1. Record Nr. UNINA9910816329303321

| | |
|---|---|
| Autore | Trent E. M (Edward Moor) |
| Titolo | Metal cutting / / Edward M. Trent, Paul K. Wright |
| Pubbl/distr/stampa | Boston, : Butterworth-Heinemann, c2000 |
| ISBN | 1-281-02560-7<br>9786611025601<br>0-08-051145-7 |
| Edizione | [4th ed.] |
| Descrizione fisica | 1 online resource (465 p.) |
| Altri autori (Persone) | WrightPaul Kenneth |
| Disciplina | 671.5/3 |
| Soggetti | Metal-cutting<br>Metal-cutting tools |
| 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 and index. |
| Nota di contenuto | Cover; Table of Contents; Foreword; Preface; Acknowledgements; Chapter 1. Introduction: Historical and Economic Context; The Metal Cutting (or Machining) Process; A Short History of Machining; Machining and the Global Economy; Summary and Conclusion; References; Chapter 2. Metal Cutting Operations and Terminology; Introduction; Turning; Boring Operations; Drilling; Facing; Forming and Parting Off; Milling; Shaping and Planing; Broaching; Conclusion; References; Bibliography (Also see Chapter 15); Chapter 3. The Essential Features of Metal Cutting; Introduction; The Chip Techniques for Study of Chip Formation Chip Shape; Chip Formation; The Chip/tool Interface; Chip Flow Under Conditions of Seizure; The Built-up Edge; Machined Surfaces; Summary and Conclusion; References; Chapter 4. Forces and Stresses in Metal Cutting; Introduction; Stress on the Shear Plane; Forces in the Flow Zone; The Shear Plane and Minimum Energy Theory; Forces in Cutting Metals and Alloys; Stresses in the Tool; Stress Distribution; Conclusion; References; Chapter 5. Heat in Metal Cutting; Introduction; Heat In the Primary Shear Zone; Heat at the Tool/work Interface<br>Heat Flow at the Tool Clearance Face Heat in Areas of Sliding; Methods of Tool Temperature Measurement; Measured Temperature Distribution in Tools; Relationship of Tool Temperature to Speed; Relationship of |

Tool Temperature to Tool Design; Conclusion; References; Chapter 6. Cutting Tool Materials I: High Speed Steels; Introduction and Short History; Carbon Steel Tools; High Speed Steels; Structure and Composition; Properties of High Speed Steels; Tool Life and Performance of High Speed Steel Tools; Tool-life Testing; Conditions of Use; Further Development; Conclusion; References
Chapter 7. Cutting Tool Materials II: Cemented Carbides Cemented Carbides: an Introduction; Structures and Properties; Tungsten Carbide-Cobalt Alloys (WC-Co); Tool Life and Performance of Tungsten Carbide-Cobalt Tools; Tungsten-Titanium-Tantalum Carbide Bonded with Cobalt; Performance of (WC+TiC+TaC) -Co Tools; Perspective: StraightZ WC-Co Grades versus the Steel-CuttingZ Grades; Performance of TiC OnlyZ Based Tools; Performance of Laminated and Coated Tools; Practical Techniques of Using Cemented Carbides for Cutting; Conclusion on Carbide Tools; References
Chapter 8. Cutting Tool Materials III: Ceramics, CBN Diamond Introduction; Alumina (Ceramic) Tools; Alumina-Based Composites (Al2O3 + TiC); Sialon; Cubic Boron Nitride (CBN); Diamond, Synthetic Diamond, and Diamond Coated Cutting Tools; General Survey of All Tool Materials; References; Chapter 9. Machinability; Introduction; Magnesium; Aluminum and Aluminum Alloys; Copper, Brass and Other Copper Alloys; Commercially Pure Iron; Steels: Alloy Steels and Heat-Treatments; Free-Cutting Steels; Austenitic Stainless Steels; Cast Iron; Nickel and Nickel Alloys; Titanium and Titanium Alloys; Zirconium Conclusions on Machinability

Sommario/riassunto

Metal cutting is an essential process throughout engineering design and manufacturing industries. To increase efficiency and reduce costs, it is necessary to improve understanding of the metal cutting process. This book presents a comprehensive treatment of the subject that focuses on the features of the behavior of tool and work materials that influence the efficiency of metal cutting operations.The fourth edition of this acclaimed book has been expanded and revised to include significant changes and additions to metal cutting theory, and to cover developments in tool materials

2.

| | |
|---|---|
| Record Nr. | UNINA9910811227903321 |
| Autore | Allendorf Frederick William |
| Titolo | Conservation and the genetics of populations / / Fred W. Allendorf, Gordon Luikart, Sally N. Aitken ; with illustrations by Agostinho Antunes |
| Pubbl/distr/stampa | Chichester, West Sussex, : John Wiley & Sons, 2012 |
| ISBN | 1-118-40857-8<br>1-283-64455-X<br>1-118-40856-X |
| Edizione | [2nd ed.] |
| Descrizione fisica | 1 online resource (630 p.) |
| Collana | New York Academy of Sciences |
| Classificazione | 467<br>333.95/16 |
| Altri autori (Persone) | AitkenSally N<br>LuikartGordon |
| Disciplina | 333.95/16 |
| Soggetti | Biodiversity conservation<br>Evolutionary genetics<br>Population genetics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Includes bibliographical references (p. [531]-586) and index |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Title page; Copyright page; Contents; Guest Box authors; Preface; Preface to the first edition; List of symbols; PART I: Introduction; CHAPTER 1: Introduction; 1.1 Genetics and Civilization; 1.2 What Should We Conserve?; 1.2.1 Phylogenetic diversity; 1.2.2 Populations, species, or ecosystems?; 1.3 How Should We Conserve Biodiversity?; 1.4 Applications of Genetics to Conservation; 1.5 The Future; Guest Box 1: L. Scott Mills and Michael E. Soule, The role of genetics in conservation; CHAPTER 2: Phenotypic variation in natural populations; 2.1 Color Pattern; 2.2 Morphology; 2.3 Behavior<br>2.4 Phenology2.5 Differences Among Populations; 2.5.1 Countergradient variation; 2.6 Nongenetic Inheritance; Guest Box 2: Chris J. Foote, Looks can be deceiving: countergradient variation in secondary sexual color in sympatric morphs of sockeye salmon; CHAPTER 3: Genetic variation in natural populations: chromosomes and proteins; 3.1 Chromosomes; 3.1.1 Karyotypes; 3.1.2 Sex chromosomes; 3.1.3 Polyploidy; 3.1.4 Numbers of chromosomes; 3.1.5 Supernumerary chromosomes; 3.1.6 Chromosomal size; 3.1.7 |

Inversions; 3.1.8 Translocations; 3.1.9 Chromosomal variation and conservation
3.2 Protein Electrophoresis3.2.1 Strengths and limitations of protein electrophoresis; 3.3 Genetic Variation within Natural Populations; 3.3.1 Data from natural populations; 3.4 Genetic Divergence Among Populations; Guest Box 3: E. M. Tuttle, Chromosomal polymorphism in the white-throated sparrow; CHAPTER 4: Genetic variation in natural populations: DNA; 4.1 Mitochondrial and Chloroplast Organelle DNA; 4.1.1 Restriction endonucleases and RFLPs; 4.1.2 Polymerase chain reaction; 4.2 Single-Copy Nuclear Loci; 4.2.1 Microsatellites; 4.2.2 PCR of protein-coding loci
4.2.3 Single nucleotide polymorphisms4.2.4 Sex-linked markers; 4.3 Multiple Locus Techniques; 4.3.1 Minisatellites; 4.3.2 AFLPs and ISSRs; 4.4 Genomic Tools and Markers; 4.4.1 High-throughput sequencing; 4.4.2 Inferences from sequence data; 4.4.3 EST sequencing applications; 4.4.4 SNP discovery and genotyping by sequencing; 4.5 Transcriptomics; 4.6 Other 'Omics' and The Future; 4.6.1 Metagenomics; Guest Box 4: Louis Bernatchez Rapid evolutionary changes of gene expression in domesticated Atlantic salmon and its consequences for the conservation of wild populations
PART II: Mechanisms of Evolutionary ChangeCHAPTER 5: Random mating populations: Hardy-Weinberg principle; 5.1 Hardy-Weinberg Principle; 5.2 Hardy-Weinberg Proportions; 5.3 Testing for Hardy-Weinberg Proportions; 5.3.1 Small sample sizes or many alleles; 5.3.2 Multiple simultaneous tests; 5.4 Estimation of Allele Frequencies; 5.4.1 Recessive alleles; 5.4.2 Null alleles; 5.5 Sex-Linked Loci; 5.5.1 Pseudoautosomal inheritance; 5.6 Estimation of Genetic Variation; 5.6.1 Heterozygosity; 5.6.2 Allelic richness; 5.6.3 Proportion of polymorphic loci
Guest Box 5: Paul Sunnucks and Birgita D. Hansen, Null alleles and Bonferroni 'abuse': treasure your exceptions (and so get it right for Leadbeater's possum)

Sommario/riassunto

Loss of biodiversity is among the greatest problems facing the world today. Conservation and the Genetics of Populations gives a comprehensive overview of the essential background, concepts, and tools needed to understand how genetic information can be used to conserve species threatened with extinction, and to manage species of ecological or commercial importance. New molecular techniques, statistical methods, and computer programs, genetic principles, and methods are becoming increasingly useful in the conservation of biological diversity. Using a balance of data and theory, coupled w