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   Sommario/riassunto This book is focused on fractional order systems. Historically, fractional
                       calculus has been recognized since the inception of regular calculus,
                       with the first written reference dated in September 1695 in a letter
                       from Leibniz to L'Hospital. Nowadays, fractional calculus has a wide
                       area of applications in areas such as physics, chemistry,
                       bioengineering, chaos theory, control systems engineering, and many
                       others. In all those applications, we deal with fractional order systems
                       in general. Moreover, fractional calculus plays an important role even in
                       complex systems and therefore allows us to develop better descriptions
                       of real-world phenomena. On that basis, fractional order systems are
                       ubiquitous, as the whole real world around us is fractional. Due to this
                       reason, it is urgent to consider almost all systems as fractional order
                       systems. This Special Issue explores applications of such systems to
                       control, synchronization, and various mathematical models, as for
                       instance, MRI, long memory process, diffusion.