

Martin Klauco, PhD

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Energy systems consultant and associate professor specializing in model predictive control, battery storage systems, PV forecasting, and custom software solutions. 10+ years of consulting experience with proven delivery of large-scale systems.

CORE COMPETENCIES

Energy Systems: Battery Energy Storage Systems (BESS), PV Production Forecasting, Energy Trading, Grid Ancillary Services, Wind Turbine Control

Control Engineering: Model Predictive Control (MPC), Process Optimization, Real-time Control Systems, Automotive Applications

Software Development: Laravel, Python, Matlab, SQL, Large-scale Database Architecture, Web-based Business Systems

PROFESSIONAL EXPERIENCE

Associate Professor

Czech Technical University in Prague, Department of Control Engineering

February 2025 - Present

Software Consultant

MK Assets, s.r.o., Bratislava, Slovakia

January 2015 - Present

- Architected [NORMAN database](#) system managing 90M+ environmental monitoring records for Environmental Institute
- Developed web-based business information systems for Kersia Slovakia & Czech (data collection, reporting, office management)
- Delivered custom data analysis solutions using Matlab, Python, SQL, and Laravel

Energy Systems Consultant

TESLA Group a.s., Bratislava, Slovakia

August 2024 - January 2025

- Led software team developing algorithms for battery energy storage systems (BESS)
- Deployed production systems for PV predictions, energy trading, and ancillary services
- Implemented MPC-based energy management systems for grid optimization

Control Systems Consultant

Porsche Engineering Services, Prague, Czech Republic

2020 - 2022

- Provided model predictive control consulting for automotive stability systems
- Developed vehicle stability control algorithms and real-time MPC implementations

Team Leader - Battery Storage Optimization

EnergAqua, a.s., Bratislava, Slovakia

2023 - 2024

- Led economic optimization of second-life battery storage system integrations
- Developed battery lifecycle economic models and storage integration strategies

Head of Department

Slovak University of Technology, Department of Information Engineering and Process Control

September 2020 - December 2024

- Managed department of 27 personnel with full budget and resource allocation responsibility
- [Achieved #1 ranking in Slovakia](#) for Information & Communication Sciences
- Organized 5+ international scientific conferences ([DYCOPS 2025](#), [PC25](#), [PC23](#), [PC21](#), [NMPC 2021](#))
- Completed full reconstruction of 4 laboratories (budget planning, procurement, infrastructure)

EDUCATION

PhD in Process Control (Summa Cum Laude)

Slovak University of Technology in Bratislava

2013 - 2017

Research Stay

University of California, Berkeley

2015 - 2016

SELECTED PUBLICATIONS

- **MPC-Based Reference Governors** - Springer, 2019 (Book)
- **Introduction to Process Control** - Slovenska chemicka kniznica, 2022 (Book)
- [Unified Carbon Emissions and Market Prices Forecasts of the Power Grid](#) - Applied Energy, 2025
- [Vehicle and Wheels Stability Using Driving Envelope Protection Algorithm](#) - IEEE Trans. ITS, 2024
- [Differentiable Predictive Control: Deep Learning Alternative to Explicit MPC](#) - J. Process Control, 2022
- [Real-Time Tunable Approximated Explicit MPC](#) - Automatica, 2022

[View full publication list on Google Scholar](#)

AWARDS & RECOGNITION

- [Nomination for ESET Science Award 2023](#) - Slovakia's most prestigious scientific honor
- [Science & Technology Personality Under 35 Award](#)
- 2 Patents in process control

CONFERENCE ORGANIZATION

- [DYCOPS 2025](#) - 14th IFAC Symposium on Dynamics and Control of Process Systems (NOC Vice-Chair)

- [PC25](#), [PC23](#), [PC21](#) - International Conference on Process Control (Organizer)
- [NMPC 2021](#) - 7th IFAC Conference on Nonlinear Model Predictive Control (Organizer)