

Leapfrog-IP : "Image Analysis Techniques for Material Characterization and Simulation"

Description: Image Analysis Techniques for Material Characterization and Simulation (Leapfrog-IP project, EC contract No. 515810 - NMP2-CT-2005-515810), R&D project for image analysis and characterization for clothing industry applications (2006-2007). The LEAPFROG Integrated Project attempts to modernise and ultimately transform the clothing sector into a demand-driven, knowledge-based, high-tech industry by exploitation of recent advances in a broad area of scientific-technological fields ranging from: nanotechnology and polymeric material science, robotics and innovative joining techniques, 3D computer graphics and animation, e-business and management research, etc. **Keywords:** shape analysis, morphological features, image processing

Material and Results:

Presentations and work conducted by AUA (Harris Georgiou):

1. Leapfrog-IP, Workpackage-4: **Drape Image Processing: Progress report summary on image pre-processing, segmentation and further stages** (Athens, GREECE, 18th June 2007).

<http://dx.doi.org/10.5281/zenodo.59616> [download: [pdf](#)]

2. Leapfrog-IP, Workpackage-4: **Drape Image Processing: Progress report summary 2 on shape features, preliminary analysis and further stages** (Athens, GREECE, 31st October 2007).

<http://dx.doi.org/10.5281/zenodo.59617> [download: [pdf](#)]

Technical reports co-authored by NKUA/UoA (Harris Georgiou):

- Leapfrog-IP, Workpackage-4: **Results of feasibility study for classification of fabrics and quick automatic estimation of their simulation parameters based on image analysis** (deliverable report D4.19, draft/unofficial version, 31-Jan-2008).

<http://dx.doi.org/10.5281/zenodo.59620> [download: [pdf](#)]

Book publications:

Transforming Clothing Production into a demand-driven, knowledge-based, high-tech industry - The [Leapfrog](#) paradigm

Leapfrog-IP: Material and Results

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- H. Georgiou, G. Kartsounis (members of the team of AUA, subcontractor to Hohenstein Institute, contributing authors). [Book published by Springer](#) , regarding advances in nanotechnology and innovative polymeric materials, flexible robotics and innovative joining techniques, 3D CAD and Collaborative Virtual Prototyping, knowledge networking of textile and garment organisations. The book is a collection of short papers from prominent researchers involved with the LEAPFROG (Leadership for European Apparel Production From Research along Original Guidelines) initiative. LEAPFROG proposes a revolutionary industrial paradigm based on research results in scientific-technological fields, outlining key developments in all of the above areas, covering both technological and business aspects. It is an excellent reference for decision makers, managers, scientists and practitioners in the textile and clothing sectors, as well as academics and postgraduate students across a range of disciplines. (results from: LEAPFROG-IP, 6th Framework, FP6-2003-NMP-NI-3, Contract No: 515810). Springer, 1st/edition, ISBN:978-1848826076, 29-Sept-2009. [download: [preface/TOC \(pdf\)](#) from Springer.com]

Notice: All the material and results related to the work under the Leapfrog-IP project were not publicly available until the end of May 2009 due to IPR limitations. Nevertheless, all the files available here are only unofficial/draft versions, prepared almost entirely by the author (Harris Georgiou). Thus, they can now be accessed publicly without any restriction whatsoever, under the copyright notice included in this page.



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