Microcontroller-Based Temperature Monitoring and Control

Dogan Ibrahim
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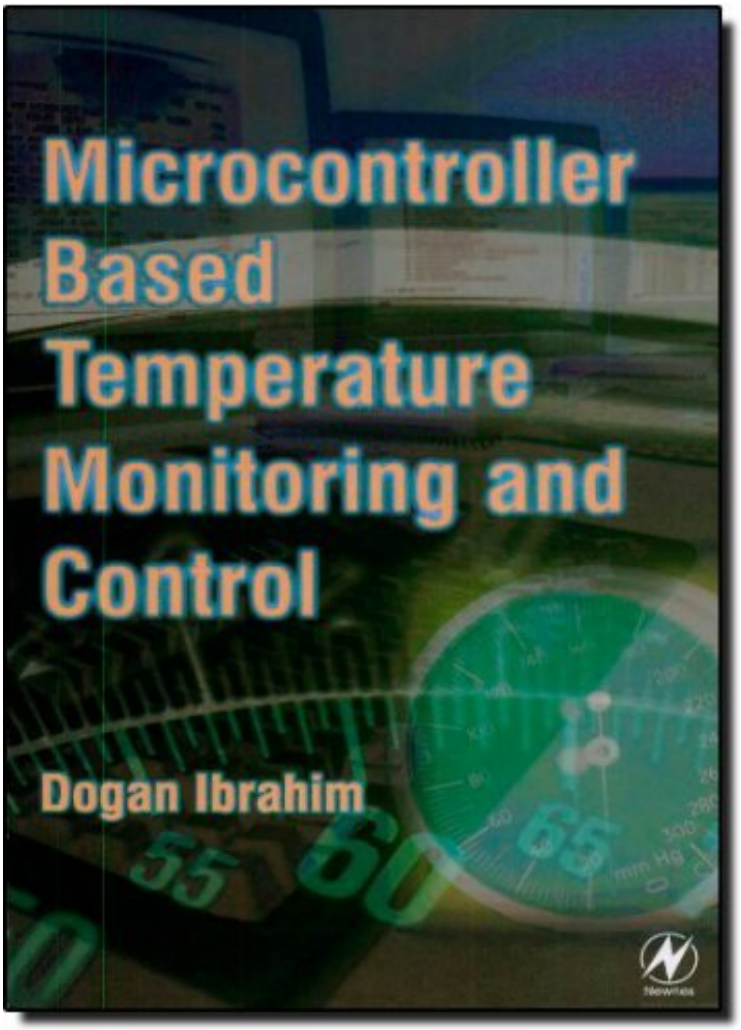

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Dogan Ibrahim : Microcontroller-Based Temperature Monitoring and Control before purchasing it in order to gage whether or not it would be worth my time, and all praised Microcontroller-Based Temperature Monitoring and Control:

0 of 0 people found the following review helpful. Great book for Instrumentation!By Ricardo Jimenez, Sr.I use this book to cover the topic of Linearizing Thermistors using the classic Steinhart-Hart equation. Thanks Mr. Ibrahim for sharing your knowledge with the world!0 of 0 people found the following review helpful. Two StarsBy cmiguensAll OK3 of 3 people found the following review helpful. A great book for the beginners on feedback controlBy Book ReaderI'm so sorry Dogan. But I've had your book for three years and it's not until now that I do a review of it. And your book is very very good book for learning about thermistors and feedback control. The first chapters are about the different kind of temperature sensors and what enviroment they are used in. Then the book goes on with the typical C-

learning for beginners and the compiler used is FED C-compiler which is actually very good and has a lot of features. The laster chapters is about how to do an PI and PID controller with an 8-bit. Unfortunately the case study is for a slow measurement controller and not a fast controller, but with a little understanding of the topic you should have work as a fast controller (I succeeded :o)). But your book really taught me a lot about feedback control theory and practice, and I got the second highest grade at my final exam at University. So thank you for a really good book.

Microcontroller-Based Temperature Monitoring and Control is an essential and practical guide for all engineers involved in the use of microcontrollers in measurement and control systems. The book provides design principles and application case studies backed up with sufficient control theory and electronics to develop your own systems. It will also prove invaluable for students and experimenters seeking real-world project work involving the use of a microcontroller. Techniques for the application of microcontroller-based control systems are backed up with the basic theory and mathematics used in these designs, and various digital control techniques are discussed with reference to digital sample theory.The first part of the book covers temperature sensors and their use in measurement, and includes the latest non-invasive and digital sensor types. The second part covers sampling procedures, control systems and the application of digital control algorithms using a microcontroller. The final chapter describes a complete microcontroller-based temperature control system, including a full software listing for the programming of the controller.*Provides practical guidance and essential theory making it ideal for engineers facing a design challenge or students devising a project *Includes real-world design guides for implementing a microcontroller-based control systems *Requires only basic mathematical and engineering background as the use of microcontrollers is introduced from first principles

From the Back Cover*Provides practical guidance and essential theory making it ideal for engineers facing a design challenge or students devising a project *Includes real-world design guides for implementing a microcontroller-based control systems *Requires only basic mathematical and engineering background as the use of microcontrollers is introduced from first principlesEngineers involved in the use of microcontrollers in measurement and control systems will find this book an essential practical guide, providing design principles and application case studies backed up with sufficient control theory and electronics to develop their own systems. It will also prove invaluable for students and experimenters seeking real-world project work involving the use of a microcontroller. Unlike the many introductory books on microcontrollers Dogan Ibrahim has used his engineering experience to write a book based on real-world applications. A basic mathematical and engineering background is assumed, but the use of microcontrollers is introduced from first principles. Microcontroller-Based Temperature Monitoring and Control is an essential and practical guide for all engineers involved in the use of microcontrollers in measurement and control systems. The book provides design principles and application case studies backed up with sufficient control theory and electronics to develop your own systems. It will also prove invaluable for students and experimenters seeking real-world project work involving the use of a microcontroller. Techniques for the application of microcontroller-based control systems are backed up with the basic theory and mathematics used in these designs, and various digital control techniques are discussed with reference to digital sample theory. The first part of the book covers temperature sensors and their use in measurement, and includes the latest non-invasive and digital sensor types. The second part covers sampling procedures, control systems and the application of digital control algorithms using a microcontroller. The final chapter describes a complete microcontroller-based temperature control system, including a full software listing for the programming of the controller.About the AuthorProf Dogan Ibrahim graduated from the University of Salford with First Class Honours in Electronic Engineering. He then completed an MSc course in Automatic Control Engineering at the University of Manchester, and PhD in Digital Signal Processing at the City University in London. Prof Ibrahim worked at several companies before returning to the academic life. He is currently a lecturer at the Department of Computer Information Systems at the Near East University. Prof Ibrahim is a Fellow of the IET, and a Chartered Electrical Engineer. His interests are in the fields of microcontroller based automatic control, digital signal processing, and computer aided design.Dogan Ibrahim has been Associate Professor and Head of Department at the Near East University, Cyprus, lecturer at South Bank University, London, Principal Research Engineer at GEC Hirst Research Centre, and is now a hardware and software systems consultant to London's Traffic Control Systems Unit.