

József Gábor KOVÁCS is an Associate Professor in the Department of Polymer Engineering at the **Budapest University of Technology and Economics** (BME). He earned his MSc (2000) and PhD (2007) from BME, specializing in polymer simulations and manufacturing optimization. He has supervised over 11 PhD and 130 MSc students, shaping the next generation of engineers.

Since 2020, he has been the Group Leader of the MTA-BME Lendület (Momentum) Lightweight Polymer Composites Research Group at the Hungarian Academy of Sciences, leading research on sustainable and high-performance polymer composites. His work focuses on advanced manufacturing techniques, integrating Industry 4.0 technologies, and improving **injection molding** processes.

He has enhanced the calculation of bonding strength in multi-component polymer systems, addressing key challenges in overmolding technologies. His research introduced methods to improve material compatibility and structural integrity, ensuring the reliability of hybrid polymer structures. He has also optimized additive manufacturing techniques, combining traditional injection molding with advanced 3D printing and Thermoplastic Resin Transfer Molding (T-RTM). Additionally, he has explored real-time sensor technologies to enhance quality control in injection molding.

Recognized with numerous awards, including the Knight's Cross of the Hungarian Order of Merit and the Innovation Grand Prize, he serves as Chair of the Hungarian Academy of Sciences' Scientific Committee on Fiber and Composite Technology.