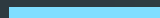


# Bibliometric analysis of PDRL

2019-2023

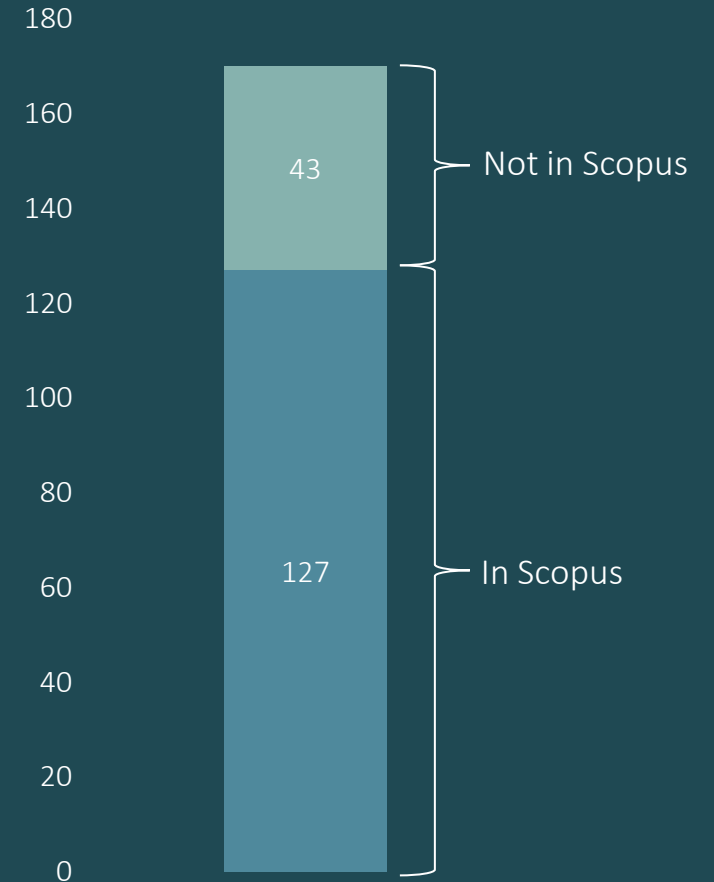


## Scopus coverage

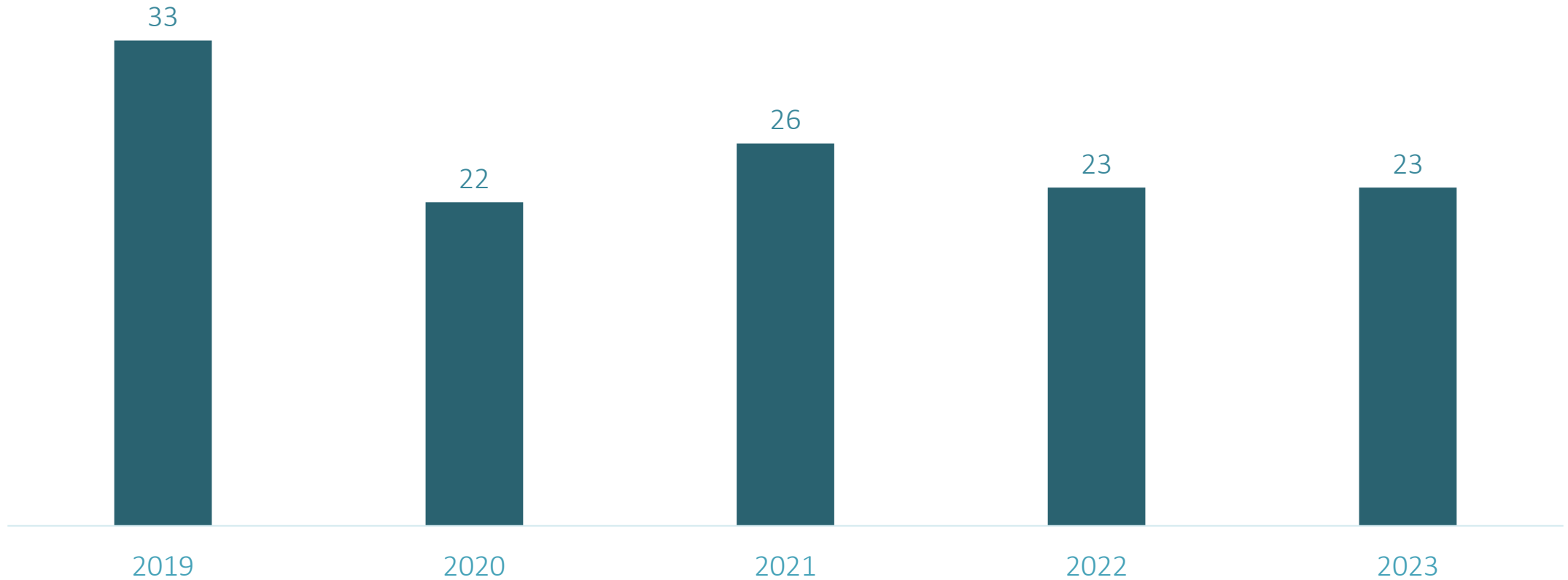
- Out of the original 170 publications from PDRL between 2019-2023, 127 are found in Scopus.
- Scopus coverage is thus 75 pct.
- The following analysis is conducted on the publications found in Scopus.



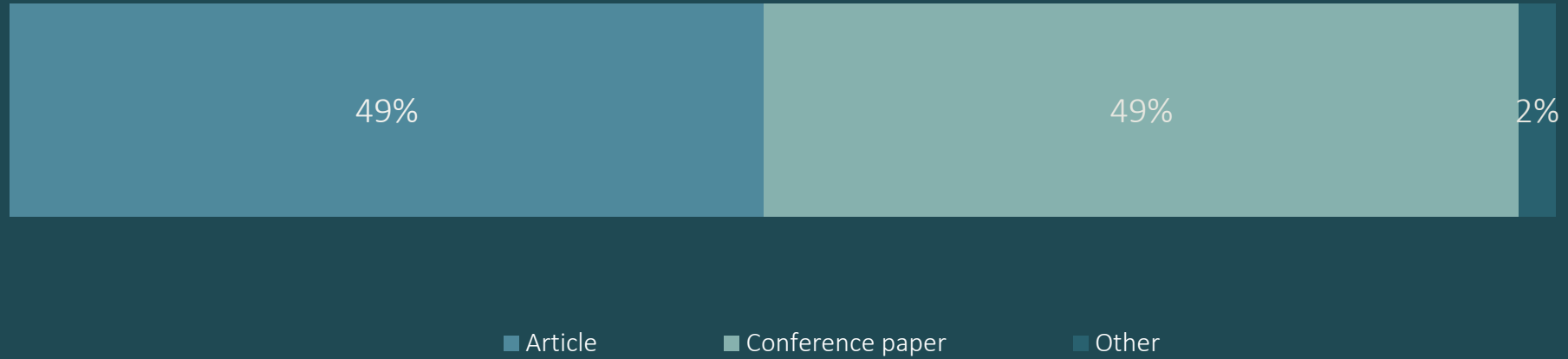
Scopus



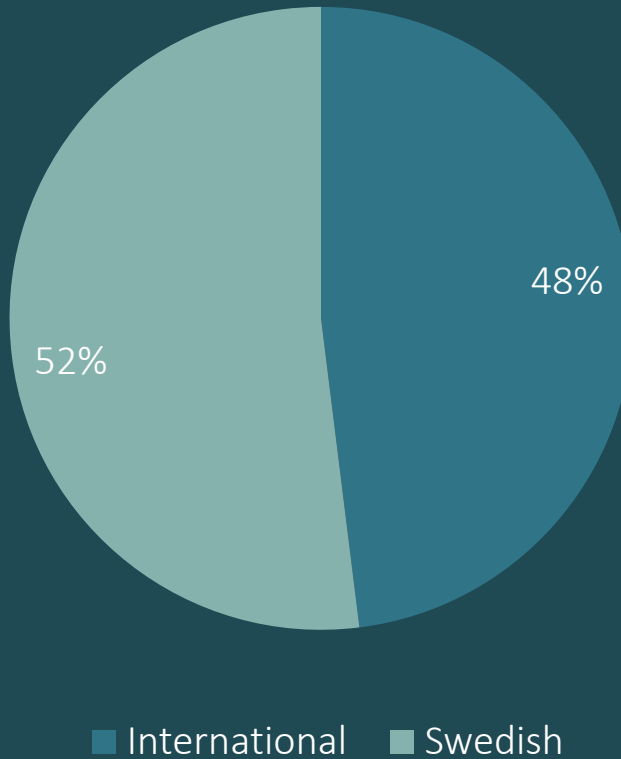
On average PDRL publishes 25 papers per year (127 in total)



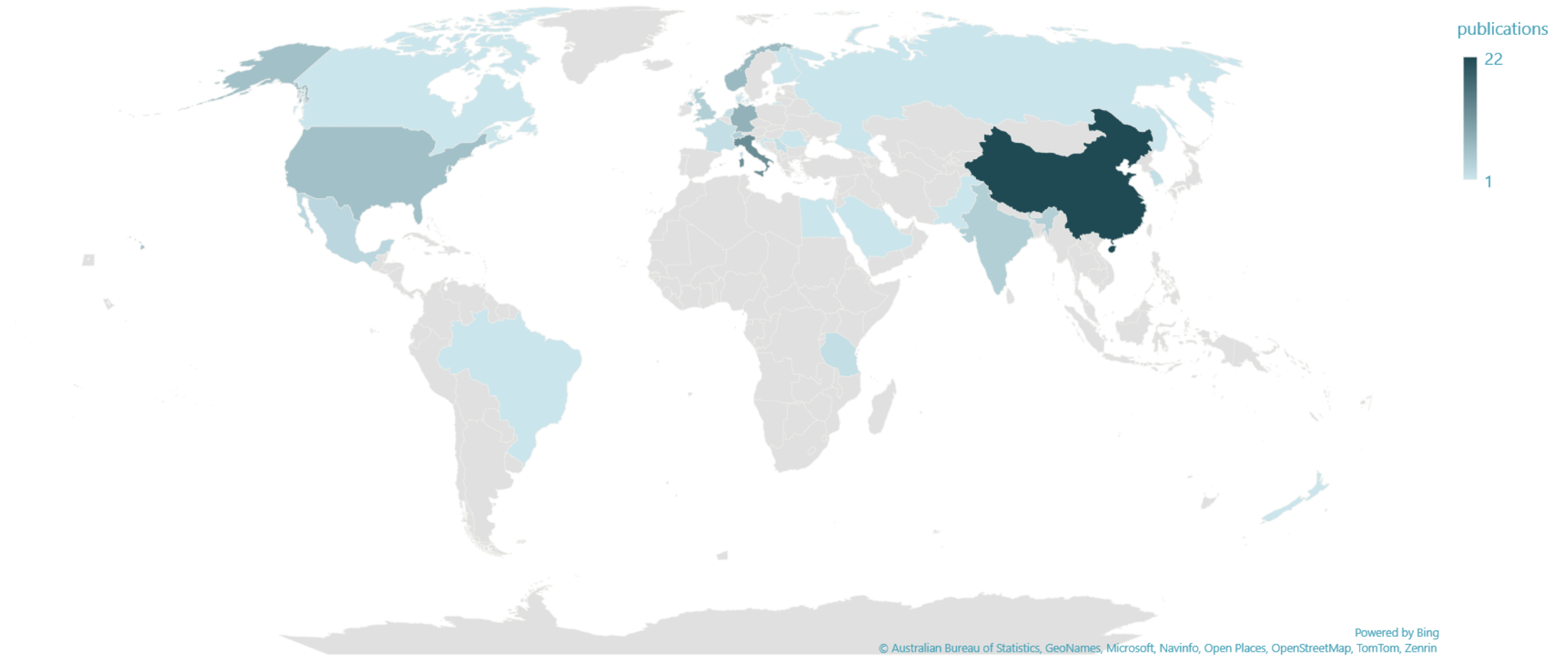
An equal number of articles and conference papers (62 of each)



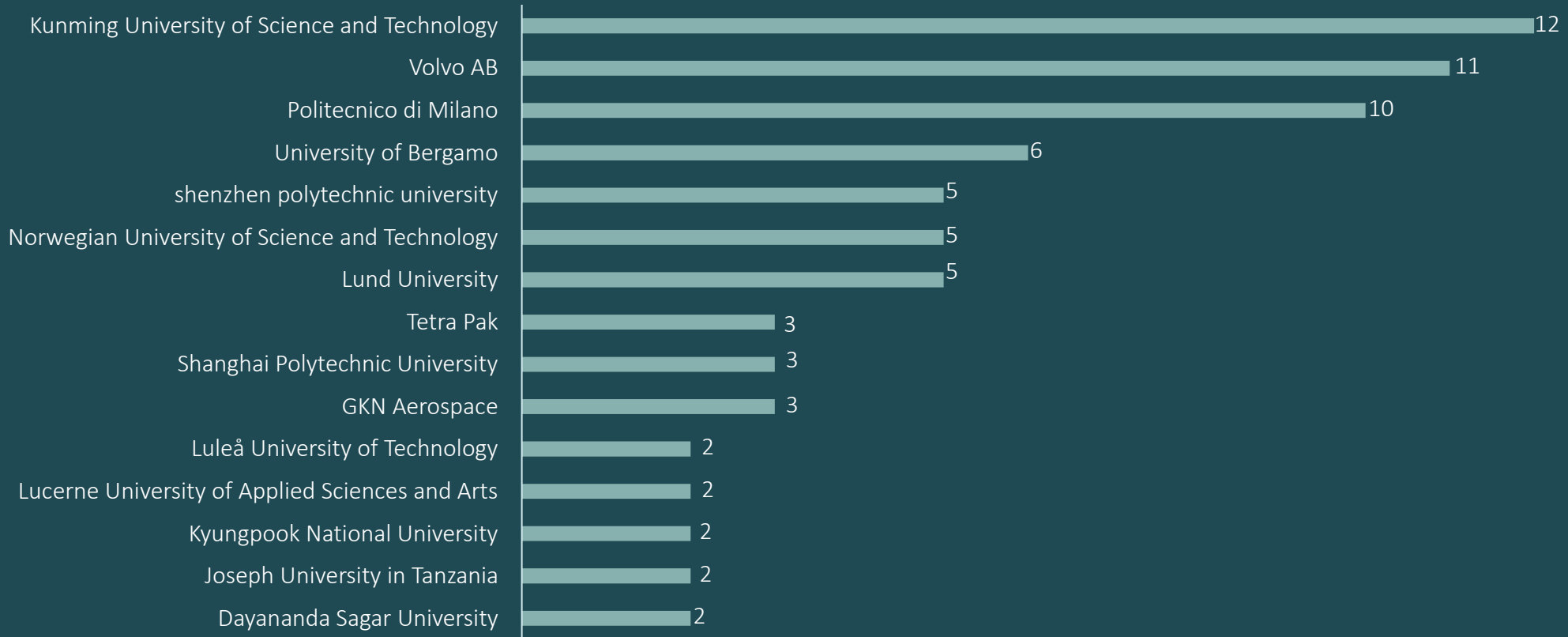
48 pct. of the publications are co-authored with researchers affiliated with international organizations (universities, research institutes etc)



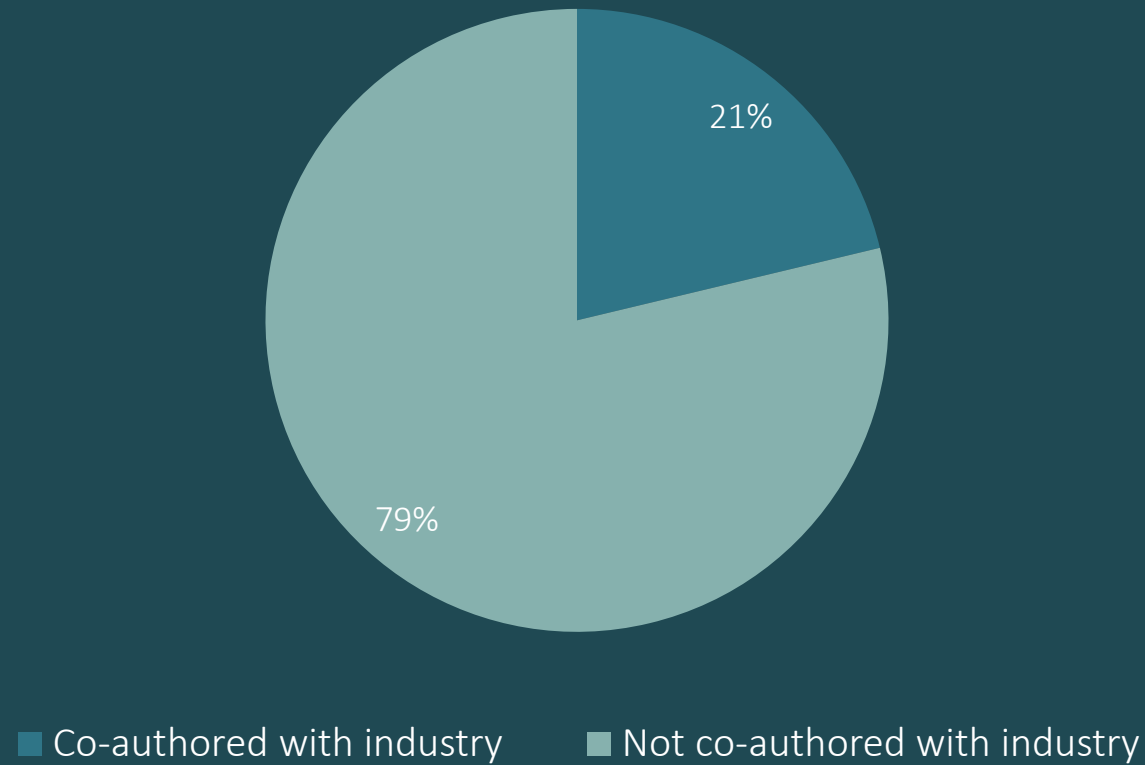
China (22 co-authored publications) is clearly the biggest collaboration country followed by Italy (13) and Germany (8).



## Kumming University, Volvo AB and Politecnico di Milano are among the top collaborators

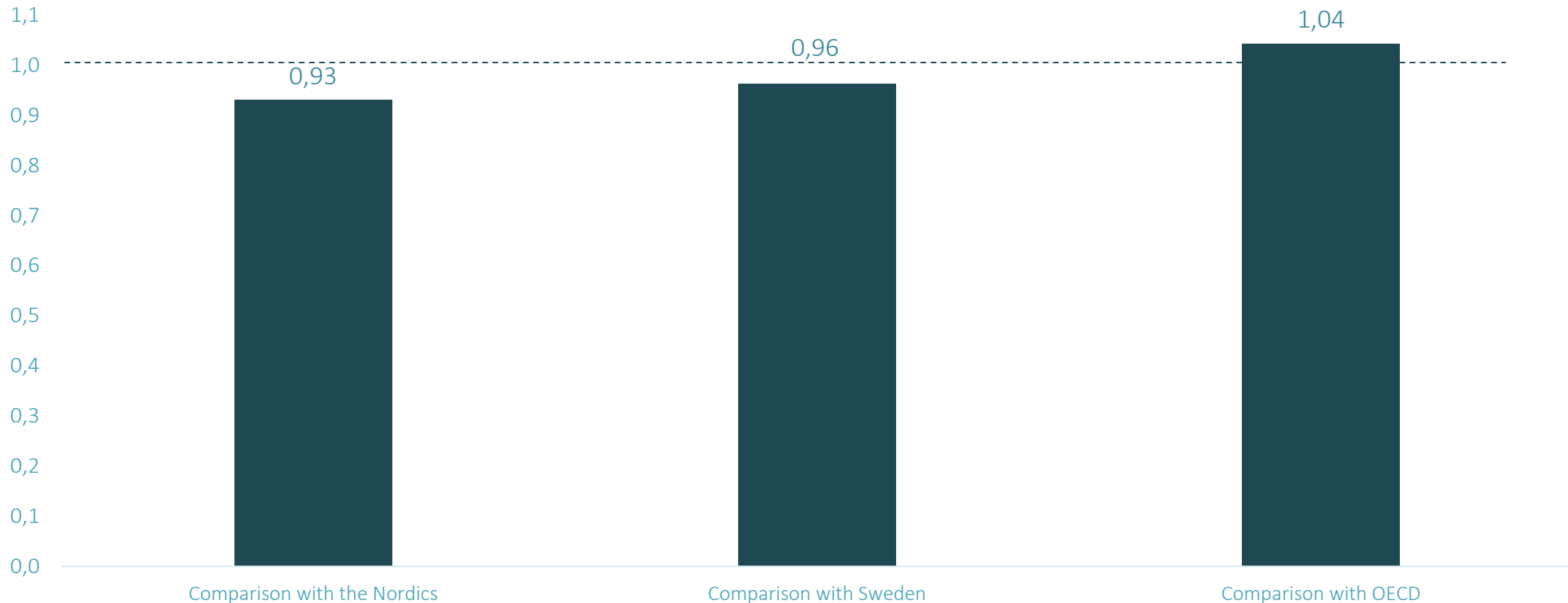


27 (21 pct.) of publications are co-authored with industry researchers





## PDRL publications are cited almost to the same extent as comparable publications (in the same journals) from Swedish universities

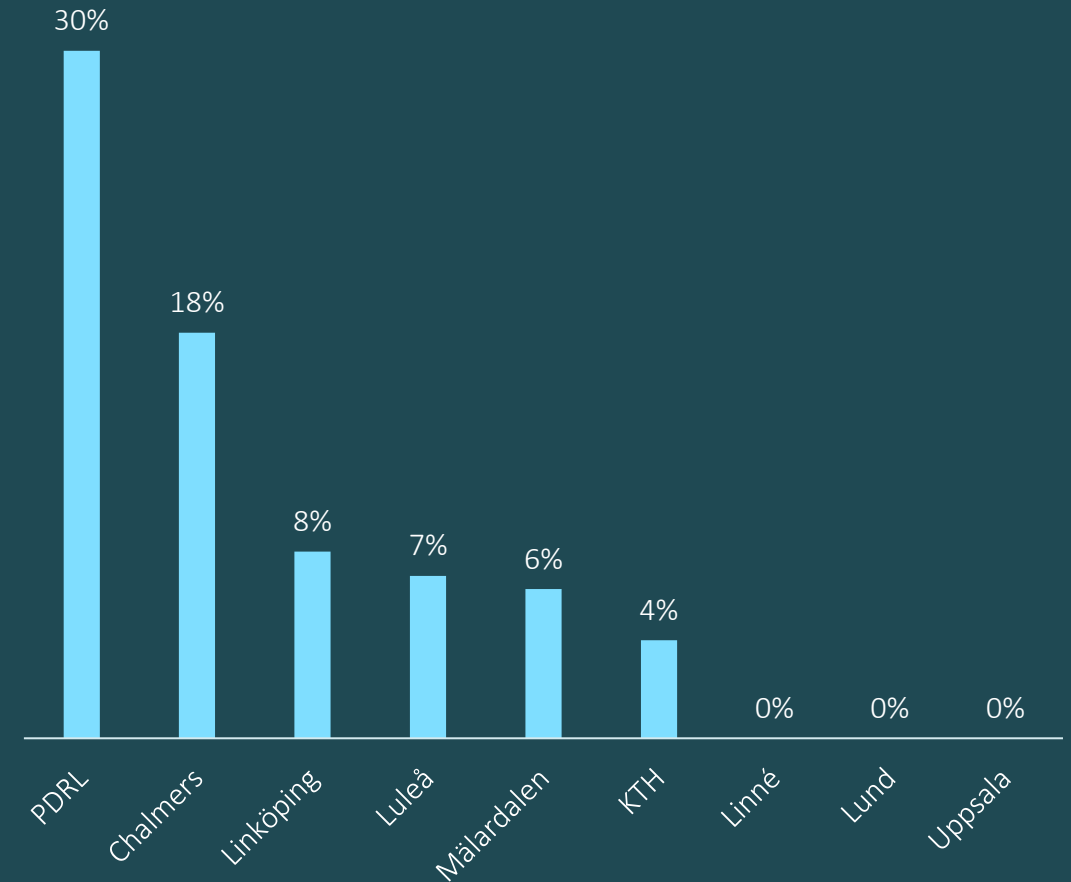


## PDRL's publication strategy shows results

Publications from PDRL are often published in the journals and conferences PDRL have identified as the most important outlets. 30 pct. of the publications from PDRL between 2019-2023 have been published in these outlets (journals and conferences are listed in the Appendix).

Compared to eight other universities, PDRL publications are published far more often in these outlets. PDRL publications are published over 10 percentage points more than the university that publishes the second most in these outlets, Chalmers.

Publications from the comparison universities have been selected based on keywords, which is further explained on the following page.



## How specialized are the universities?

Specialization is measured by first downloading all publications that have been published by BTH and 8 other Swedish universities between 2019-2023 that uses at least 2 of the 15 keywords selected to represent the research field by PDRL (keywords are presented to the right).

The total publication volume within this research area (B) is then divided by the total publication volume from Swedish universities during the same period (SE).

We then divide each (x) of the 9 universities' publications that include at least 2 of the 15 keywords (A) with the total amount of publications from each of the universities (I).

Finally, we perform the following equation to calculate the scientific specialization:

$$\frac{A/I^x}{B/SE}$$

### Top 15 keywords used for the analysis

product-service systems

value-driven design

data-driven design

decision support systems

design space exploration

design thinking

digital servitization

metal forming

model-based decision-making

model-driven-development

systems engineering

sustainable product development

complex systems design

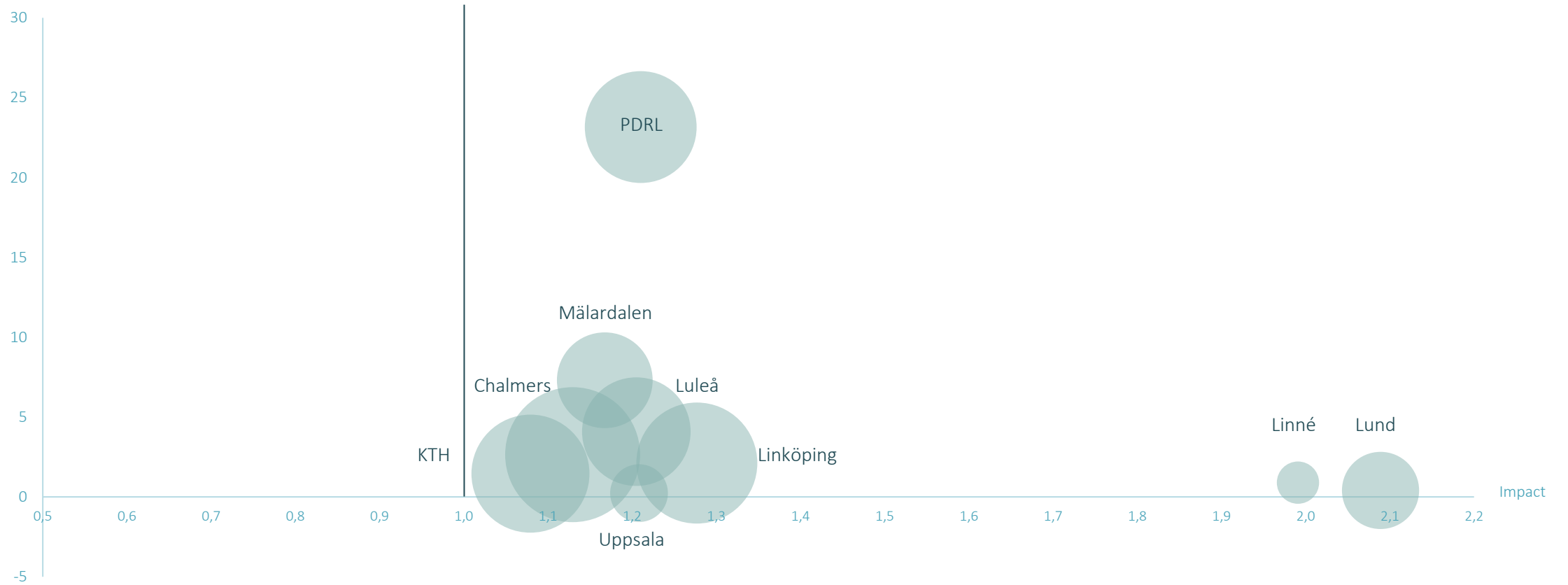
virtual prototyping

Engineering design



## Very specialized, relatively high impact

Scientific Specialization

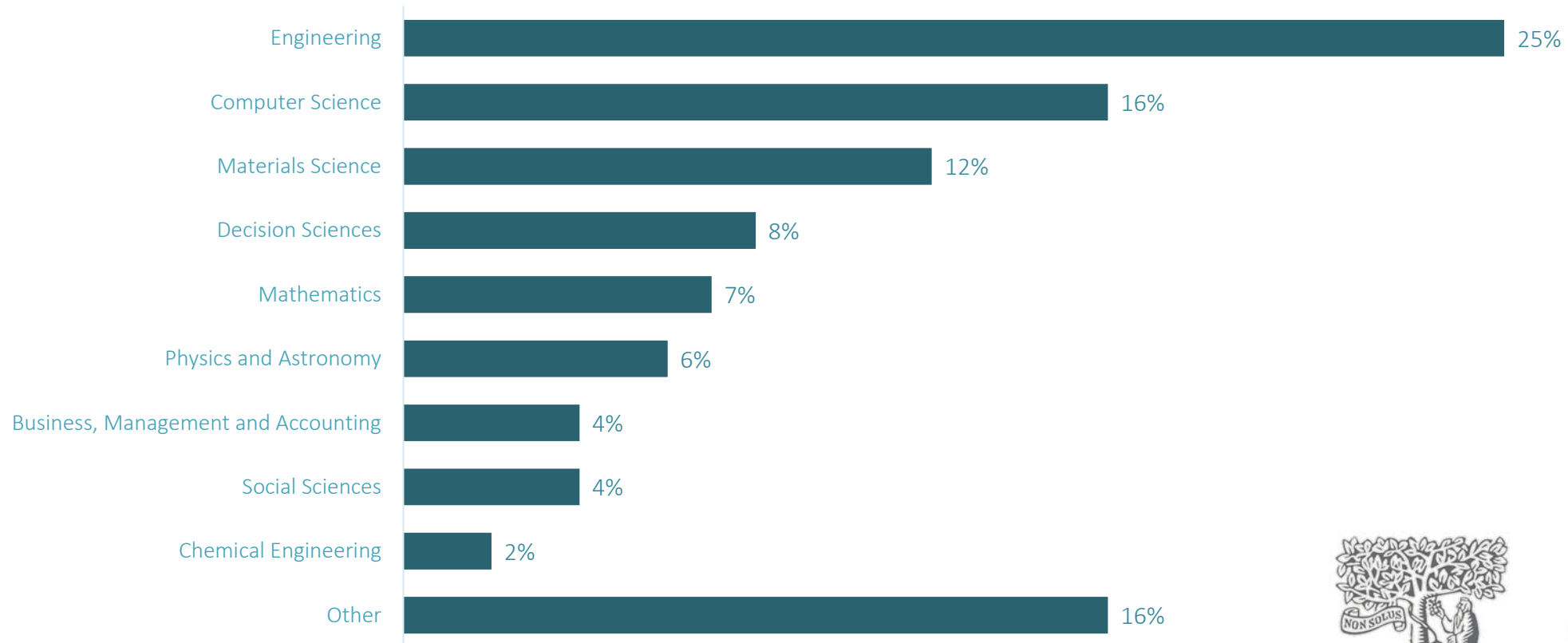


The figure illustrates the relationship between scientific specialization and impact. It shows how specialized a school is in a particular area and the corresponding scientific impact of its publications within that area. The size of the dots is standardized based on the volume of publications.

# Appendix

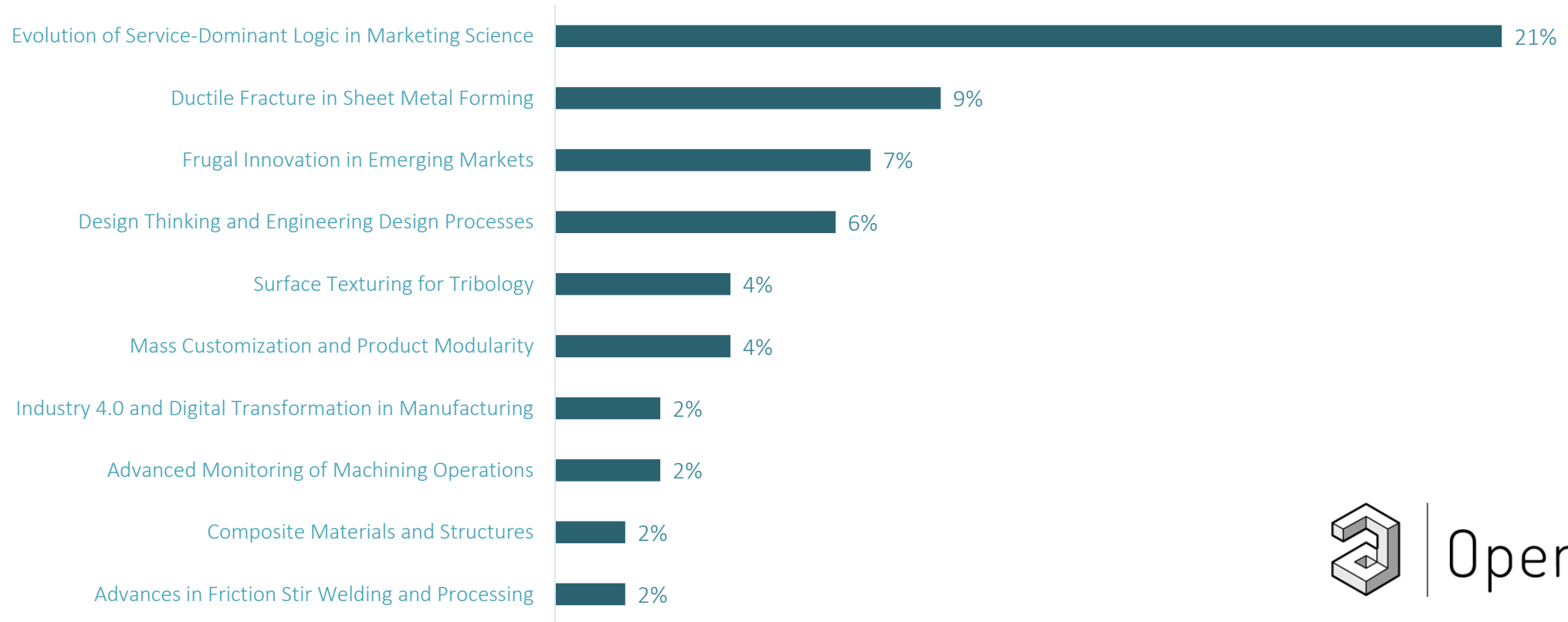


# Computer Science, Engineering and Mathematics are the most common research areas in Scopus



Scopus

*Evolution of Service-Dominant Logic in Marketing Science* and *Ductile Fracture in Sheet Metal Forming* are the most common research areas when using OpenAlex's categories



The list shows the journals and conferences identified by PDRL as the most important

| Journals   | Conferences   |
|--|---|
| Computers in Industry                            | International Conference on Engineering Design (ICED)   |
| Concurrent Engineering Research and Applications | International DESIGN conference   |
| Journal of Engineering Design                    | CIRP Design conference  |
| Journal of Cleaner Production                    | ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE) |
| International Journal of Solids and Structures   | PRO-VE IFIP/SOCOLNET Working Conference on Virtual Enterprises  |
| International Journal of Material Forming        | Conference of the International Deep Drawing Research Group (IDDRG)   |
| International Journal of Fracture                | International ESAFORM Conference on Material Forming  |
| Design Studies                                   | International Conference and Workshop on Numerical Simulation of 3D Sheet Metal Forming Processes (NUMISHEE)                  |
| Design Science                                   | International Conference on Fracture (ICF)  |







where it all adds up

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