1. Record Nr. UNINA9910437806703321

Autore	Chawla Nikhilesh
Titolo	Metal matrix composites / / Nikhilesh Chawla, Krishan K. Chawla
Pubbl/distr/stampa	New York : , : Springer, , 2013
ISBN	1-4614-9548-2
Edizione	[2nd ed. 2013.]
Descrizione fisica	1 online resource (xvi, 370 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	620.0042
Soggetti	Metallic composites
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 indexes.
Nota di contenuto	Preface -- Introduction -- Reinforcements -- Matrix Materials -- Processing -- Interface -- Micromechanics -- Monotonic Behavior -- Cyclic Fatigue -- Creep -- Wear and Corrosion -- Applications -- Author Index -- Subject Index.
Sommario/riassunto	Metal Matrix Composites (MMCs) have progressed from “niche” materials to high performance applications in aerospace, electronic packaging, automotive, and recreational products. This book focuses on the synergistic relationships among processing, microstructure, and properties of metal matrix composites. The authors include chapters on reinforcements, common matrix materials, processing of MMCs, interface characterization and techniques for obtaining interfacial properties, monotonic mechanical and physical properties, cyclic fatigue, creep, wear resistance, corrosion, and applications of MMCs. This, 2nd edition, builds on the text of the previous edition, by adding new and contemporary coverage of nanocomposites, corrosion, new applications, and new characterization techniques such as x-ray tomography and micropillar compression.

2. Record Nr. UNINA9910299943003321

Autore	Koubaa Anis
Titolo	Robot Path Planning and Cooperation : Foundations, Algorithms and Experimentations / / by Anis Koubaa, Hachemi Bennaceur, Imen Chaari, Sahar Trigui, Adel Ammar, Mohamed-Foued Sriti, Maram Alajlan, Omar Cheikhrouhou, Yasir Javed
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-77042-X
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XIX, 190 p. 61 illus., 47 illus. in color.)
Collana	Studies in Computational Intelligence, , 1860-949X ; ; 772
Disciplina	629.892
Soggetti	Computational intelligence Artificial intelligence Robotics Automation Computational Intelligence Artificial Intelligence Robotics and Automation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I Global Robot Path Planning -- Introduction to Mobile Robot Path Planning -- Background on Articial Intelligence Algorithms for Global Path Planning -- Design and Evaluation of Intelligent Global Path Planning Algorithms -- Integration of Global Path Planners in ROS -- Robot Path Planning using Cloud Computing for Large Grid Maps -- Part II Multi-Robot Task Allocation -- General Background on Multi-Robot Task Allocation -- Different Approaches to Solve the MRTA Problem -- Performance Analysis of the MRTA Approaches for Autonomous Mobile Robot.
Sommario/riassunto	This book presents extensive research on two main problems in robotics: the path planning problem and the multi-robot task allocation problem. It is the first book to provide a comprehensive solution for using these techniques in large-scale environments containing randomly scattered obstacles. The research conducted resulted in

tangible results both in theory and in practice. For path planning, new algorithms for large-scale problems are devised and implemented and integrated into the Robot Operating System (ROS). The book also discusses the parallelism advantage of cloud computing techniques to solve the path planning problem, and, for multi-robot task allocation, it addresses the task assignment problem and the multiple traveling salesman problem for mobile robots applications. In addition, four new algorithms have been devised to investigate the cooperation issues with extensive simulations and comparative performance evaluation. The algorithms are implemented and simulated in MATLAB and Webots.