

Canadian Engineering Grand Challenges and Engineering Research

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Dean, Faculty of Engineering
University of Waterloo



The Canadian
Academy of
Engineering



L'Académie
canadienne
du génie

Science versus Engineering

Science

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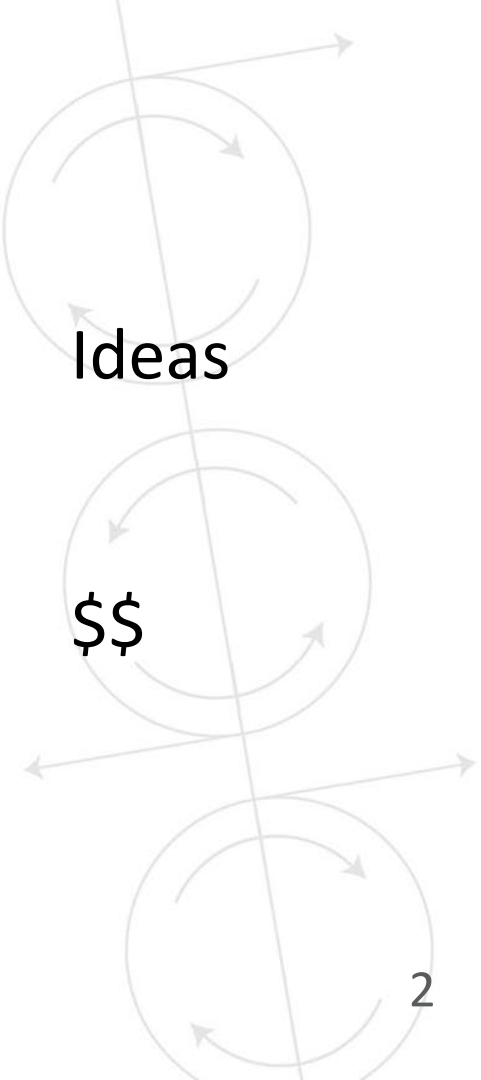
Ideas

Engineering

Ideas



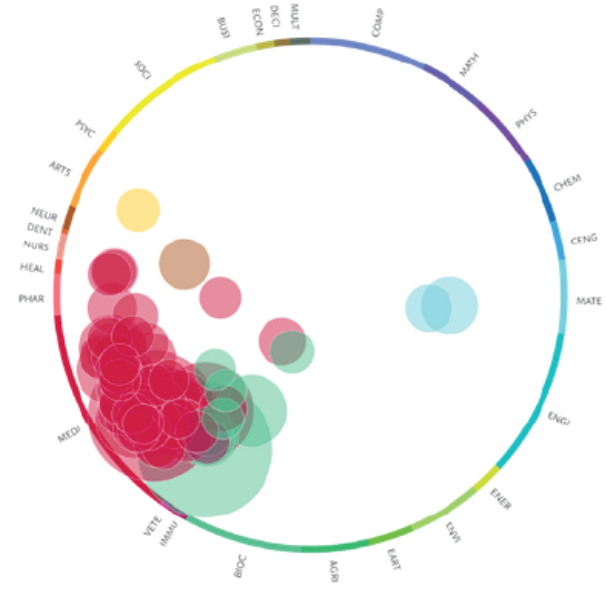
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Research Related to the UN SDG's



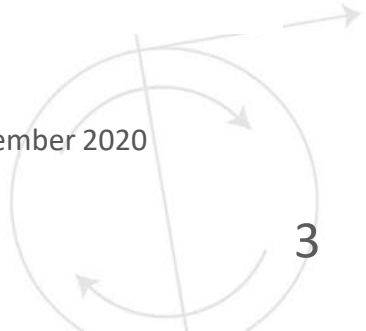
Metabolic Syndrome
 Ovarian Neoplasm
 Pancreatic Neoplasm
 Obesity
 Tuberculosis
 Colorectal Neoplasm
 Primary Care
 Prostatic Neoplasm
 Chronic Kidney Failure
 Exercise
 Metastasis
Breast Neoplasm
 Lung Neoplasm
 Cancer
 Alzheimer Disease
 Human Heart Failure
 Glioma
 Stomach Neoplasm
Microna
 Fatty Liver
 Systematic Review
 Diabete
 Radiotherapy
 Atrial Fibrillation
 Liver Cell Carcinoma
 Stroke
 Mental Health
 Pediatric Non-small Cell Lung Carcinoma
 Oncology
 Non Insulin Dependent Diabete Mellitu
 Ergocalciferol
 Immunotherapy
 Parkinson Disease
 Long Noncoding RNA
 Cognitive Dysfunction



- COMP Computer Science
- MATH Mathematics
- PHYS Physics and Astronomy
- CHEM Chemistry
- CENG Chemical Engineering
- MATE Materials Science
- ENGI Engineering
- ENER Energy
- ENVI Environmental Science
- EART Earth and Planetary Sciences
- AGRI Agricultural and Biological Sciences
- BIOC Biochemistry, Genetics and Molecular Biology
- IMMU Immunology and Microbiology
- VETE Veterinary
- MEDI Medicine
- PHAR Pharmacology, Toxicology and Pharmaceutics
- HEAL Health Professions
- NURS Nursing
- DENT Dentistry
- NEUR Neuroscience
- ARTS Arts and Humanities
- PSYC Psychology
- SOCI Social Sciences
- BUSI Business, Management and Accounting
- ECON Economics, Econometrics and Finance
- DECI Decision Sciences
- MULT Multidisciplinary

Topic Wheel - Research publications (2010-2019)

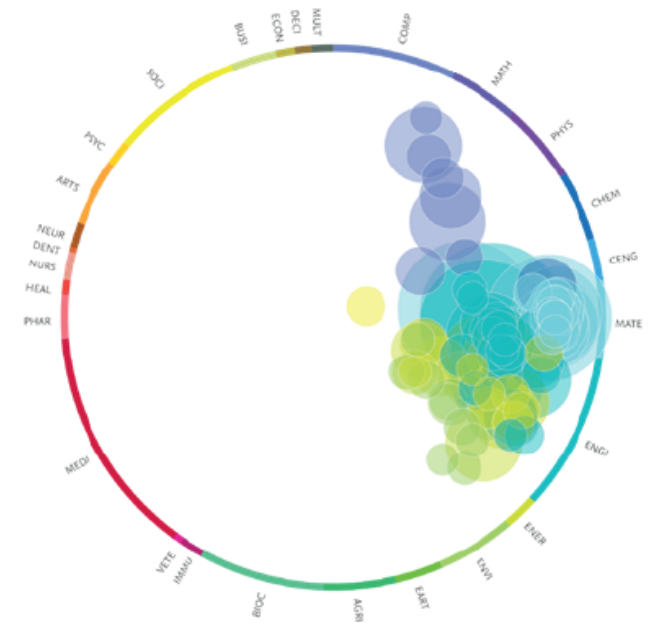
The Power of Data to Advance the SDGs Mapping research for the Sustainable Development Goals - Elsevier September 2020



Research Related to the UN SDG's



Wind Turbine, Electric Power Transmission Network, District Heating, Energy Management, Life Cycle Assessment, Hydrogen Production, Water Splitting, Solar Collector, Solar Energy, TiO2, Storage System, Smart Meter, Lithium-ion Battery, Electrolyt, Energy Storage, Photovoltaic System, Solar, Perovskite, Renewable Energy, Smart Grid, Energy System, Electric Vehicle, Biodiesel, Building, Photovoltaic Cell, Inverte, Internet of Thing, Nanosheet, Energy Utilization, Energy Efficiency, Solar Cell, Electrode, Microgrid, Grid, Energy Efficient, Perovskite Solar Cell, Solar Generator, Renewable Energy Source, Renewable, Demand Response, Powerpoint, Battery, Energy Policy, Energy Consumption, Energy Conservation, Dye-sensitized Solar Cell, Energy Saving, Energy, Maximum Power Point Tracker.



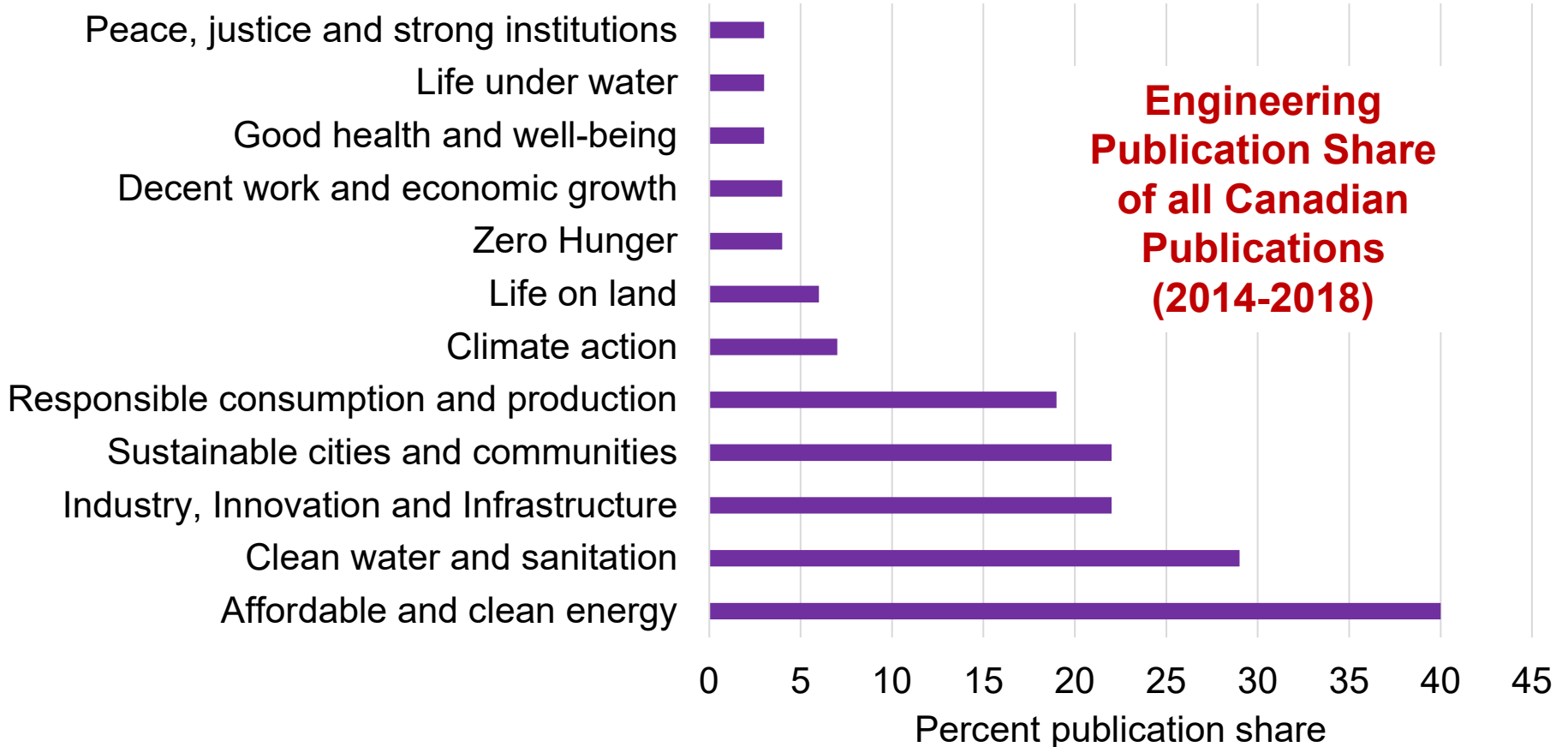
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Publication Share:



Canadian Engineering Research and the UN SDG's



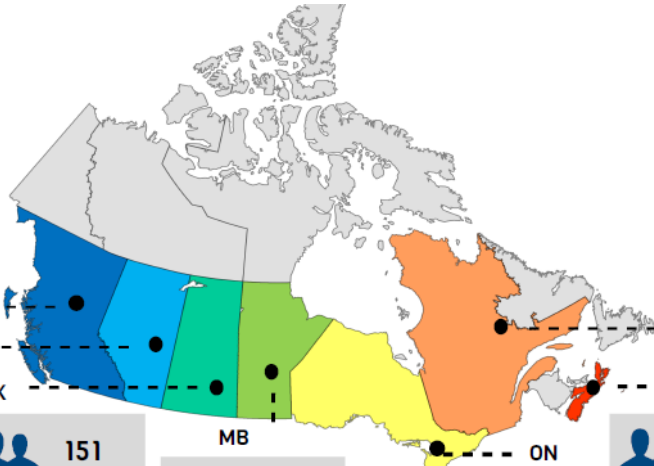
of Eng. Faculty



SDG Publications



SDG (s) with highest average research impact factor



BC

309

1524

AB

470

1751

SK

151

699

MB

111

414

ON

1606

6781

NS

126

500

QC

609

2192

7 AFFORDABLE AND CLEAN ENERGY

7 AFFORDABLE AND CLEAN ENERGY

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

7 AFFORDABLE AND CLEAN ENERGY

7 AFFORDABLE AND CLEAN ENERGY

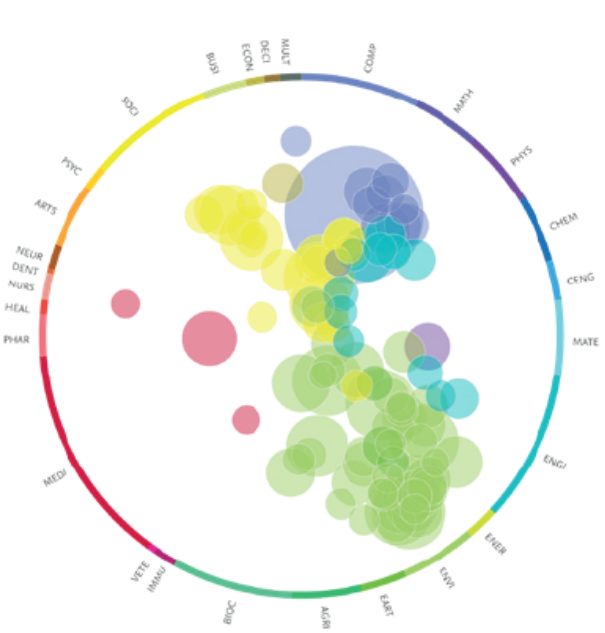
15 LIFE ON LAND



SDG included if Region has > 50 engineering publications

Data Note: Publications (2014-2018) exported from Scopus contributed to 2020 Times Higher Education SDG Impact Ranking, Research Metric

Research Related to the UN SDG's



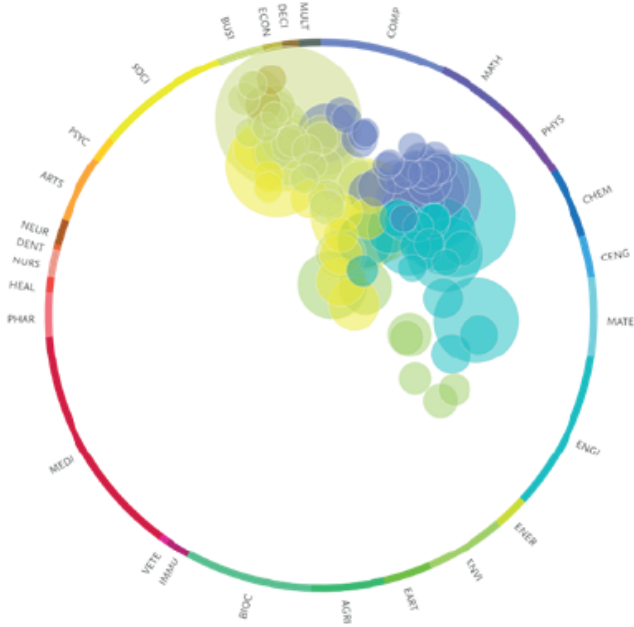
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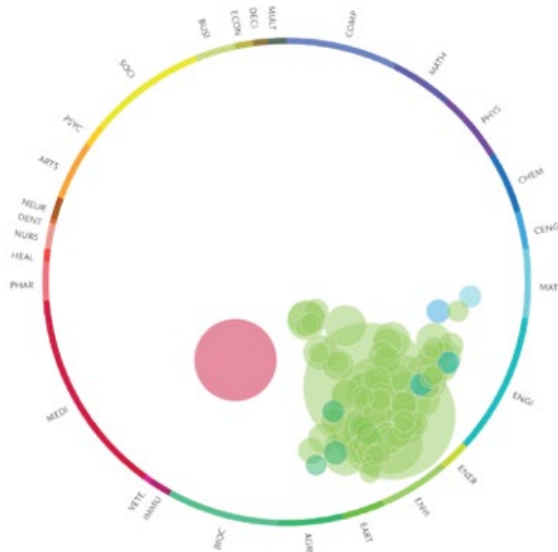
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