| Record Nr. | UNINA9910822799303321 |
|-------------------------|--|
| Titolo | Fractional order systems : modeling and control applications / / Riccardo Caponetto [et al.] |
| Pubbl/distr/stampa | Singapore, : World Scientific, c2010 |
| ISBN | 1-282-76371-7 9786612763717 981-4304-20-4 |
| Edizione | [1st ed.] |
| Descrizione fisica | 1 online resource (200 p.) |
| Collana | World Scientific Series on Nonlinear Science: Series A |
| Altri autori (Persone) | CaponettoR <1966-> (Riccardo) |
| Disciplina | 515.83 |
| Soggetti | Fractional calculus Nonlinear systems - Mathematical models Control theory - Mathematical models |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Preface; Acknowledgments; Contents; List of Figures; List of Tables; 1. Fractional Order Systems; 2. Fractional Order PID Controller and their Stability Regions Definition; 3. Fractional Order Chaotic Systems; 4. Field Programmable Gate Array Implementation; 5. Microprocessor Implementation and Applications; 6. Field Programmable Analog Array Implementation; 7. Switched Capacitor Integrated Circuit Design; 8. Fractional Order Model of IPMC; Bibliography; Index |
| Sommario/riassunto | This book aims to propose implementations and applications of Fractional Order Systems (FOS). It is well known that FOS can be applied in control applications and systems modeling, and their effectiveness has been proven in many theoretical works and simulation routines. A further and mandatory step for FOS real world utilization is their hardware implementation and applications on real systems modeling. With this viewpoint, introductive chapters on FOS are included, on the definition of stability region of Fractional Order PID Controller and Chaotic FOS, followed by the practical implementati |

1.