



Davide Manca - BIO

Davide Manca graduated and received the PhD in Chemical Engineering at Politecnico di Milano (POLIMI). He is professor of Process Systems Engineering and head of the PSE-Lab at POLIMI.

He is coauthor of more than 180 peer-reviewed publications on international journals and conferences with a few chapters on books.

In more than twenty years of academic activity he conjugated research activity and industrial advice to make these worlds better interact and get benefit from their mutual collaboration. At the basis of Davide's research is the modeling activity that has the quantification of what is analyzed as the final target. Design, simulation, control, optimization, and assessment are the main features that use computer algorithms and methods to produce the quantification of the phenomenon, process, and plant under study.

Prof. Manca has taught Numerical Calculus, Dynamics and Control of Chemical Processes, Process Systems Engineering. He has been the supervisor of tens of students involved in the bachelor, master, and PhD degrees.

He was founder and director of R&D and Engineering department at Virthualis, a spin-off company of POLIMI, working on operator training simulation in 3D immersive virtual environments.

Under his direction, PSE-Lab has worked on a number of European and Italian research projects with a fruitful collaboration with international universities and companies.

His favorite research topics span interdisciplinary activities: design, simulation, dynamics, control, data reconciliation, optimization, planning, scheduling, supply chain, economic assessment, market uncertainty, key performance indicators, process analytical technologies, pharmacokinetics, accident simulation, consequence analysis, performance assessment, industrial safety, safety reports, land-use planning. Davide has worked on several industrial plants and processes: incineration plants, microencapsulation processes, crude oil distillation, petrochemical plants, polymerization units, *pharma* equipment, granulators, driers, perforated pans, demilitarization activities, calcium hydroxide production. He was also involved in designing and coding computer programs for the design, simulation of chemical plants and dedicated process units together with an industrial accident simulator and a performance assessment procedure for industrial operators.

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