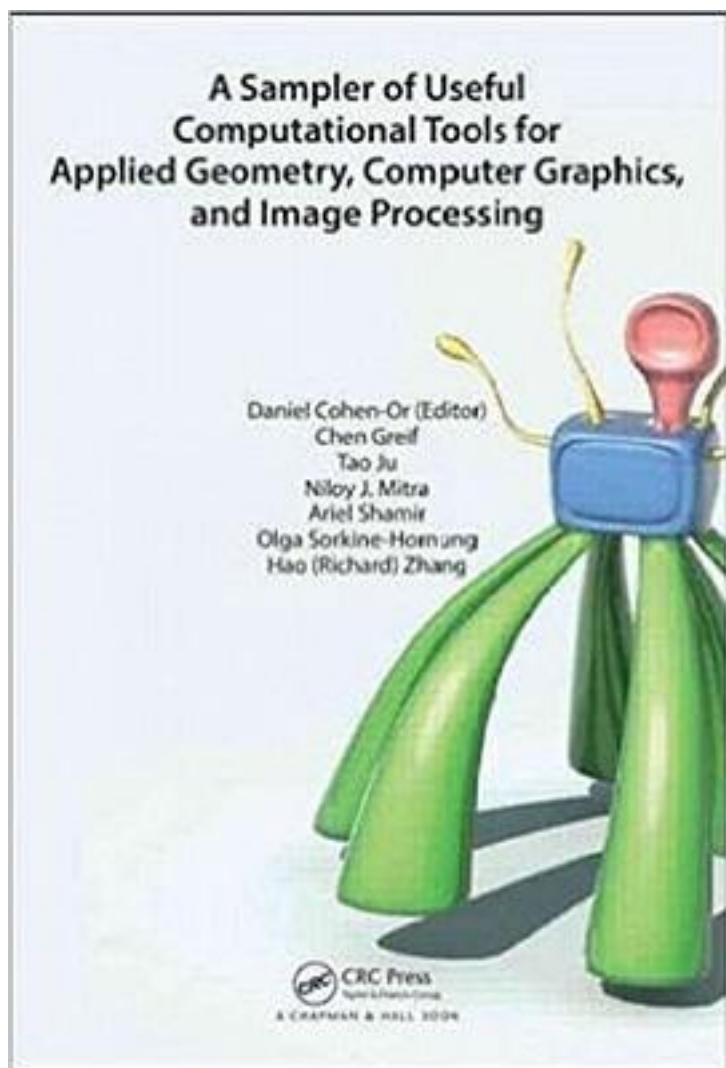


A Sampler of Useful Computational Tools for Applied Geometry, Computer Graphics, and Image Processing



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A Sampler of Useful Computational Tools for Applied Geometry, Computer Graphics, and Image Processing shows how to use a collection of mathematical techniques to solve important problems in applied mathematics and computer science areas. The book discusses fundamental tools in analytical geometry and linear algebra. It covers a wide range of topics, from matrix decomposition to curvature analysis and principal component analysis to dimensionality reduction.

Written by a team of highly respected professors, the book can be used in a one-semester, intermediate-level course in computer science. It takes a practical problem-solving approach, avoiding detailed proofs and analysis. Suitable for readers without a deep academic background in mathematics, the text explains how to solve non-trivial geometric problems. It quickly gets readers up to speed on a variety of tools employed in visual computing and applied geometry.

作者介绍:

目录: Analytical Geometry Olga Sorkine-Hornung and Daniel Cohen-Or
Linear Algebra Daniel Cohen-Or, Olga Sorkine-Hornung, and Chen Greif
Least Squares Solutions Niloy J. Mitra
PCA and SVD Olga Sorkine-Hornung
Spectral Transform Hao (Richard) Zhang
Solution of Linear Systems Chen Greif
Laplace and Poisson Daniel Cohen-Or and Gil Hoffer
Curvatures: A Differential Geometry Tool Niloy J. Mitra and Daniel Cohen-Or
Dimensionality Reduction Hao (Richard) Zhang and Daniel Cohen-Or
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Topology: How Are Objects Connected? Niloy J. Mitra
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标签

数学

图形学

计算机

数学-数学软件

评论

自己在豆瓣上创建的第一本图书条目哈哈哈哈哈。相见恨晚的书，为啥没有早点遇见。科研一线大佬们写的还是很通俗易懂的，非常适合作为图形学方向的入门读物。部分章节讲的不是很深入，另外涉及的话题再多一点就更好了！

线性代数、微分几何、泊松方程在这本书中的应用未免也太有趣了吧，只叹数学不够用

精巧而直观，可惜错误太多，减一星。正在写勘误。This book has a special presentation style that gives up excessive rigor and completeness, but strives to be useable, effective and well motivated.

前面三章，以及zhang hao写的两章不错

danny,olga和niloy等合写的小书，通俗易懂，也很实用。支持一下

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书评

精巧而直观，可惜错误太多，减一星。勘误写到第五章。This book has a special presentation style that gives up excessive rigor and completeness, but strives to be useable, effective and well motivated. 第8页 第9页 第27页 第60页 第61页 第88页

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