



Sofía De-León Almaraz

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<https://scholar.google.hu/citations?user=C2WO338AAAAJ&hl=en>

Sofía holds an Industrial Engineering degree with a Master's in Administration, and a PhD in Process and Environmental Engineering from the University of Toulouse. She has been working on the sustainability criteria of Hydrogen Supply Chains since 2011, when she started her PhD studies at the *Laboratoire de Genie Chimique* of the *Institut National Polytechnique de Toulouse* by approaching the sustainable prospective design of hydrogen supply chains. The results for the PhD dissertation were selected to be presented in the National Debate for the Energy Transition in 2013 in Toulouse, France and her thesis was awarded with the *Leopold Escande Prize* 2014 from the University of Toulouse.

Currently working as an Associate Professor at the Department of Supply Chain Management at Corvinus University of Budapest, Sofía leads a nationally funded project (OTKA) focusing on hydrogen network cooperation and competition. She also teaches Energy Sustainability, and Operations Management. Prior to her academic tenure, Sofía worked in industry contributing to various sectors with a focus on product and process design, as well as supply chain management.

Over the past decade, Sofía has been involved in several hydrogen research projects collaborating with international multidisciplinary teams to explore alternatives for sustainable hydrogen supply chains. Working under the paradigms of supply chain management, multi-objective optimisation, and geographic simulation, Sofía has been able to produce some important findings published in reputable journals. Notably, her work emphasises the importance of the holistic integration of economic, environmental, and social criteria in hydrogen supply chain design, revealing critical trade-offs to increase awareness and facilitate informed decision-making.

In the pursuit of economic viability, Sofía has integrated metrics such as the levelised cost of hydrogen and total cost of ownership of fuel cell vehicles into multiperiod optimisation models adapted to diverse geographical contexts. For the environmental dimension, she has incorporated criteria like global warming potential alongside emerging methodologies such as Life Cycle Assessment (LCA). Collaborating with social scientists, she has identified and described social aspects of hydrogen technologies, exploring safety risks and social cost-benefit analyses to allow technology comparisons and maximise societal benefits. Sofía's personal webpage contains an updated list of publications.

Beyond her research on sustainability of hydrogen supply chains, Sofía explores the topic of hydrogen supply chain reliability, and is interested in circularity within components' supply chains (e.g., fuel cells, electrolysers).