

1. Record Nr.	UNINA9910461642803321
Autore	Ensmenger Nathan <1972->
Titolo	The computer boys take over : computers, programmers, and the politics of technical expertise // Nathan Ensmenger
Pubbl/distr/stampa	Cambridge, Massachusetts : , : MIT Press, , c2010 [Piscataway, New Jersey] : , : IEEE Xplore, , [2012]
ISBN	0-262-28935-0
Descrizione fisica	1 online resource (331 p.)
Collana	History of computing
Disciplina	005.1
Soggetti	Computer programming Computer programmers Software engineering - History Computer software - Development - Social aspects Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	"This book provides the most holistic approach to the history of the development of programming and computer systems so far written. By embedding this history in a sociological and political context, Ensmenger has added hugely to our understanding of how the world of computing and its work practices came to be." Martin Campbell-Kelly, Professor of Computer Science, Warwick University. "The Computer Boys Take Over shows how computer programmers struggled for professional legitimacy and organizational recognition from the early days of ENIAC through the \$300 billion Y2K crisis. Ensmenger's descriptions of computer science' and software engineering,' as well as his portraits of Maurice Wilkes, Alan Turing, John Backus, Edsger Dijkstra, Fred Brooks, and other pioneers, give a compelling introduction to the field." Thomas J. Misa, Director of the Charles Babbage Institute, University of Minnesota. "The Computer Boys Take Over rewrites the history of computing by recounting the development of software in terms of labor, gender, and professionalization. Ensmenger meets the long-standing challenge to

reform computer history by employing themes of vital interest to the general history of science and technology." Ronald Kline, Bovay Professor in History and Ethics of Engineering, Cornell University. Ensmenger follows the rise of the computer boys as they struggled to establish a role for themselves within traditional organizational, professional, and academic hierarchies. He describes the tensions that emerged between the craft-centered practices of vocational programmers, the increasingly theoretical agenda of academic computer science, and the desire of corporate managers to control and routinize the process of software development. In doing so, he provides a human perspective on what is too often treated as a purely technological phenomenon. --Book Jacket.

2. Record Nr.	UNINA9910146406803321
Autore	Kannatey-Asibu E
Titolo	Principles of laser materials processing [[electronic resource] /] / Elijah Kannatey-Asibu, Jr
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2009
ISBN	1-282-11388-7 9786612113888 0-470-45930-1 0-470-45919-0
Descrizione fisica	1 online resource (849 p.)
Collana	Wiley series on processing of engineering materials
Disciplina	621.36/6 621.366
Soggetti	Lasers - Industrial applications Materials science 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 and index.
Nota di contenuto	PRINCIPLES OF LASER MATERIALS PROCESSING; CONTENTS; PREFACE; PART I PRINCIPLES OF INDUSTRIAL LASERS; 1 Laser Generation; 1.1 Basic Atomic Structure; 1.2 Atomic Transitions; 1.2.1 Selection Rules;

1.2.2 Population Distribution; 1.2.3 Absorption; 1.2.4 Spontaneous Emission; 1.2.5 Stimulated Emission; 1.2.6 Einstein Coefficients: $A_{e,B}$, $B(12)$, $B(21)$; 1.3 Lifetime; 1.4 Optical Absorption; 1.5 Population Inversion; 1.6 Threshold Gain; 1.7 Two-Photon Absorption; 1.8 Summary; References; Appendix 1A; Problems; 2 Optical Resonators; 2.1 Standing Waves in a Rectangular Cavity; 2.2 Planar Resonators 2.2.1 Beam Modes 2.2.1.1 Longitudinal Modes; 2.2.1.2 Transverse Modes; 2.2.2 Line Selection; 2.2.3 Mode Selection; 2.2.3.1 Transverse Mode Selection; 2.2.3.2 Longitudinal Mode Selection; 2.3 Confocal Resonators; 2.4 Generalized Spherical Resonators; 2.5 Concentric Resonators; 2.6 Stability of Optical Resonators; 2.7 Summary; Appendix 2A; Problems; 3 Laser Pumping; 3.1 Optical Pumping; 3.1.1 Arc or Flash Lamp Pumping; 3.1.2 Diode Laser Pumping; 3.1.2.1 Longitudinal Pumping; 3.1.2.2 Transverse Pumping; 3.1.3 Pumping Efficiency; 3.1.4 Energy Distribution in the Active Medium 3.2 Electrical Pumping 3.3 Summary; 4 Rate Equations; 4.1 Two-Level System; 4.2 Three-Level System; 4.3 Four-Level System; 4.4 Summary; Appendix 4A; Problems; 5 Broadening Mechanisms; 5.1 Line-Shape Function; 5.2 Line-Broadening Mechanisms; 5.2.1 Homogeneous Broadening; 5.2.1.1 Natural Broadening; 5.2.1.2 Collision Broadening; 5.2.2 Inhomogeneous Broadening; 5.3 Comparison of Individual Mechanisms; 5.4 Summary; Appendix 5A; Problems; 6 Beam Modification; 6.1 Quality Factor; 6.2 Q-Switching; 6.2.1 Mechanical Shutters; 6.2.2 Electro-Optic Shutters; 6.2.3 Acousto-Optic Shutters 6.2.4 Passive Shutters 6.3 Q-Switching Theory; 6.4 Mode-Locking; 6.4.1 Active Mode Locking; 6.4.2 Passive Mode-Locking; 6.5 Laser Spiking; 6.6 Lamb Dip; 6.7 Summary; Appendix 6A; Problems; 7 Beam Characteristics; 7.1 Beam Divergence; 7.2 Monochromaticity; 7.3 Beam Coherence; 7.3.1 Spatial Coherence; 7.3.2 Temporal Coherence; 7.4 Intensity and Brightness; 7.5 Frequency Stabilization; 7.6 Beam Size; 7.7 Focusing; 7.8 Radiation Pressure; 7.9 Summary; References; Appendix 7A; Problems; 8 Types of Lasers; 8.1 Solid-State Lasers; 8.1.1 The Ruby Laser; 8.1.2 Neodymium Lasers; 8.1.2.1 The Nd:YAG Laser 8.1.2.2 The Nd:Glass Laser 8.2 Gas Lasers; 8.2.1 Neutral Atom Lasers; 8.2.2 Ion Lasers; 8.2.3 Metal Vapor Lasers; 8.2.4 Molecular Gas Lasers; 8.2.4.1 Vibrational-Rotational Lasers; 8.2.4.2 Vibronic Lasers; 8.2.4.3 Excimer Lasers; 8.3 Dye Lasers; 8.4 Semiconductor (Diode) Lasers; 8.4.1 Semiconductor Background; 8.4.2 Semiconductor Lasers; 8.4.3 Semiconductor Laser Types; 8.4.3.1 Homojunction Lasers; 8.4.3.2 Heterojunction Lasers; 8.4.3.3 Quantum Well Lasers; 8.4.4 Low-Power Diode Lasers; 8.4.5 High-Power Diode Lasers; 8.4.6 Applications of High-Power Diode Lasers; 8.5 Free Electron Laser 8.6 New Developments in Industrial Laser Technology

Sommario/riassunto

Coverage of the most recent advancements and applications in laser materials processing This book provides state-of-the-art coverage of the field of laser materials processing, from fundamentals to applications to the latest research topics. The content is divided into three succinct parts: Principles of laser engineering-an introduction to the basic concepts and characteristics of lasers, design of their components, and beam delivery Engineering background&a review of engineering concepts needed to analyze different processes: thermal analysis and fluid flow; solidification
