



## Geometric Algebra for Computer Graphics

By John Vince

Springer Okt 2010, 2010. Taschenbuch. Book Condition: Neu. 235x178x14 mm. This item is printed on demand - Print on Demand Titel. - Since its invention, geometric algebra has been applied to various branches of physics such as cosmology and electrodynamics, and is now being embraced by the computer graphics community where it is providing new ways of solving geometric problems. It took over two thousand years to discover this algebra, which uses a simple and consistent notation to describe vectors and their products. John Vince (best-selling author of a number of books including Geometry for Computer Graphics and Vector Analysis for Computer Graphics ) tackles this new subject in his usual inimitable style, and provides an accessible and very readable introduction. The first five chapters review the algebras of real numbers, complex numbers, vectors, and quaternions and their associated axioms, together with the geometric conventions employed in analytical geometry. As well as putting geometric algebra into its historical context, John Vince provides chapters on Grassmann's outer product and Clifford's geometric product, followed by the application of geometric algebra to reflections, rotations, lines, planes and their intersection. The conformal model is also covered, where a 5D Minkowski space provides...



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