Environmental assessment and guidance for the future offshore wind energy development

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Curriculum Vitae

Chen Li was born in Jiaxing, Zhejiang province, China, where he graduated from Yuanji senior high school in June 2012. In September 2012, he moved to northwest China for his bachelor study. He obtained his bachelor's degree in statistics at Shanxi University of Finance and Economics in June 2016. In September 2016, he moved to Dongbei University of Finance and Economics in northeast China for his master study. He obtained his master's degree in statistics in January 2019. From April to June 2019, he worked as algorithm engineer for the development of medical artificial intelligence products. In September 2019, he started his PhD in the Institute of Environmental Sciences (CML) at Leiden University on the topic of environmental impact assessment of the offshore wind energy development. Since July 2022, he has been working as consultant in the wind energy industry. After his PhD, he will continue to work as a postdoctoral researcher at CML, and meanwhile, keep the role in industry as a project engineer for a floating wind farm project.

List of publications

Publications related to this thesis

Li, C., Coolen, J.W., Scherer, L., Mogollón, J.M., Braeckman, U., Vanaverbeke, J., Tukker, A. & Steubing, B. (2023). Offshore Wind Energy and Marine Biodiversity in the North Sea: Life Cycle Impact Assessment for Benthic Communities. *Environmental Science & Technology*. 57(16), 6455–6464

Li, C., Mogollón, J. M., Tukker, A., Dong, J., von Terzi, D., Zhang, C., & Steubing, B. (2022). Future material requirements for global sustainable offshore wind energy development. *Renewable and Sustainable Energy Reviews*, 164, 112603.

Li, C., Mogollón, J. M., Tukker, A., & Steubing, B. (2022). Environmental impacts of global offshore wind energy development until 2040. *Environmental Science & Technology*, 56(16), 11567-11577.

Li, C., Steubing, B., Morpurgo, J., Tukker, A., & Mogollón, J. M. Optimal technology and choice of location can halve the North Sea's offshore wind energy environmental footprint (In preparation for submission to *Nature Sustainability*).

Additional publications

Li, C. (2021). A fuzzy theory-based machine learning method for workdays and weekends short-term load forecasting. *Energy and Buildings*, 245, 111072.

Li, C. (2020). Designing a short-term load forecasting model in the urban smart grid system. *Applied Energy*, 266, 114850.

Li, C., Zhu, Z., Yang, H., & Li, R. (2019). An innovative hybrid system for wind speed forecasting based on fuzzy preprocessing scheme and multi-objective optimization. *Energy*, 174, 1219-1237.

Li, C., & Zhu, Z. (2018). Research and application of a novel hybrid air quality early-warning system: A case study in China. *Science of The Total Environment*, 626, 1421-1438.

Jiang, P., & **Li, C.** (2018). Research and application of an innovative combined model based on a modified optimization algorithm for wind speed forecasting. *Measurement*, 124, 395-412.

Li, R., Jiang, P., Yang, H., & **Li, C**. (2020). A novel hybrid forecasting scheme for electricity demand time series. *Sustainable Cities and Society*, 55, 102036.

Zhang, C., Hu, M., van der Meide, M., Di Maio, F., Yang, X., Gao, X., Li, K., Zhao, H., **Li, C**. (2023). Life cycle assessment of material footprint in recycling: A case of concrete recycling. *Waste Management*, 155, 311-319.

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Harpprecht, S., van Nielen, S., Miranda Xicotencatl, B., van der Meide, M., **Li, C.**, Li, Z., Tukker, A., & Steubing, B. Future environmental impacts of metals: A systematic review of impact trends, modelling approaches, and challenges (In preparation for submission to *Resource, Conservation & Recycling*).

Yang, H., Zhu, Z., **Li, C**., & Li, R. (2020). A novel combined forecasting system for air pollutants concentration based on fuzzy theory and optimization of aggregation weight. *Applied Soft Computing*, 87, 105972.

Li, R., Dong, Y., Zhu, Z., **Li, C**., & Yang, H. (2019). A dynamic evaluation framework for ambient air pollution monitoring. *Applied Mathematical Modelling*, 65, 52-71.

Jiang, P., Yang, H., Li, R., & **Li, C**. (2020). Inbound tourism demand forecasting framework based on fuzzy time series and advanced optimization algorithm. *Applied Soft Computing*, 92, 106320.

Zhang, C., Hu, M., Laclau, B., Garnesson, T., Yang, X., **Li, C**., & Tukker, A. (2021). Environmental life cycle costing at the early stage for supporting cost optimization of precast concrete panel for energy renovation of existing buildings. *Journal of Building Engineering*, 35, 102002.

Zhang, C., Hu, M., Sprecher, B., Yang, X., Zhong, X., **Li, C**., & Tukker, A. (2021). Recycling potential in building energy renovation: A prospective study of the Dutch residential building stock up to 2050. *Journal of Cleaner Production*, 301, 126835.

Experiences

Speaker at the 15th Ecobalance conference, Fukuoka, Japan (Oct. 2022)

Staff member of Navicular research cruise, the North Sea (Aug. 2022)

Supervisor of student groups in the courses ‘Resilient cities’ and ‘Area study Sustainability’ of the Minor Sustainability, Leiden (Sep. 2021 – Feb. 2022)

Speaker at the 17th European Academy of Wind Energy PhD seminar, Porto, Portugal (Nov. 2021)