IN-THE-LOOP
EMOTION RECOGNITION SYSTEM
FOR HUMAN MACHINE
INTERACTION (HMI)

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CONTENTS

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In the 21st century, there will be more machines developed either to complement or totally replace the jobs previously done by human since the machine can operate with high precision and accuracy. It is also essential for a machine to understand users' feeling and react accordingly especially for Human Machine Interaction (HMI) applications. In this book, an emotion recognition system is developed based on the machine learning technique that can be used throughout a wider range of human population. It is hassle free as there is no sensors attached to the body of the human subject. The identification of the emotion is deduced from the measured electromagnetic (EM) signals radiated from the human body by a handheld device called Resonant Field Imaging (RFITM). The hybrid automata is selected as a framework to embody emotion in controlling the rehabilitation robot platform to study the efficacy of the approach.

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