Shangjun Ke

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GitHub : https://github.com/sjksdu1993?tab=repositories

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ABOUT ME

PhD candidate in Environmental Engineering at University of Southern Denmark

EDUCATION AND TRAINING

Ph.D.

University of Southern Denmark [Mar 2021 – Current]

City: Odense
Country: Denmark
Website: https://www.sdu.dk/en/om_sdu/institutter_centre/igt-green-technology
Field(s) of study: Engineering, manufacturing and construction: *Electricity and energy* , *Environmental protection technology*
Thesis: End of life management and circular economy in the renewable energy transition
Link: https://www.sdu.dk/-/media/files/om_sdu/institutter/ikbm/poster/phd+postershangjun+ke.pdf

Master

University of Sciense and Technology of China [Sep 2017 – Nov 2020]

City: Hefei, Anhui
Country: China
Website: https://en.ustc.edu.cn/
Field(s) of study: Engineering, manufacturing and construction: *Electricity and energy* , *Chemical engineering and processes*
Thesis: Comprehensive Analysis and Forecasting Model of Guangzhou Electricity Consumption

Bachelor

Anqing Normal University [Sep 2012 – Jul 2016]

City: Anqing, Anhui
Country: China
Website: https://bgs.aqnu.edu.cn/English/Introduction_of_the_University.htm

PROJECTS

The material stock and flow analysis of wind energy systems in Brazil by 2050 from the spatiotemporal perspective.

[Jul 2021 – Dec 2023]

PhD research: This study combines dynamic Material Flow Analysis and site suitability analysis of future wind farm installation (A GIS-based multi-criteria model for onshore wind farm site selection) to help policymakers, decision-makers, and local governments understand the technical and geographical variation of wind turbine material waste. The results evaluate the different environmental and economic costs of various recycling solutions, and the practical recommendations could assist them to optimize their end-of-life management strategy for decommissioned wind farms.

Uncovering the spatiotemporal evolution of wind energy system by 2020: A high spatial resolution material stock and flow analysis

[Jun 2021 – Dec 2023]

PhD research: The study uncovers the spatiotemporal change of material metabolism and environmental implications of material outflows within the wind energy system up to 2020, and furthermore it maps hotspots of material mining potential.

GIS-based multi-criteria decision analysis for onshore wind farm site selection in Brazil

[Jun 2021 – Dec 2023]

PhD research: This study developed a geographical information system (GIS)-based model using analytic hierarchy process to support onshore wind farm site selection in Brazil.

Project of Guangzhou Energy Management and Aid Decision Making (ADM) Platform
[Oct 2018 – Apr 2019]

Research Assistant

Participated in the preparation of the Guangzhou Energy Management Regulations

Established Comprehensive Forecast Model of Guangzhou Electricity Consumption for the ADM platform

Analyzed the relation between electricity consumption in various industrial sectors by applying input-output model.

Research Report on Sustainable Development of Guangzhou Natural Gas Power Generation
[Feb 2019 – Jun 2019]

Research Assistant

Participated in a preliminary study on the status and sustainability of natural gas power generation in Guangzhou.

Involved in questionnaire design, data collection and policy decipher.

Investigated the natural gas supply source, price adjustment mechanism and gas pipeline network construction.

Verification Action for Enterprises' Carbon Emission in Guangdong Province, China
[Jul 2018 – May 2019]

Inspector

Attended various enterprise-level training sessions for energy audit and carbon emission verification.

Visited industries including power plants, chemical, papermaking, airport, logistics & warehousing, hotels & malls.

Investigated enterprises' energy consumption patterns, management system and re-verified carbon emission reports.

Project of Meizhou Natural Resources Balance Sheet
[Aug 2018 – Nov 2018]

Research Assistant

Participated in the training sessions provided by Supermap (GIS software) and applied to the Project

Collected and compiled construction report on energy consumption monitoring platform for large public buildings

CONFERENCES AND SEMINARS

ISIE 2023
[Leiden University, Netherlands , 1 Jul 2023 – 5 Jul 2023]

ISIE2023, held in Leiden 2-5 July 2023, is the 11th biennial conference of the International Society for Industrial Ecology (ISIE).

https://isie2023netherlands.nl/theme-transitions-in-a-world-in-turmoil

Link: https://isie2023.exordo.com/programme/presentation/765

DIGITAL SKILLS

Data Science
SQL and MS-SQL / programming: Python, MATLAB and SQL / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / MS Power Platform (Power Apps, Power Automate, Power BI)

Material metabolism for renewable energy system
Material Flow Analysis / Material flow analysis : STAN / Wind Energy / Renewable energy systems

GIS
GIS software: Expert QGIS and good control of ArcGIS

Microsoft office
Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access

LANGUAGE SKILLS

Mother tongue(s): **Chinese**

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user