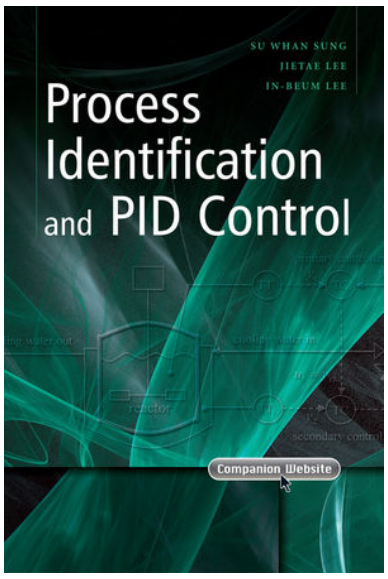

Process Identification and PID Control

Su Whan Sung, Jietae Lee, In-Beum Lee

E-Book	978-0-470-82411-5	July 2009	**$141.99**
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DESCRIPTION

Process Identification and PID Control enables students and researchers to understand the basic concepts of feedback control, process identification, autotuning as well as design and implement feedback controllers, especially, PID controllers. The first The first two parts introduce the basics of process control and dynamics, analysis tools (Bode plot, Nyquist plot) to characterize the dynamics of the process, PID controllers and tuning, advanced control strategies which have been widely used in industry. Also, simple simulation techniques required for practical controller designs and research on process identification and autotuning are also included. Part 3 provides useful process identification methods in real industry. It includes several important identification algorithms to obtain frequency models or continuous-time/discrete-time transfer function models from the measured process input and output data sets. Part 4 introduces various relay feedback methods to activate the process effectively for process identification and controller autotuning.

• Combines the basics with recent research, helping novice to understand advanced topics

• Brings several industrially important topics together:

  • Dynamics

  • Process identification

  • Controller tuning methods

  • Written by a team of recognized experts in the area

  • Includes all source codes and real-time simulated processes for self-practice

- Contains problems at the end of every chapter
- PowerPoint files with lecture notes available for instructor use

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ABOUT THE AUTHOR

Su Whan Sung is an Assistant Professor of Chemical Engineering at Kyungpook National University, Korea. His main research interests are PID controllers, autotuning, and system identification. He has spent over 15 years researching these topics, and has published 50 related papers in *SCI* journals. His previous work experience includes time as a Senior Researcher with LG Chem and research professorships at Korea's top engineering universities: KAIST and POSTECH. He holds an M.S. and PhD in Chemical Engineering from POSTECH.

SERIES

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