

1. Record Nr.	UNINA9910457269803321
Autore	Novak Serguei Y.
Titolo	Extreme value methods with applications to finance / / Serguei Y. Novak
Pubbl/distr/stampa	Boca Raton, Fla. : , : CRC Press, , 2012
ISBN	0-429-09383-7 1-280-12191-2 9786613525772 1-4398-3575-6
Descrizione fisica	1 online resource (397 p.)
Collana	Monographs on statistics and applied probability ; ; 122
Disciplina	332.01/5195
Soggetti	Finance - Mathematical models Financial risk - Mathematical models Extreme value theory - Mathematical models Electronic books.
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.
Nota di contenuto	Front Cover; Detication; Contents; Preface; Introduction; List of Conventions; List of Abbreviations; Author; Part I: Distribution of Extremes; 1. Methods of Extreme Value Theory; 2. Maximum of Partial Sums; 3. Extremes in Samples of Random Size; 4. Poisson Approximation; 5. Compound Poisson Approximation; 6. Exceedances of Several Levels; 7. Processes of Exceedances; 8. Beyond Compound Poisson; Part II: Statistics of Extremes; 9. Inference on Heavy Tails; 10. Value-at-Risk; 11. Extremal Index; 12. Normal Approximation; 13. Lower Bounds; 14. Appendix; References
Sommario/riassunto	Extreme value theory (EVT) deals with extreme (rare) events, which are sometimes reported as outliers. Certain textbooks encourage readers to remove outliers-in other words, to correct reality if it does not fit the model. Recognizing that any model is only an approximation of reality, statisticians are eager to extract information about unknown distribution making as few assumptions as possible. Extreme Value Methods with Applications to Finance concentrates on modern topics in EVT, such as processes of exceedances, compound Poisson

2. Record Nr.	UNINA9910465175203321
Autore	Weicker Phillip
Titolo	A systems approach to lithium-ion battery management / / Phillip Weicker
Pubbl/distr/stampa	Boston : , : Artech House, , [2014] [Piscataway, New Jersey] : , : IEEE Xplore, , [2013]
ISBN	1-5231-1692-7 1-60807-660-1
Descrizione fisica	1 online resource (301 p.)
Collana	Power engineering
Disciplina	621.312424
Soggetti	Lithium ion batteries Power electronics Battery chargers Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Formerly CIP.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Introduction; 1.1 Battery Management Systems and Appli; 1.2 State of the Art; 1.3 Challenges; 2 Lithium-Ion Battery Fundamentals; 2.1 Battery Operation; 2.2 Battery Construction; 2.3 Battery Chemistry; 2.4 Safety; 2.5 Longevity; 2.6 Performance; 2.7 Integration; 3 Large-Format Systems; 3.1 Definition; 3.2 Balance of Plant; 3.3 Load Interface; 3.4 Variation and Divergence; 3.5 Application Parameters; 4 System Description; 4.1 Typical Inputs; 4.2 Typical Outputs; 4.3 Typical Functions; 4.4 Summary; 5 Architectures; 5.1 Monolithic; 5.2 Distributed; 5.3 Semi-Distributed 5.4 Connection Methods5.5 Additional Scalability; 5.6 Battery Pack Architectures; 5.7 Power Supply; 5.8 Control Power; 5.9 Computing Architecture; 6 Measurement; 6.1 Cell Voltage Measurement; 6.2 Current Measurement ; 6.2.1 Current Sensors; 6.2.2 Current Sense Measurement; 6.3 Synchronization of Current and Volta; 6.4 Temperature Measurement; 6.5 Measurement Uncertainty and Battery ;

6.6 Interlock Status; 7 Control; 7.1 Contactor Control; 7.2 Soft Start or Precharge Circuits; 7.3 Control Topologies; 7.4 Contactor Opening Transients; 7.5 Chatter Detection; 7.6 Economizers
 7.7 Contactor Topologies 7.8 Contactor Fault Detection; 8 Battery Management System Functionality; 8.1 Charging Strategies; 8.1.1 CC/CV Charging Method; 8.1.2 Target Voltage Method; 8.1.3 Constant Current Method; 8.2 Thermal Management; 8.3 Operational Modes; 9 High-Voltage Electronics Fundamentals; 9.1 High-Voltage DC Hazards; 9.2 Safety of High-Voltage Electronics; 9.3 Conductive Anodic Filaments; 9.4 Floating Measurements; 9.4.1 Y-Capacitance; 9.5 HV Isolation; 9.6 ESD Suppression on Isolated Devices; 9.7 Isolation Detection; 10 Communications; 10.1 Overview; 10.2 Network Technologies
 10.2.1 IC/SPI 10.2.2 RS-232 and RS-485; 10.2.3 Local Interconnect Network; 10.2.4 CAN; 10.2.5 Ethernet and TCP/IP; 10.2.6 Modbus; 10.2.7 FlexRay; 10.3 Network Design; 11 Battery Models; 11.1 Overview; 11.2 Thevenin Equivalent Circuit; 11.3 Hysteresis; 11.4 Coulombic Efficiency; 11.5 Nonlinear Elements; 11.6 Self-Discharge Modeling; 11.7 Physics-Based Battery Models; 11.7.1 Doyle-Fuller-Newman Model; 11.7.2 Single Particle Model; 11.8 State-Space Representations of Batt; References; 12 Parameter Identification; 12.1 Brute-Force Approach; 12.2 Online Parameter Identification
 12.3 SOC/OCV Characterization 12.4 Kalman Filtering; 12.5 Recursive Least Squares; 12.6 Electrochemical Impedance Spectrosc; 13 Limit Algorithms; 13.1 Purpose; 13.2 Goals; 13.3 Limit Strategy; 13.4 Determining Safe Operating Area; 13.5 Temperature; 13.6 SOC/DOD; 13.7 Cell Voltage; 13.8 Faults; 13.9 First-Order Predictive Power Limit; 13.10 Polarization-Dependent Limit; 13.11 Limit Violation Detection ; 13.12 Limits with Multiple Parallel Stri; 14 Charge Balancing; 14.1 Balancing Strategies; 14.2 Balancing Optimization; 14.3 Charge Transfer Balancing; 14.3.1 Flying Capacitor

Sommario/riassunto

Previously limited to heavy and bulky lead-acid storage batteries, large format batteries were used only where absolutely necessary as a means of energy storage. The improved energy density, cycle life, power capability, and durability of lithium ion cells has given us electric and hybrid vehicles with meaningful driving range and performance, grid-tied energy storage systems for integration of renewable energy and load leveling, backup power systems and other applications. This book discusses battery management system (BMS) technology for large format lithium-ion battery packs from a systems perspective. It covers the future of BMS; provides new ways to generate, use, and store energy; free us from the perils of non-renewable energy sources; provides a full update on BMS technology, covering software, hardware, integration, testing, and safety. --
