrics and Ranking (RBR) division
Department of Communication and Learning in Science (CLS)

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Publishing @ Chalmers

Stina Johansson
Bibliometric Analyst
Dept. of Communication and Learning in Science
Chalmers University of Technology
RBR – a division at CLS (Department of Communication and Learning in Science)

• **Research, Bibliometrics, Ranking**

• Research: research support/research.chalmers.se

• Bibliometrics: statistical methods to analyze quality, impact, visibility (citations analysis) and collaboration patterns (co-authorship) through publications

• (University) **Ranking**
CHALMERS RESEARCH
FORSKNINGSINFORMATION

I research.chalmers.se hittar du information om Chalmers forskning, projekt, personer och publikationer. Du kan filtrera på organisation, finansiärer, geografiska data, personer och samarbeten.

SÖK CHALMERS FORSKNING

Projekt, publikationer, personer, organisationer...

Sök

FORSKNINGSPUBLIKATIONER

Chalmers forskare publicerar sina resultat i en

FORSKNINGSPROJEKT

Chalmers forskare deltar i projekt som utforskar

TEMA: HÅLLBAR UTVECKLING

Älta publikationer och forskningsprojekt som för
Why it is important to publish

• Increase knowledge within your field of research

• Describe your research, results, possibilities and consequences

• Publishing = meriting

• For society: to make practical’ use of your research

• Make your data available for other to use, and test your results
“The number of scientific publications published per year is over 2.5 million (Ware and Mabe, 2018) and the total global scientific output doubles every nine years or so…” (van Noorden, 2014).

Reference


Measuring impact

Bibliometric indicators are calculated to follow up research activities, evaluate groups and allocate research funds (national, Chalmers level)

Use of bibliometric indicators at Chalmers

- Faculty model
- Chalmers research evaluation
- VP1 (Yearly follow-up of Chalmers departments, Qlikview)
- PVU (Prioritized Operational Development)
Scival (www.Scival.com)
Scopus data is the main source for Chalmers in terms of bibliometrics.
1. Antal vetenskapliga publikationer i CPL
2. Antal vetenskapliga publikationer i Scopus
3. Antal vetenskapliga publikationer i Scopus
4. Antal och andel publikationer i de 25 % mest citerade tidsskrifterna inom ämnet (Topp25%)
5. Armesnomerat citeringsmått - FWCI (Field-Weighted Citation Impact)
6. Antal och andel publikationer bland de 10 % högst citerade inom ämnet (Topp10%)

### Avser Chalmers totalt

<table>
<thead>
<tr>
<th>Publiceringsår</th>
<th>Artikel(Chalmers)</th>
<th>Konf.bidrag(Chalmers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1 273</td>
<td>987</td>
</tr>
<tr>
<td>2011</td>
<td>1 336</td>
<td>1 075</td>
</tr>
<tr>
<td>2012</td>
<td>1 475</td>
<td>1 177</td>
</tr>
<tr>
<td>2013</td>
<td>1 752</td>
<td>1 133</td>
</tr>
<tr>
<td>2014</td>
<td>1 807</td>
<td>1 227</td>
</tr>
<tr>
<td>2015</td>
<td>1 911</td>
<td>1 173</td>
</tr>
<tr>
<td>2016</td>
<td>1 970</td>
<td>1 227</td>
</tr>
<tr>
<td>2017</td>
<td>2 047</td>
<td>957</td>
</tr>
</tbody>
</table>
PVU (Prioritized Operational Development)

• PVU 2019-2021
• Quality above quantity

”… Strive for publications with the highest quality and relevance and prioritizes to publish a larger share of articles in better seen journals rather than a large amount of publications”…. (Free translation from the PVU 2018-06-19)

• KPI: Top 10 % (share of publications that are among the 10% most cited within their respective fields)
6. Antal och andel publikationer bland de 10 % högst citerade inom ämnet (Topp10%)

<table>
<thead>
<tr>
<th>Period</th>
<th>Alla publ. (Chalmers)</th>
<th>Alla publ. (Chalmers)</th>
<th>Artikel (Chalmers)</th>
<th>Artikel (Chalmers)</th>
<th>Konf.bidrag (Chalmers)</th>
<th>Konf.bidrag (Chalmers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2013</td>
<td>1428</td>
<td>18%</td>
<td>885</td>
<td>17%</td>
<td>508</td>
<td>17%</td>
</tr>
<tr>
<td>2011-2014</td>
<td>1571</td>
<td>18%</td>
<td>993</td>
<td>18%</td>
<td>521</td>
<td>17%</td>
</tr>
<tr>
<td>2012-2015</td>
<td>1638</td>
<td>18%</td>
<td>1051</td>
<td>17%</td>
<td>535</td>
<td>17%</td>
</tr>
</tbody>
</table>
Chalmers OA policy

• Chalmers has the ambition to make all published research results freely available to everyone, this is known as Open Access. To ensure that Chalmers' scientific results are disseminated as widely as possible, the President has decided to introduce an Open Access Policy, which applies from January 1, 2010.

• This is in accordance with the Berlin Declaration on Open Access, to which the Association of Swedish Higher Education is a signatory. It is also in accordance with the requirements of an increasing number of research funding bodies.

Research data

• To publish research data – part of the “publishing business”

• We need to relate to national and international initiatives

• FAIR (findable, accessible, interoperable, reusable)
"Strategic publishing involves questions of where and how to publish to get cited, while also making your research freely available to everyone"
# Publishing policies abroad – Universities explored (and compared to KTH)

<table>
<thead>
<tr>
<th>University</th>
<th>Year</th>
<th>Online link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiff University</td>
<td>2017</td>
<td><a href="https://tinyurl.com/ydb6a48n">https://tinyurl.com/ydb6a48n</a></td>
</tr>
<tr>
<td>University of Turku</td>
<td>2016</td>
<td><a href="https://tinyurl.com/y74ytpx9">https://tinyurl.com/y74ytpx9</a></td>
</tr>
<tr>
<td>King’s College London</td>
<td>no date</td>
<td><a href="https://tinyurl.com/yclf2erg">https://tinyurl.com/yclf2erg</a></td>
</tr>
<tr>
<td>Brunel University London</td>
<td>2016</td>
<td><a href="https://tinyurl.com/ybarxamr">https://tinyurl.com/ybarxamr</a></td>
</tr>
<tr>
<td>Sheffield Hallam University</td>
<td>2017</td>
<td><a href="https://tinyurl.com/ycxf4tye">https://tinyurl.com/ycxf4tye</a></td>
</tr>
<tr>
<td>Technical University of Denmark</td>
<td>2016</td>
<td><a href="https://tinyurl.com/yden4fgm">https://tinyurl.com/yden4fgm</a></td>
</tr>
</tbody>
</table>
### Similarity and dissimilarity

<table>
<thead>
<tr>
<th>Point discussed</th>
<th>Turku</th>
<th>Sheffield</th>
<th>King’s CL</th>
<th>DTU</th>
<th>Brunel</th>
<th>Cardiff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy statement</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Purpose</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Aim</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Scope</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Guideline in compare to KTH</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Gold Open Access</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Green Open Access</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Hybrid model</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Copyright</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>CC BY license</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Legend:**
- **YES**: Similarity
- **NO**: Dissimilarity
## Similarity and dissimilarity

<table>
<thead>
<tr>
<th>Point discussed</th>
<th>Turku</th>
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<th>King’s CL</th>
<th>DTU</th>
<th>Brunel</th>
<th>Cardiff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Achieve</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Thesis</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>ORCID</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Institutional affiliation</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Cost for open access</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Additional policies</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Principle of authorship</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Policy review</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Rational of the policy</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Benefits of the policy</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

**Legend:**
- **YES**: Similar
- **NO**: Dissimilar
Strategic publishing – areas that recommendations/policies typically cover

- To choose your publication channel (OA*, bibliometrics)
- Authorship: Who should be the author(s) of a publication?
- Author IDs
- How to write your affiliation
- Co-authorship (encourage international collaboration)
- CRIS systems (how and why to register)
- Research data*

*Open science
Why these recommendations?

- To increase impact and visibility of your research
- To increase impact and visibility of your university’s research
- For sustainable publishing
- To make publications retrievable, included in bibliometric analysis
- To avoid predatory journals
- Publish OA to improve visibility, impact, make you research available
- Publish data to enable others to build on your work, test your results
- Co-author ethically
Mission: write a clear set of recommendations to...

- Increase impact and visibility of Chalmers research

- Define Chalmers intentions

- Support Chalmers departments’ and divisions’ in issues regarding strategic publishing, “action plans” etc.
Where are we now?

• Gathering and updating existing information (Chalmers, RBR)
• Studying other universities’ policies and recommendations

• Workshops
• Interviews (with researchers from different disciplines)

• Writing
Publication strategies

Jakaria Rahman, PhD
Bibliometric Analyst
Dept. of Communication and Learning in Science
Chalmers University of Technology
Why publication strategies?

To reach the goals in the PVU (Prioritized Operational Development) and to meet the KPI’s (Key Performance Indicators) for research

To improve the visibility and impact of Chalmers scholarly publications

To move upwards in several international rankings

To attract international collaboration

To increase chances for funding opportunities
Enhance visibility and impact

1. Publish in peer-reviewed
   - journals that are indexed in Scopus or Web of Science.
   - open access journals that are indexed in Scopus or Web of Science.
   - conference proceedings that are indexed in Scopus or Web of Science.

2. Publish scholarly books, series and non-series books, edited books or volumes, major reference works, graduate level text books with an aim to meet the Scope and selection criteria of Scopus or Web of Science.

3. If you publish an article (as a works in progress) in a conference proceeding that is NOT indexed in Scopus or Web of Science, please consider substantial rework to publish as an article in a journal indexed in Scopus or Web of Science.
Factors that make research more visible and influential

Publish in Gold or Green Open Access journals

Aim journals that have SNIP(source normalized impact per paper) > 1
- SNIP corrects for differences in citation practices between scientific fields
- CWTS Journal indicators  http://www.journalindicators.com/indicators

Collaborate internationally

Journals can be compared and analyzed, grouped by subject area (27 major thematic areas), subject category (313 specific subject categories) or by country.
Ensure publication traceability

**Scopus Author ID**
Automatically assigned to a group of documents matched to the same author
Verify your author profile and publication list in Scopus (guide available at http://www.lib.chalmers.se/publicering/bibliometri-och-rankning/scival)

**Web of Science ResearcherID** (http://www.researcherid.com/Home.action)

**ORCID (Open Researcher & Contributor)** used in
research profile maintenance
manuscript submissions
grant applications and
patent applications

https://orcid.chalmers.se
Work organization and mental health problems in PhD students

Under pressure? This study found that the work stress that PhD students face can have significant impact on their mental health.

Authors
Katia Levecque; Frederik Anseel; Alain De Beuckelaer; Johan Van der Heyden...

Institutions
Ghent University; ECOOM; Bocconi University; Radboud University Nijmegen...

Countries
Belgium; Italy; Netherlands; China
Increase visibility through social media
Predatory journals

Questionable practices & claims of predatory journals

- Fake names
- Use reputable scholars without their knowledge
- None listed, or disclaimer stating soon to be uploaded
- Clones of existing, legitimate journal/publisher websites, charging to publish
- No contact info

Abstracting & Indexing
- "Open Academic Journals Index"
- "Advanced Science Index"
- "Journal Impact Factor"
- "Global Impact Factor"
- "Citefactor"

Metrics

Websites

Publication time
- Mere days from submission to publication
- Not enough time for Peer Review
- No value added by copy-editing

Meaningless words
- Very long titles
- International, global
- Advanced, recent
- "International Advanced Research Journal in Science, Engineering and Technology"

Journal scope
- Many unrelated subjects
- "International Journal of Current Research and Academic Review"
- "International Journal of Recent Scientific Research"

Editors & board

Source: Enslin, M & Masinyana, S.O. (2015). Predatory journals and the impact on the scholarly publishing community presentation at the UNISA Research and Innovation Week programmes
Who Publishes in ‘Predatory’ Journals?

Victims
Lack of author awareness

Co-conspirators
Knowingly wanting immediate unethical results
Consequence for researcher

Longer term reputation and career prospects sacrificed for immediate “gains” (!).

No academic gain, (false/no peer review, no value added)

Permanent stain on academic reputation

Even if your research is sound, it will likely be disregarded by the academic community if published in a predatory journal

Waste of research funding – could be held accountable by funding agency

Difficult to find international collaborator or grant when predatory journals are listed in the CV

Competitor use this mistake (!) as an opportunity and report
How to avoid predatory journal?

Consider Open Access journals that are indexed in Scopus or Web of Science

⚠️ THINK 🔄 CHECK 🔄 SUBMIT  https://thinkchecksubmit.org

Does the open access journal listed in the Directory of Open Access Journals (DOAJ)?
Does the publisher belong to the Open Access Scholarly Publishers’ Association (OASPA)?

List of Predatory Journals  https://predatoryjournals.com/journals
Cabell's journal blacklist  http://www2.cabells.com/blacklist


We are happy to support you
bibliometrics.lib@chalmers.se
Ranking

Per-Eric Thörnström, PhD
Specialist Support Staff
Dept. of Communication and Learning in Science
Chalmers University of Technology
Should we really care about rankings?
I say YES, we have to!

• A good ranking position is never a disadvantage – it means status!
• Students look at rankings – especially in Asia & South America it seems
• Postdocs and assistant professors are often aware of rankings nowadays, but the status of the subject and/or the research group is normally most important.
• Collaboration partners within academia and industry are increasingly interested…
• Funding organizations for students are interested. Does this go for funding bodies for international research grants as well? That is what KTH anticipate…
• Chalmers use rankings to evaluate the universities from where the international master students come. How do others evaluate Chalmers?
Rankings are here to stay

There are approx. 30 international world-wide rankings – increasing!

• Universities, Fields, Subjects, Special rankings (e.g. Employability, Co-publ. with industry, Business incubators, Innovation, Sustainability)

Who are the rankers?

• Companies active within "Higher Education", for example:
  ─ THE – World University Ranking (THE-WUR)
  ─ QS – World University Ranking (QS-WUR)

• University coupled entities, for example:
  ─ Centre for Science and Technology Studies - CWTS (Leiden ranking)
  ─ Shanghai Ranking – Academic Ranking of World Universities (ARWU)

• Ranking report 2016 (in Swedish) describes most lists available, incl. subject rankings:
  https://chalmersuniversity.app.box.com/file/251121505882
### The major rankings – some differences

<table>
<thead>
<tr>
<th></th>
<th>THE-WUR</th>
<th>QS-WUR</th>
<th>ARWU</th>
<th>CWTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ranked universities</strong></td>
<td>1102</td>
<td>1000+</td>
<td>500+300</td>
<td>938</td>
</tr>
<tr>
<td><strong>Size dependent</strong></td>
<td>No (Yes)</td>
<td>No (Yes)</td>
<td>Yes (90%)</td>
<td>No/Yes</td>
</tr>
<tr>
<td><strong>Data reporting</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Indicators (no.)</strong></td>
<td>13 (5)</td>
<td>6</td>
<td>6</td>
<td>5+5</td>
</tr>
<tr>
<td><strong>Bibliometric indicators</strong></td>
<td>3 (38,5%)</td>
<td>1 (20%)</td>
<td>3 (60%)</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Data base for publications</strong></td>
<td>Scopus</td>
<td>Scopus</td>
<td>WoS</td>
<td>WoS – part of</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Surveys 18%+15%</td>
<td>Surveys 40%+10%</td>
<td>Nobel prize 20%+10%</td>
<td>One list per indicator</td>
</tr>
<tr>
<td><strong>Calculation of score</strong></td>
<td>Share, excl. extremes</td>
<td>Share, excl. extremes</td>
<td>Share of the very best</td>
<td>Absolute numbers &amp; Share of total production</td>
</tr>
</tbody>
</table>
Chalmers Ranking Position 2012 - 2018


National Position:
- 4th SWE: 2018 - 128
- 8th SWE: 2012 - 298
Chalmers CWTS Position 2012 - 2018

Dependence on Fractional counting or not

- Field-weighted
- No self-citations

**NB!**

392 in number of publications with fractional counting 2018.
391 in number of publications without fractional counting 2018.
Why such different pictures?

• Crucial if indicators depend on size of the university. (Numbers or Shares)

• The composition of indicators in the ranking and their respective weight.

• Which are the most common indicators?
  — **Bibliometrics**; publications (fractional counting or not), citations (with or without self-citations, subject normalized or not). Per academics, per paper, top percentiles, FWCI, etc. *Collaboration* - internat, industry, (shares) etc.
  — **Internationalisation**; students and/or faculty, co-publications
  — No. of students; levels, per faculty etc.
  — **Surveys** to academics / employers
  — Doctoral education; exams, per masters/bachelor exams, per faculty
  — Income (research/teaching, from industry, per acdemics)
  — Prizes (Nobel, Fields medal, other)

• The scores of the indicators say more than the ranks in general, BUT not always transparent – changes are there!
What about AoA Transport?

- Hard to rank an AoA - rankings are subject based.

- Subjects are defined by the channels for publishing (Journal, Conf. Proc. etc.)

- If a publication channel is attributed to more than one subject, every publication in that channel is counted as one publication in each of the attributed subjects.

- Thus all subjects normally contains publications from many departments and Areas of Advance.

- Subject rankings tell little about the departmental performance, much more about Chalmers’ joint performance in a specific subject.
**Transport – “performance parameters”**

<table>
<thead>
<tr>
<th>Indicator (SciVal)</th>
<th>AoA Transport</th>
<th>Chalmers</th>
<th>Publ. Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>P (all publications)</td>
<td>1 021</td>
<td>9 791</td>
<td>2013-2016</td>
</tr>
<tr>
<td>Top 25% (J)</td>
<td>63,4%</td>
<td>63,4%</td>
<td>2013-2016</td>
</tr>
<tr>
<td>FWCI (excl self-c)</td>
<td>1,31</td>
<td>1,17</td>
<td>2012-2015</td>
</tr>
<tr>
<td>Top 10% most cited (field weighted)</td>
<td>19,8%</td>
<td>17,7%</td>
<td>2012-2015</td>
</tr>
</tbody>
</table>

- Only BIO, E2 and TME has higher FWCI than AoA Transport
- In top 10% most cited publications AoA Transport is no.4 (E2, BIO, CSE)
- 15,7% are non-cited publications 2012 – 2015 (Chalmers 21%)

The share of non-cited papers have decreased from 2012 to 2015 – positive trend!

Data from SciVal – Transport is a publication set with all publications marked AoA Transport in our CRIS-system: "research.chalmers.se", 2012 - 2017
<table>
<thead>
<tr>
<th>Department</th>
<th>FWCI</th>
<th>Department</th>
<th>CIT Top 10%</th>
<th>Department</th>
<th>SNIP Top 25%</th>
<th>Department</th>
<th>Int Coll.</th>
<th>Department</th>
<th>% konf. Papers</th>
<th>Department</th>
<th>Academic Corporate Coll.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>1.94</td>
<td>E2</td>
<td>24.1%</td>
<td>SEE</td>
<td>77.5%</td>
<td>F</td>
<td>65.6%</td>
<td>CSE</td>
<td>78.8%</td>
<td>TRPT</td>
<td>21.0%</td>
</tr>
<tr>
<td>E2</td>
<td>1.41</td>
<td>BIO</td>
<td>22.9%</td>
<td>BIO</td>
<td>71.8%</td>
<td>BIO</td>
<td>63.8%</td>
<td>E2</td>
<td>63.1%</td>
<td>IMS</td>
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</tr>
<tr>
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<td>1.33</td>
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<td>K</td>
<td>70.5%</td>
<td>SEE</td>
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<td>F</td>
<td>67.9%</td>
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<td>K</td>
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<td>39.1%</td>
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</tr>
<tr>
<td>MC2</td>
<td>1.27</td>
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<td>ACE</td>
<td>60.4%</td>
<td>MV</td>
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<td>Chalmers</td>
<td>2.2%</td>
<td>Chalmers</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Source: Scopus, Publication Set 170502, 2012-2016, Transport Publication Set 2012-2016 from180921
AoA Transport Research Performance


No fractionalization

Scholarly Output: 1,205
Authors: 1,841
Citation Count: 9,951
Citations per Publication: 8.3

Field-Weighted Citation Impact: 1.56
NB! Including self citations
1,34 excluding self citations

Mechanical Engineering (21.6% => 6.5%)
Automotive Engineering (14.9% => 4.5%)

Categories:
- Computer Science (10.2%)
- Physics and Astronomy (6.0%)
- Chemistry (5.5%)
- Chemical Engineering (6.2%)
- Materials Science (4.4%)
- Energy (3.9%)
- Environmental Science (6.2%)
- Social Sciences (6.2%)
- Business, Management and Accounting (2.4%)
- Mathematics (4.8%)
- Other (7.9%)

No fractionalization
Publications and FWCI for main subjects, TRPT

Subject Rankings

• **QS Subjects** (Scopus): (0%) 70% size dependent. Academic reputation 40%, Employers reputation 30%, Bibliometrics 30% (H-index & citation/publication)
  48 subjects

• **ARWU – GRAS** (WoS): 71% size dependent – Award 24%, Bibliometrics 76% (Scolarly output, FWCI, % Int.collaboration, top 20% journals)
  54 Subjects
  — Transportation – 27 in the world (2017: 70)
    Improvement by more publications in higher ranked journals – will hopefully lead to improvement in citations

• **NTU Subject** (WoS) : 90% size dependent indicators – Bibliometrics 100% ! Top focus 30%.
  14 Subjects
# QS Subject Rankings 2014-2018

20-50% Bibliometric, 50-80% ”Reputation”, 100% Size indep.

<table>
<thead>
<tr>
<th>Subject</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture / Built Environment</td>
<td>51-100</td>
<td>51-100</td>
<td>51-100</td>
<td>51-100</td>
<td>51-100</td>
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<tr>
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<td>101-150</td>
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<tr>
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<tr>
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<td>151-200</td>
<td>151-200</td>
<td>151-200</td>
<td>101-150</td>
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### Global Ranking of Academic Subjects:
No. of publications rank minus FWCI rank

<table>
<thead>
<tr>
<th>Subject</th>
<th>Rank Difference</th>
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<tbody>
<tr>
<td>Physics</td>
<td>-264</td>
</tr>
<tr>
<td>Materials Science &amp; Engineering</td>
<td>-147</td>
</tr>
<tr>
<td>Computer Science &amp; Engineering</td>
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<tr>
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<tr>
<td>Environmental Science &amp; Engineering</td>
<td>-127</td>
</tr>
<tr>
<td>Nanoscience &amp; Nanotechnology</td>
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</tr>
<tr>
<td>Electrical &amp; Electronic Engineering</td>
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</tr>
<tr>
<td>Chemistry</td>
<td>-101</td>
</tr>
<tr>
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<td>-62</td>
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<tr>
<td>Transportation Science &amp; Technology</td>
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<tr>
<td>Telecommunication Engineering</td>
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<tr>
<td>Instruments Science &amp; Technology</td>
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<td>Chemical Engineering</td>
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<td>Biotechnology</td>
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<tr>
<td>Metallurgical Engineering</td>
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<tr>
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<tr>
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<tr>
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<td>379</td>
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</table>

Source: Global Ranking of Academic Subjects (GRAS) 2017, WoS 2011-2016, articles only!
Publishing is that a problem for Chalmers?

- In addition, 25% of all publications from Chalmers (same period) are not cited at all. Sweden’s average: 23%. 10th place in Sweden.

- However, FWCI (=MNCS) (Same period, WoS, CWTS – excluding self-citations) for Chalmers is 1,10. An increase from 1,01 for 2010-2013.
What to do, to improve in rankings?

Very much in line with Chalmers vision and strategy - Quality is in focus!

- Recruit the right people and give them time for research, teaching and utilization.
- Improve bibliometry – “publication policy” and strategies!
- Improve internationalisation – collaborate deeply with the best.
- Make Chalmers more visible – internationally.

The academic reputation of Chalmers must be increased. Everyone of us is an ambassador for Chalmers!

Strive for our goals: world-class teaching, excellent research and efficient utilization
Thank you!

If you have any questions, do not hesitate to contact us.

All questions regarding bibliometrics: bibliometrics.lib@chalmers.se

Stina Johansson: stina.johansson@chalmers.se

Jakaria Rahman: jakaria.rahman@chalmers.se

Per-Eric Thörnström: peth@chalmers.se