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| Nota di contenuto | Preface. -- Acknowledgements. -- Introduction to industrial experimentation. -- Fundamentals of Design of Experiments. -- Understanding key interactions in processes. -- A systematic methodology for Design of Experiments. -- Screening designs. -- Full factorial designs. -- Fractional factorial designs. -- Some useful and practical tips for making your experiments successful. -- Case Studies. -- Index |
| Sommario/riassunto | The tools and technique used in the Design of Experiments (DOE) have been proved successful in meeting the challenge of continuous improvement over the last 15 years. However, research has shown that applications of these techniques in small and medium-sized manufacturing companies are limited due to a lack of statistical knowledge required for their effective implementation. Although many books have been written in this subject, they are mainly by statisticians, for statisticians and not appropriate for engineers. Design of Experiments for Engineers and Scientists overcomes the problem of statistics by taking a unique approach using graphical tools. The same outcomes and conclusions are reached as by those using statistical methods and readers will find the concepts in this book both familiar |

and easy to understand. The book treats Planning, Communication, Engineering, Teamwork and Statistical Skills in separate chapters and then combines these skills through the use of many industrial case studies. Design of Experiments forms part of the suite of tools used in Six Sigma. Key features:

- * Provides essential DOE techniques for process improvement initiatives
- * Introduces simple graphical techniques as an alternative to advanced statistical methods reducing time taken to design and develop prototypes, reducing time to reach the market
- * Case studies place DOE techniques in the context of different industry sectors
- * An excellent resource for the Six Sigma training program

This book will be useful to engineers and scientists from all disciplines tackling all kinds of manufacturing, product and process quality problems and will be an ideal resource for students of this topic. Dr Jiju Anthony is Senior Teaching Fellow at the International Manufacturing Unit at Warwick University. He is also a trainer and consultant in DOE and has worked as such for a number of companies including Motorola, Vickers, Procter and Gamble, Nokia, Bosch and a large number of SMEs.

- * Provides essential DOE techniques for process improvement initiatives
- * Introduces simple graphical techniques as an alternative to advanced statistical methods - reducing time taken to design and conduct tests
- * Case studies place DOE techniques in the context of different industry sectors
