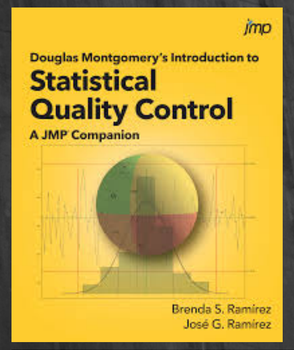
ZenEos
Statistical Insights



Brenda S. Ramírez
José G. Ramírez

Introduction Statistical Quality Control
A JMP® Companion

Why SQC?

- "Statistical Process Control or SPC has been called one of the greatest technological innovations of the 20th century."

Prof. Montgomery's foreword to
ISQC A JMP Companion

- "SPC techniques
  - have a sound intuitive basis,
  - are straightforward mathematically,
  - and have broad applicability to a wide range of industrial and business environments."

Why SQC?

- “The application of SPC along with other techniques for quality and business improvement have led to significantly improved quality and reliability of many products and services and contributed in an important way to business success and economic development.”

Prof. Montgomery’s foreword to
ISQC A JMP Companion

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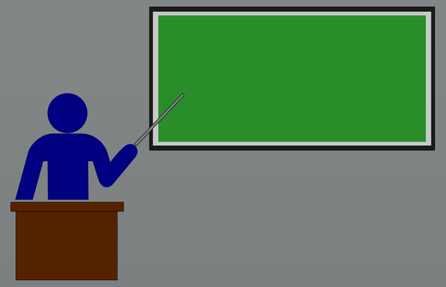
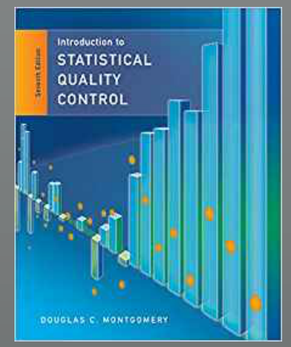
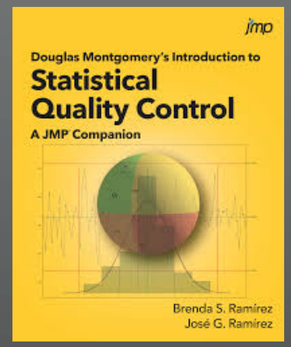
The SQC Student Needs:





- A good instructor
- A sound and practical book
- Relevant examples that show how to effectively apply SQC techniques in different industries
- Easy-to-use, up-to-date, and reliable software



jmp
Statistical Discovery™ From SAS.

Why JMP® for ISQC

- "Because SPC can be very data-intensive appropriate software is essential to any successful application, and JMP is an outstanding package. It has all of the fundamental and advanced techniques that are necessary to a successful SPC implementation."

Prof. Montgomery's foreword to
ISQC A JMP Companion

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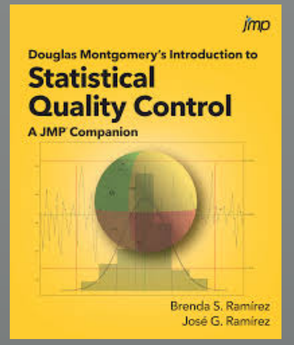

Introduction to Statistical Quality Control A JMP® Companion

- We have an extensive background in the application of SQC across a variety of industries.
- We provide detailed step-by-step instructions along with screen shots and output from JMP.
- We include additional statistical insights about the methodology or extensions of some of the basic ideas, and innovations such as process stability metrics and process health assessment.

JMP Companion Book Chapter Number and Title	Prof. Montgomery's ISQC Chapter Number and Title	SQC Techniques
CH 3. Control Charts for Variables	CH 6. Control Chart for Variables	XmR, XBar & Range, XBar & S, 3-way control charts
CH 4. Control Charts for Attributes	CH 7. Control Charts for Attributes	P, NP, C and U charts
CH 5. Process and Measurement System Capability Analysis	CH 8. Process and Measurement System Capability Analysis	Process Capability Indices (C_p, P_p, C_{pk}, P_{pk}), Gauge R&R and EMP
CH 6. Process Health Assessment	N/A	Stability Ratio, P_{pk}, Process Performance Dashboard
CH 7. Cumulative Sum and Exponentially Weighted Moving Average Control Charts	CH 9. Cumulative Sum and Exponentially Weighted Moving Average Control Charts	CUSUM control chart, EWMA control chart. and UWMA control chart
CH 8. Other Univariate Statistical Process Monitoring and Control Techniques	CH 10. Other Univariate Statistical Process Monitoring and Control Techniques	Time Series Residuals control charts, Time Series Forecast charts, and the Cuscore chart
CH 9. Multivariate Process Monitoring and Control	CH 11. Multivariate Process Monitoring and Control	Hotelling's T^2 control chart and Regression adjusted chart

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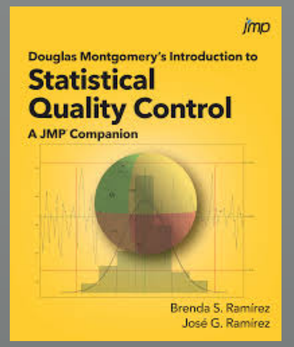

ISQC Examples Using JMP®

- Chapter 3 Control Charts For Variables
  - ISQC Example 6.1 and Table 6.1 Flow Width Data
  - Statistical Insights: Phase Chart and OC Curve

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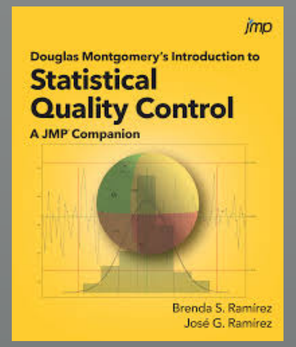

ISQC Examples Using JMP®

- Chapter 3 Control Charts For Variables
  - ISQC Example 6.1 and Table 6.1 Flow Width Data
  - Statistical Insights: OC Curve and Phase Chart
- Chapter 4 Control Charts For Attributes
  - ISQC Example 7.1 and Table 7.1 Orange Juice Cans
  - Statistical Insights: Overdispersion→Negative binomial

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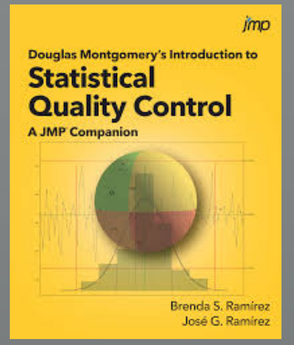

ISQC Examples Using JMP®

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  - ISQC Example 7.1 and Table 7.1 Orange Juice Cans
  - Statistical Insights: Negative binomial
- Chapter 6 Process Health Assessment

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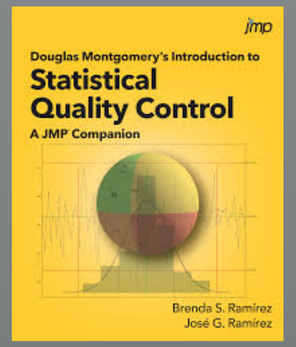

ISQC A JMP® Companion

- "I highly recommend this book. It is well-written, and provides clear, authoritative guidance on the implementation of SPC through the JMP software package. Even if you are an experienced JMP user you will find the book a rewarding and useful reference. For new users, the book is an invaluable aid that will quickly facilitate your successful use of the SPC toolkit."

Prof. Montgomery's foreword to
ISQC A JMP Companion

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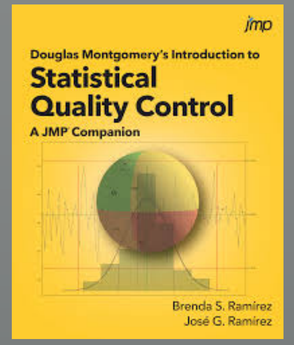

Thanks to

- Prof. Douglas Montgomery
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  - Sian Roberts
- JMP & JMP Academic Programs
  - Curt Hinrichs
  - Ruth Hummel