

The background of the cover is a photograph of an industrial factory floor. Several robotic arms, primarily in shades of orange and grey, are visible, some in motion. A person's hands are seen in the upper left, interacting with one of the robots. The scene is filled with various mechanical components, pipes, and equipment, creating a complex industrial environment. The lighting is somewhat dim, with some bright spots from overhead lights.

BASIC OF CONTROLLER DESIGN

THEORY AND APPLICATIONS

ZAMBERI JAMALUDIN
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BASIC OF CONTROLLER DESIGN THEORY AND APPLICATIONS

Rapid advancement in technology has enabling applications of new complex processes and machineries with greater efficiency and productivity. At the heart of these various technological break-through is the ability of the systems to function in the best possible manner with the least errors deemed possible. For these mechatronic systems, well designed motion controller is essential. Control system theory and design are fundamental knowledge in engineering education and highly important to those practicing in the field of robotics and automation.

Mastering the control theory and the tools necessary to realise a good controller design is essential for any mechatronics system designer and engineer. However, this can be of great challenge to many aspiring mechatronics engineers. With so many advanced control theory books and references in the market, the choice can be a challenge in itself. An easy-to-follow step-by-step approach to a complete controller design with minimal understanding on the often-complicated control theory would be an attractive option to many in the field.



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