New book series

Geometry and Computing   http://www.springer.com/series/7580

Announcement and Call for Proposals

Complementing Springer's publication activities in their Lecture Notes series and journals, **Geometry and Computing** is devoted to the publication of high- profile books, such as advanced textbooks, focused monographs, and consolidated state-of-the-art research surveys; also welcome are edited collections on emergent topics, which are coherently integrated and presented in a competent and well-balanced way.

Background:

Geometric shapes belong to our everyday life, and modeling and optimization of such forms determine biological and industrial success. Similar to the digital revolution in image processing, which turned digital cameras and online video downloads into consumer products, nowadays we encounter a strong industrial need for and scientific research into geometry processing technologies for 3D shapes.

Several disciplines are involved, many with their origins in mathematics, revived with computational emphasis within computer science, and motivated by applications in the sciences and engineering. Just to mention one example, the renewed interest in discrete differential geometry is motivated by the need for a theoretical foundation for geometry processing algorithms, which cannot be found in classical differential geometry.

Scope:

This book series is devoted to new developments in geometry and computation and its applications. It provides a scientific resource library for education, research, and industry. The series constitutes a platform for publication of the latest research in mathematics and computer science on topics in this field.

The topics covered by Geometry and Computing include geometric aspects in:

* Discrete geometry   * Computational geometry
* Differential geometry   * Discrete differential geometry
* Computer graphics   * Geometry processing
* CAD/CAM   * Computer-aided geometric design
* Geometric topology   * Computational topology
* Statistical shape analysis   * Structural molecular biology
* Shape optimization   * Geometric data structures
* Geometric probability   * Geometric constraint solving
* Algebraic geometry   * Graph theory
* Physics- based modeling   * Kinematics
* Symbolic computation   * Approximation theory
* Scientific computing   * Computer vision

The audience of Geometry and Computing comprises researchers, advanced students and professionals in mathematics, computer science, engineering and computational sciences.

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