DESCRIPTION

Inspired by the *Encyclopedia of Statistical Sciences, Second Edition* (ESS2e), this volume presents a concise, well-rounded focus on the statistical concepts and applications that are essential for understanding gathered data in the fields of engineering, quality control, and the physical sciences. The book successfully upholds the goals of ESS2e by combining both previously-published and newly developed contributions written by over 100 leading academics, researchers, and practitioners in a comprehensive, approachable format. The result is a succinct reference that unveils modern, cutting-edge approaches to acquiring and analyzing data across diverse subject areas within these three disciplines, including operations research, chemistry, physics, the earth sciences, electrical engineering, and quality assurance. In addition, techniques related to survey methodology, computational statistics, and operations research are discussed, where applicable. Topics of coverage include: optimal and stochastic control, artificial intelligence, quantum mechanics, and fractals.

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