1. Record Nr. UNINA9910298397803321

Titolo	Advanced High-Resolution Tomography in Regenerative Medicine : Three-Dimensional Exploration into the Interactions between Tissues, Cells, and Biomaterials / / edited by Alessandra Giuliani, Alessia Cedola
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-030-00368-X
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (235 pages)
Collana	Fundamental Biomedical Technologies, , 1559-7083
Disciplina	616.0757
Soggetti	Regenerative medicine Tissue engineering Radiology Stem cells Biomaterials Regenerative Medicine/Tissue Engineering Imaging / Radiology Stem Cells
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The Huge Machines of Physics: the bet of the Multidisciplinary Research Teams in Regenerative Medicine -- X-ray Microtomography: the basic principles for dummies -- Role of X-ray Microtomography in Regenerative Medicine -- Synchrotron Radiation – based Microtomography: what opportunities more? -- From Projections to the 3D Exploration of the Regenerated Tissue: Algorithms, Software and more -- Inside the bone: applications in Orthopedics and Dentistry -- The Challenge of the Vascularization of Regenerated Tissues -- Lung Imaging: Alterations and treatment Approaches in Pulmonary Diseases -- Better Cartilage Imaging at Synchrotron Facilities -- Into the “Heart” of the problem: which contributes to Cardiac Regeneration -- Frontiers in Muscle Diseases: the X-ray microtomography Support to latest Researches -- Brain, Drug release and more: what is cooking in research related to other Districts -- Towards an Increased Sensitivity

	by the In-line Phase Tomography -- Perspectives and Prospective from insiders -- Role of Standard X-ray Microtomography in Tissue Engineering.
Sommario/riassunto	This book covers the state-of-the-art research on advanced high-resolution tomography, exploring its role in regenerative medicine. and also explores the 3D interactions between tissues, cells, and biomaterials. Various multidisciplinary paths in regenerative medicine are covered, including X-ray microtomography and its role in regenerative medicine, synchrotron radiation-based microtomography and phase contrast tomography, the challenge of the vascularization of regenerated tissues, lung and cartilage imaging, and more. This is an ideal book for biomedical engineers, biologists, physicists, clinicians, and students who want to pursue their studies in the field of regenerative medicine. This book also: Reviews in detail the algorithms and software used for the 3D exploration of regenerated tissue Covers the latest research on the use of X-ray microtomography for muscle diseases Details applications of synchrotron radiation tomography in orthopedics and dentistry.

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Record Nr.	UNINA9910970294403321
Titolo	National capacity in forestry research / / Committee on National Capacity in Forestry Research, Board on Agriculture and Natural Resources, Division on Earth and Life Sciences, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, c2002
ISBN	9786610183623 9780309182737 0309182735 9781280183621 1280183624 9780309566049 0309566045
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xvii, 144 pages)
Collana	Compass series
Disciplina	634.9
Soggetti	Forests and forestry - Research - United States Forests and forestry - United States Forests and forestry - Research Forestry schools and education

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	The Committee "sponsored a workshop on forestry-research capacity on July 16-17, 1999, which ... was an important component of this project"--Preface.
Nota di bibliografia	Includes bibliographical references (p. 128-135).
Nota di contenuto	""National Capacity in Forestry Research""; ""Copyright""; ""Preface""; ""Acknowledgments""; ""Contents""; ""Executive Summary""; ""DEFINING FORESTRY-RESEARCH CAPACITY""; ""THE VALUE OF FORESTRY RESEARCH""; ""KEY PLAYERS""; ""KNOWLEDGE BASE AND PRIORITIES""; ""ASSESSING THE STATUS OF FORESTRY RESEARCH""; ""ENHANCING FORESTRY-RESEARCH PERSONNEL, FACILITIES, AND INFRASTRUCTURE""; ""LEADERSHIP AND STRATEGIC PLANNING""; ""CREATING INTELLECTUAL AND SCIENTIFIC-RESEARCH CAPITAL""; ""INCREASING STRENGTH, COLLABORATION, AND DIVERSIFICATION IN FORESTRY RESEARCH""; ""ENSURING PROGRESS"" ""1 Need, Context, and Foundation for Forestry Research"" ""THE CURRENT STUDY""; ""Boundaries of the Assessment""; ""DEFINING FORESTRY-RESEARCH CAPACITY""; ""INSTITUTIONAL FRAMEWORK FOR FORESTRY-RELATED RESEARCH""; ""EARLY FORESTRY RESEARCH AND EDUCATION""; ""THE IMPORTANCE OF MAINTAINING, PROTECTING, AND ENHANCING TODAY'S FORESTS FOR TOMORROW""; ""FUTURE CHALLENGES""; ""FORESTRY EDUCATION AND RESEARCH""; ""2 The Essential Knowledge Base for Forestry Issues""; ""KNOWLEDGE BASE REQUIRED""; ""Foundation Education and Research Priorities""; ""Emerging Education and Research Priorities"" ""Stewardship and Sustainability of Public Lands"" ""Sustainable-Management Criteria and Indicators""; ""Forest Certification""; ""Forest-Industry Priorities""; ""New Forestry-Research Challenges""; ""WORKSHOP INPUT ON AN ESSENTIAL KNOWLEDGE BASE""; ""CONCLUSIONS AND RECOMMENDATIONS""; ""3 Current Forestry-Research Capacity in the United States""; ""ASSESSING FORESTRY-RESEARCH CAPACITY""; ""A PORTRAIT OF THE FORESTRY-RESEARCH WORKFORCE""; ""USDA Forest Service""; ""Research Scientists""; ""Research Productivity""; ""Research Quality""; ""Research Advisory Body"" ""Professional Forestry Schools and Colleges"" ""Faculty""; ""Forestry Extension""; ""Private Industry""; ""Total Forestry Research Workforce by Sector, Function, and Sustainable Forest Management Criteria""; ""INVESTMENT IN FORESTRY RESEARCH""; ""Forest Service Research Support""; ""Other Federal Forestry-Research Funding""; ""Leveraging Research Support""; ""University Research Support""; ""Contributions of the Forest Products Industry""; ""Other Sources of Research Support""; ""EVALUATING RETURN ON INVESTMENT IN FORESTRY RESEARCH""; ""CONCLUSIONS AND RECOMMENDATIONS""; ""Personnel"" ""Research Quality, Productivity, and Efficacy"" ""Fiscal Strength""; ""Toward Greater Capacity""; ""4 Preparing Forestry Scientists and Users of Forestry Science""; ""THE FUTURE OF FORESTRY EDUCATION""; ""TRENDS IN ENROLLMENT AND GRADUATION""; ""FORESTRY AS AN ACADEMIC SUBJECT""; ""CURRICULUM AS A CONCEPT""; ""MODELS FOR FORESTRY EDUCATION""; ""Broad Trends in Forestry Education""; ""WHAT ABOUT RESEARCH?""; ""WHAT ABOUT CURRICULA?""; ""ADEQUACY AND CAPACITY OF UNIVERSITY PROGRAMS TO MEET NEAR-FUTURE NEEDS""; ""Disciplinary Breadth of Forestry Education""; ""Numbers of Scientists""; ""Diversity of Scientists""

Sommario/riassunto

Forests are major components of the earth's natural resources and they are increasingly critical to the welfare of the U.S. economy, environment, and population. Desires to improve forest management and productivity, preserve biodiversity, maintain ecologic integrity, and provide societal services, such as recreation and tourism, necessitate a strong forestry-research base. Given the clear importance of forestry research in sustaining forests for the future, the U.S. Department of Agriculture (USDA) Forest Service asked the Board on Agriculture and Natural Resources of the National Academies to undertake a study of the nation's capacity in forestry research. The Committee on National Capacity in Forestry Research was appointed to carry out the study, which was conducted to review the current expertise and status of forestry research and to examine the approaches of natural resources education and forestry-research organizations to meet future needs.