A guide to all practical aspects of building, implementing, managing, and maintaining MPC applications in industrial plants

Multivariable Predictive Control: Applications in Industry provides engineers with a thorough understanding of all practical aspects of multivariate predictive control (MPC) applications, as well as expert guidance on how to derive maximum benefit from those systems. Short on theory and long on step-by-step information, it covers everything plant process engineers and control engineers need to know about building, deploying, and managing MPC applications in their companies.

MPC has more than proven itself to be one the most important tools for optimising plant operations on an ongoing basis. Companies, worldwide, across a range of industries are successfully using MPC systems to optimise materials and utility consumption, reduce waste, minimise pollution, and maximise production. Unfortunately, due in part to the lack of practical references, plant engineers are often at a loss as to how to manage and maintain MPC systems once the applications have been installed and the consultants and vendors’ reps have left the plant. Written by a chemical engineer with two decades of experience in operations and technical services at petrochemical companies, this book fills that regrettable gap in the professional literature.

• Provides a cost-benefit analysis of typical MPC projects and reviews commercially available MPC software packages

• Details software implementation steps, as well as techniques for successfully evaluating and monitoring software performance once it has been installed
• Features case studies and real-world examples from industries, worldwide, illustrating the advantages and common pitfalls of MPC systems

• Describes MPC application failures in an array of companies, exposes the root causes of those failures, and offers proven safeguards and corrective measures for avoiding similar failures

*Multivariable Predictive Control: Applications in Industry* is an indispensable resource for plant process engineers and control engineers working in chemical plants, petrochemical companies, and oil refineries in which MPC systems already are operational, or where MPC implementations are being considering.

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**ABOUT THE AUTHOR**

Sandip Kumar Lahiri, PhD, is a chemical engineer with more than twenty one years of experience in operations and technical services at leading petrochemical industries around the globe. His areas of expertise include simulation, process modelling, artificial intelligence and neural networks in process industry, APC, soft sensor, and slurry flow modelling.

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