

Dr. Frank Zhu, Distinguished Professor at the University of Witwatersrand, is an internationally recognized authority on energy efficiency optimization and emissions reduction for advancing industrial sustainability. His pioneering contributions in sustainable process design and integrated optimization have driven substantial improvements in resource utilization and achieved major reductions in CO₂ and other greenhouse gas emissions. Previously a Senior R&D Fellow at Honeywell UOP, he has authored more than 100 peer-reviewed papers, secured over 75 patents, and published four influential books, including *Energy and Process Optimization for the Process Industry* (Wiley, 2013), which becomes the industrial standard for energy management, and *Digitalization and Analytics for Smart Plant Performance* (Wiley, 2021), a definitive resource on applying optimization and analytics for industrial transformation.

His work has earned numerous prestigious honors, such as AIChE's Research Excellence Award in Sustainable Process Development (2025), the AIChE Energy Sustainability Award (2014), and recognition in *Marquis Who's Who* (2024–2025).