1. Record Nr. UNINA9910299832803321

Titolo	Developments in Medical Image Processing and Computational Vision / / edited by João Manuel R. S. Tavares, Renato Natal Jorge
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-13407-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (400 p.)
Collana	Lecture Notes in Computational Vision and Biomechanics, , 2212-9413 ; ; 19
Disciplina	006.6 519 610 610.28 616.0757 620
Soggetti	Biomedical engineering Radiology Image processing - Digital techniques Computer vision Medicine - Research Biology - Research Mathematics Biomedical Engineering and Bioengineering Computer Imaging, Vision, Pattern Recognition and Graphics Biomedical Research Applications of Mathematics
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.
Nota di contenuto	Preface -- On the evaluation of automated MRI brain segmentations: technical and conceptual tools, by Elisabetta Binaghi, Valentina Pedoia, Desiree Lattanzi, Emanuele Monti, Sergio Balbi, Renzo Minotto -- Analysis of the retinal nerve fiber layer texture related to the thickness measured by optical coherence tomography, by J. Odstrcilik, R. Kolar,

R.P. Tornow, A. Budai, J. Jan, P. Mackova, M. Vodakova -- Continuum mechanics meets echocardiographic imaging: investigation on the principal strain lines in human left ventricle, by A. Evangelista, S. Gabriele, P. Nardinocchi, P. Piras, P.E. Puddu, L. Teresi, C. Torromeo, V. Varano -- A GPU accelerated algorithm for blood detection in wireless capsule endoscopy images, by Sunil Kumar, Isabel N. Figueiredo, Carlos Graça, Gabriel Falcão -- Automated image mining in fMRI Reports: a meta-research study, by N. Gonçalves, G. Vranou, R. Vigário -- Visual pattern recognition framework based on the best rank tensor decomposition, by B. Cyganek -- Tracking red blood cells flowing through a microchannel with a hyperbolic contraction: an automatic method, by B. Taboada, F. C. Monteiro, R. Lima -- A 3D computed tomography based tool for orthopedic surgery planning, by João Ribeiro, Victor Alves, Sara Silva, Jaime Campos -- Preoperative planning of surgical treatment with the use of 3D visualization and finite element method, by Wolaski Wojciech, Gzik-Zroska Boena, Kawlewska Edyta, Gzik Marek, Dzielicki Józef, Larysz Dawid, Rudnik Adam -- Pretreatment and reconstruction of three-dimensional images applied in a locking reconstruction plate for a structural analysis with FEA, by João Paulo O. Freitas, Edson A. Capello de Sousa, Cesar R. Foschini, Rogerio R. Santos, Sheila C. Rahal -- Tortuosity influence on the trabecular bone elasticity and mechanical competence, by Waldir Leite Roque, Angel Alberich-Bayarri -- Influence of beam hardening artifact in bone interface contact evaluation by 3D X-ray microtomography, by I. Lima, M.Marquezan, M. M. G. Souza, E. F. Sant'Anna, R. T. Lopes -- Anisotropy estimation of trabecular bone in gray-scale: comparison between cone beam and micro computed tomography data, by Rodrigo Moreno, Magnus Borga, Eva Klintström, Torkel Brismar, Örjan Smedby -- Fractured bone identification from CT images, fragment separation and fracture zone detection, by Félix Paulano, Juan J. Jiménez, Rubén Pulido -- On evolutionary integral models for image restoration, by E. Cuesta, A. Durán, M. Kirane -- Colour image quantisation using KM and KHM clustering techniques with outlier-based initialization, by Henryk Palus, Mariusz Frackiewicz -- A study of a firefly meta-heuristics for multithreshold image segmentation, by H. Erdmann, G. Wachs-Lopes, C. Gallão, M. P. Ribeiro, P. S. Rodrigues -- Visual-inertial 2D feature tracking based on an affine photometric model, by Dominik Aufderheide, Gerard Edwards and Werner Krybus -- Inferring heading direction from silhouettes, by Amina Bensebaa, Slimane Larabi, Neil M. Robertson -- A fast and accurate algorithm for detecting and tracking moving hand gestures, by Walter C. S. S. Simões, Ricardo da S. Barboza, Vicente F. de Lucena Jr., Rafael D. Lins -- Hand gesture recognition system based in computer vision and machine learning, by Paulo Trigueiros, Fernando Ribeiro, Luís Paulo Reis -- 3D Scanning using RGBD imaging devices: a survey, by Eduardo E. Hitomi, Jorge V. L. Silva, Guilherme C. S. Ruppert.

Sommario/riassunto

This book presents novel and advanced topics in Medical Image Processing and Computational Vision in order to solidify knowledge in the related fields and define their key stakeholders. It contains extended versions of selected papers presented in VipIMAGE 2013 – IV International ECCOMAS Thematic Conference on Computational Vision and Medical Image, which took place in Funchal, Madeira, Portugal, 14-16 October 2013. The twenty-two chapters were written by invited experts of international recognition and address important issues in medical image processing and computational vision, including: 3D vision, 3D visualization, colour quantisation, continuum mechanics, data fusion, data mining, face recognition, GPU parallelisation, image acquisition and reconstruction, image and video analysis, image

clustering, image registration, image restoring, image segmentation, machine learning, modelling and simulation, object detection, object recognition, object tracking, optical flow, pattern recognition, pose estimation, and texture analysis. Different applications are addressed and described throughout the book, comprising: biomechanical studies, bio-structure modelling and simulation, bone characterization, cell tracking, computer-aided diagnosis, dental imaging, face recognition, hand gestures detection and recognition, human motion analysis, human-computer interaction, image and video understanding, image processing, image segmentation, object and scene reconstruction, object recognition and tracking, remote robot control, and surgery planning. This volume is of use to researchers, students, practitioners and manufacturers from several multidisciplinary fields, such as artificial intelligence, bioengineering, biology, biomechanics, computational mechanics, computational vision, computer graphics, computer science, computer vision, human motion, imagiology, machine learning, machine vision, mathematics, medical image, medicine, patternrecognition, and physics.

2. Record Nr. UNINA9910143886803321

Titolo	Symbolic and Numerical Scientific Computation : Second International Conference, SNSC 2001, Hagenberg, Austria, September 10-11, 2001, Revised Papers / / edited by Franz Winkler, Ulrich Langer
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2003
ISBN	3-540-45084-X
Edizione	[1st ed. 2003.]
Descrizione fisica	1 online resource (XII, 392 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2630
Disciplina	515/.35
Soggetti	Numerical analysis Computer science—Mathematics Computer-aided engineering Computer science - Mathematics Numeric Computing Science, Humanities and Social Sciences, multidisciplinary Discrete Mathematics in Computer Science Symbolic and Algebraic Manipulation Computer-Aided Engineering (CAD, CAE) and Design Computational Mathematics and Numerical Analysis

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 at the end of each chapters and index.
Nota di contenuto	Symbolics and Numerics of Differential Equations -- Notes on Triangular Sets and Triangulation-Decomposition Algorithms I: Polynomial Systems -- Notes on Triangular Sets and Triangulation-Decomposition Algorithms II: Differential Systems -- Passive Complete Orthonomic Systems of PDEs and Involutive Bases of Polynomial Modules -- Symmetries of Second- and Third-Order Ordinary Differential Equations -- Symbolic Methods for the Equivalence Problem for Systems of Implicit Ordinary Differential Equations -- On the Numerical Analysis of Overdetermined Linear Partial Differential Systems -- Dynamical Aspects of Involutive Bases Computations -- Symbolics and Numerics in Algebra and Geometry -- Congestion and Almost Invariant Sets in Dynamical Systems -- Datagraphs in Algebraic Geometry and K3 Surfaces -- Resultants and Neighborhoods of a Polynomial -- Multi-variate Polynomials and Newton-Puiseux Expansions -- Wavelets with Scale Dependent Properties -- Accurate Numerical Fourier Transform in d-Dimensions -- Exact Real Computation in Computer Algebra -- Symbolic Methods for the Element Preconditioning Technique -- Applications in Physics and Engineering -- Solving Symbolic and Numerical Problems in the Theory of Shells with Mathematica® -- A Symbolic Procedure for the Diagonalization of Linear PDEs in Accelerated Computational Engineering -- Generation of the Quasi-solitons in the Lasers: Computer Algebra Approach to an Analysis -- Nonlinear Periodic Waves in Shallow Water.
Sommario/riassunto	This book constitutes the thoroughly refereed post-proceedings of the Second International Conference on Symbolic and Numerical Scientific Computation, SNSC 2001, held in Hagenberg, Austria, in September 2001. The 19 revised full papers presented were carefully selected during two rounds of reviewing and improvement. The papers are organized in topical sections on symbolics and numerics of differential equations, symbolics and numerics in algebra and geometry, and applications in physics and engineering.