**EMILIA DOBRIN** is an electrical engineer and researcher with a professional background in renewable energy systems, particularly wind energy. Currently a PhD candidate at the University POLITEHNICA of Timişoara, her doctoral research focuses on "Maximizing power at wind farms at variable wind speeds," reflecting her commitment to advancing sustainable energy technologies.

She works as a research scientist at the National Research and Development Institute for Welding and Material Testing (ISIM Timişoara), where she contributes to innovative projects in energy optimization, electrical systems, and unconventional welding technologies. Her technical expertise includes experimental design and analysis of wind power plant prototypes, integration of permanent magnet synchronous generators, and development of advanced electric drives for wind turbine systems.

Emilia has authored over 15 scientific publications, with notable contributions to international conferences and journals on wind energy, electrical installations, and energy conversion systems. Her work extends to international collaboration, including ERASMUS+ research mobility in Germany and Mauritius, where she participated in developing a 3D-printed wind turbine prototype.

She holds multiple innovation awards for her patent application technological solutions in energy and environmental engineering.

ACEMP-OPTIM25-000082 – TT04, Emilia Dobrin ORCID: 0000-0002-9481-4501 **Affiliation** Electrical Engineering Faculty Polytechnical University Timişoara TM, RO **Publication Topics** Electrical engineering, Renewable Energy Technologies, Wind energy, MATLAB Simulation.