



Topic of the Speech:

An AI Agent-Based Framework for Automated Textile Carbon Footprint Accounting

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Prof. Xuemei Ding is a Professor and Doctoral Supervisor at Donghua University, Shanghai, and Deputy Director of the Key Laboratory of Modern Clothing Design and Technology, Ministry of Education. She received her Ph.D. from The Hong Kong Polytechnic University and conducted postdoctoral research at the Procter & Gamble Technology Centre in the UK.

Her research centers on textile sustainability and garment care. She pioneered the modular "water-carbon" footprint quantification methodology for textile products in China and has led the development of nearly 20 national, industry, and group standards for carbon and water footprints. Her recent work focuses on developing an LLM Agent-based, full-process automated carbon footprint accounting system for the textile industry, in collaboration with leading enterprises such as Wensli Group and Shenghong Group.

Prof. Ding has led numerous projects funded by the National Key R&D Program, the National Natural Science Foundation, and industry partners including P&G, Haier, Midea, Xiaomi, and Alibaba. She has published over 400 articles and textbooks, holds 15 authorized Chinese invention patents, and has supervised more than 100 master's and doctoral graduates. She is a recipient of the Shanghai Science and Technology Progress Award (2024) and the CNTAC Science and Technology Progress Award (2020).

Prof. Ding serves as the Vice Chair of the Textile Bioengineering and Informatics Society (TBIS) Board of Directors, and the Vice Chair of the National Technical Committee on Life Cycle Assessment (SAC/TC207/SC5) under the Standardization Administration of China. She is also a member of the National Technical Committee on Cleaning Appliances (SAC/TC46/SC2).