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Titolo	Exercises in probability : a guided tour from measure theory to random processes, via conditioning / Loïc Chaumont, Marc Yor
Pubbl/distr/stampa	Cambridge ; New York : Cambridge University Press, 2012
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Collana	Cambridge series in statistical and probabilistic mathematics
Classificazione	AMS 60-01 LC QA273.25.C492
Altri autori (Persone)	Yor, Marcauthor
Disciplina	519.2
Soggetti	Probabilities Probabilities - Problems, exercises, etc
Lingua di pubblicazione	Inglese
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Sommario/riassunto	"Derived from extensive teaching experience in Paris, this second edition now includes over 100 exercises in probability. New exercises have been added to reflect important areas of current research in probability theory, including infinite divisibility of stochastic processes, past-future martingales and fluctuation theory. For each exercise the authors provide detailed solutions as well as references for preliminary and further reading. There are also many insightful notes to motivate the student and set the exercises in context". - Provided by publisher

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Autore	Inamuddin
Titolo	Superconductors : Materials and Applications
Pubbl/distr/stampa	Millersville : , : Materials Research Forum LLC, , 2022 ©2022
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Descrizione fisica	1 online resource (266 pages)
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- front-matter -- Table of Contents -- Preface -- 1 -- Basic Concepts and Properties of Superconductors -- 1. Introduction and background -- 2. History of superconductors -- 3. Superconductors vs perfect conductors -- 4. Phenomenon of superconductivity -- 4.1 Zero resistance -- 4.2 Super-electron -- 4.3 Critical temperature for superconductors -- 5. Classification of superconductors -- 6. Properties of superconductor -- 6.1 Evanesce of electrical resistance -- 6.2 Flux lines and diamagnetism -- 6.3 Flux quantization in superconductors -- 6.4 Quantum interference -- 6.5 Josephson current -- Conclusion -- References -- 2 -- Properties and Types of Superconductors -- 1. Introduction -- 1.1 The Meissner effect and superconductors -- 2. History of superconductors -- 3. Types of superconductors -- 3.1 Type I superconductors -- 3.1.1 Examples -- 3.2 Type II superconductors -- 3.2.1 Examples -- 4. Comparisons between type I and type II superconductors -- 4.1 Meissner effect -- 4.2 Conduction of electrons -- 4.3 Surface energy -- 5. Superconducting materials -- 5.1 Metal based system superconductors -- 5.2 Copper oxides (Cuprates) -- 5.3 Iron based superconductors -- 6. Properties of superconductors -- Conclusion -- References -- 3 -- Fundamentals and Properties of Superconductors -- 1. Introduction -- 2. Types of superconductors -- 2.1 Type I and II superconductors -- 2.2 Organic superconductors -- 2.3 Magnetic superconductors -- 2.4

High temperature superconductors (HTS) -- 3. Properties of superconductors -- 3.1 Zero electric resistance -- 3.2 Meissner effect -- 3.3 Transition temperature -- 3.4 Critical current -- 3.5 Persistent currents -- 3.6 Idealized diamagnetisms, flux lines, with its quantization -- 3.7 Flux quantization -- 3.8 Josephson current -- 3.9 Josephson current in a magnetic field.
3.10 Superconducting quantum interference device (SQUID) -- 3.11 Superconductivity: A macroscopic quantum phenomenon -- 3.12 Critical magnetic field -- Conclusion -- References -- 4 -- Superconductors for Large-Scale Applications -- 1. Introduction -- 2. Meissner effect: Attribute to superconductors -- 3. Advanced power transmission system -- 4. Super conducting electrical power devices -- 5. Advanced power storage system -- 6. Modern transportation -- 7. Advanced accelerators -- 8. Magnetic resonance devices -- 8.1 Magnetic resonance imaging for medical diagnostics -- 8.2 NMR spectroscopy -- 8.3 Fast field cycle relaxometer -- 9. SQUID -- Conclusion -- References -- 5 -- Lanthanide-based Superconductor and its Applications -- 1. Introduction -- 2. Lanthanide-based superconductors -- 2.1 Preparation methods -- 2.1.1 Solid state reaction processes -- 2.1.2 Laser heating -- 2.1.3 High-pressure synthesis -- 2.2 Characterization of lanthanide-based superconductors -- 2.3 Superconducting properties of the LBSC -- 2.4 Applications of LBSC -- Conclusions -- References -- 6 -- Type I Superconductors: Materials and Applications -- 1. Introduction -- 2. Type-I superconductors -- 3. History of superconductivity -- 3.1. Quest for low temperature -- 3.2 Discovery of Helium -- 3.3 Curiosity to know the resistance of metals at absolute zero? -- 3.4 Why mercury used to measure low-temperature resistance? -- 4. Attributes of superconductors -- 4.1 Current in a superconductor coil -- 4.2 How superconductors behave in an external magnetic field? -- 4.3 Unification of electric and magnetic behaviour -- 5. Characteristics of type-I superconductors -- 5.1 Critical Temperature (TC) -- 5.2 Meissner effect or perfect diamagnetism -- 5.3 Critical magnetic field (HC) -- 5.4 Critical current (IC) -- 5.5 Isotope effect -- 5.6 Development of theories of superconductivity.
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3.3 Rare - earth barium copper oxide superconductors (REBCO) -- 3.4 MgB2 superconductors -- 3.5 Iron-based superconductors (IBS) -- 4. Materials' and their applications' prospects in the future -- Conclusion -- References.

Sommario/riassunto

The book presents the current status of superconductor science and technology.