ABOUT THE AUTHOR

Dr. K P Mohandas is currently Professor in Electrical Engineering and Dean (Post Graduate Studies and Research) in National Institute of Technology (formerly Regional Engineering College) Calicut. He has graduated from Kerala University in 1968 with first class distinction and first rank and has secured his M.Tech degree in Control Systems from IIT Madras and PhD Degree from IIT Delhi in Systems Theory. He has been teaching Control and Systems Theory for the last three decades in India and abroad at undergraduate and post graduate level and had been active in research as shown in the large number of publications he has in several International journals and conferences. He is with REC (NIT), Calicut since 1969 and had been working abroad on leave as Visiting Professor in Data Storage Institute, National University, Singapore, Professor of Electrical Engineering in Cukurova University, Adana, Turkey, and Professor and Head of the Department of Electrical and Electronics Engineering in European University of Lefke, Republic of North Cyprus. In addition to his research publications, he has published several popular science articles in periodicals and authored two books in Malayalam published by the State Institute of Languages, Kerala. He was one of the editors of the Proceedings in the National Systems Conference 1998 published by M/s Allied Publishers, New Delhi.

ABOUT THE BOOK

The book is divided into ten chapters with the first chapter being a very brief introduction to classical control theory. The second chapter gives the classical design techniques using Bode plots and root locus technique. Analysis of discrete time systems is presented in Chapter 3 using *z*-transforms. Chapters 4, 5 and 6 deal with state space modelling, solution of state equation and design of control systems using state space model with a glimpse on the design of observers, and state feed back controllers. Chapters 7and 8 deal with nonlinear systems, the former on phase plane analysis and the latter on describing function method. Even though both these methods were developed long time back, these methods are still useful to get some insight into the behaviour of nonlinear systems. Chapter 9 discusses in depth the Lyapunov's method for stability analysis of systems and Chapter 10 is a brief introduction to concepts and methods of optimal control. Several worked examples and a summary–'points to remember' have been added in each chapter. A set of multiple choice questions has been added at the end of the book which is useful for students in the preparation for objective type tests and Answers to additional numerical problems have been provided. An introduction to the MATLAB software package is given in Appendix.

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