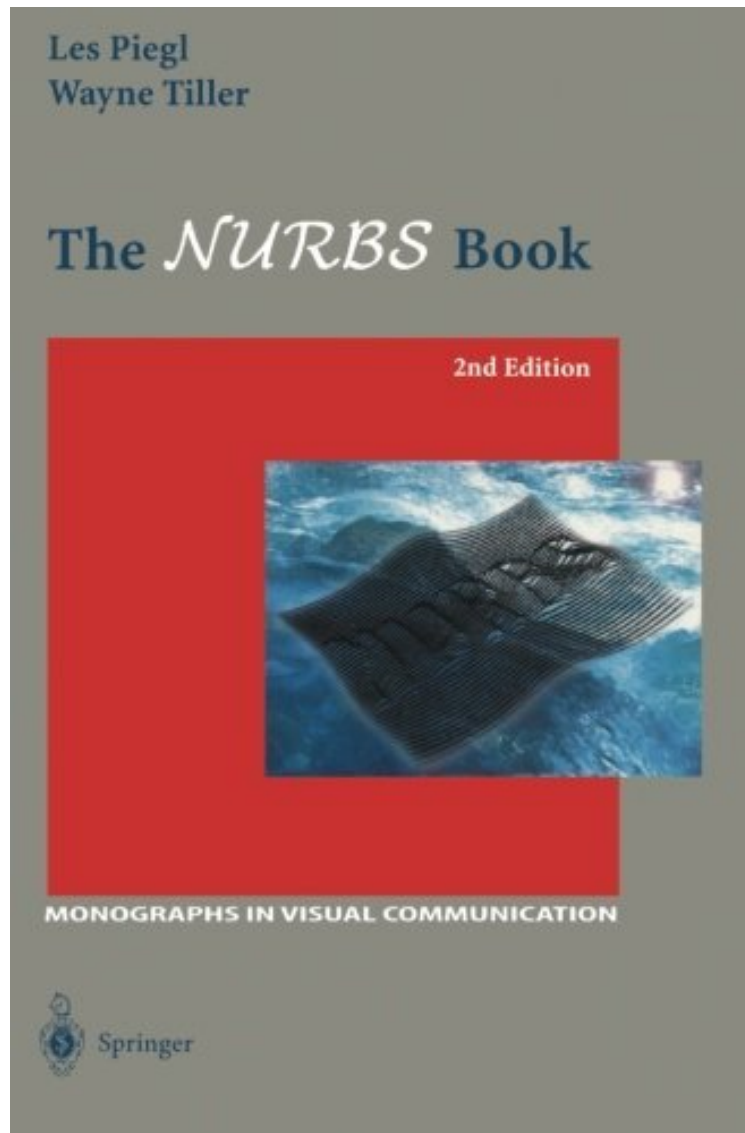


[Free pdf] The NURBS Book (Monographs in Visual Communication)

## The NURBS Book (Monographs in Visual Communication)

Von Les Piegl, Wayne Tiller

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Von Les Piegl, Wayne Tiller : The NURBS Book (Monographs in Visual Communication) before purchasing it in order to gage whether or not it would be worth my time, and all praised The NURBS Book (Monographs in Visual Communication):

KundenrezensionenHilfreichste Kundenrezensionen9 von 9 Kunden fanden die folgende Rezension hilfreich. Sehr gut fuer Profis geeignetVon Ein KundeDieses Buch ragt aus der Menge der Veroeffentlichungen im Bereich der geometrischen Datenverarbeitung zum Thema NURBS heraus. Den Autoren ist es gelungen, sowohl die mathematischen Grundlagen zu erlaeuern, als auch einen Praxisbezug durch vielfaeltige Source-Code-Beispiele zu

erreichen. Sie gehen dabei auf die verschiedenen "Basis-Algorithmen" wie Abstand Punkt zu Kurve etc. ein. Für jeden Softwareentwickler im Bereich CAD ein umfassendes Nachschlagewerk und ein interessanter Ideengeber.

Kurzbeschreibung Until recently B-spline curves and surfaces (NURBS) were principally of interest to the computer aided design community, where they have become the standard for curve and surface description. Today we are seeing expanded use of NURBS in modeling objects for the visual arts, including the film and entertainment industries, art, and sculpture. NURBS are now also being used for modeling scenes for virtual reality applications. These applications are expected to increase. Consequently, it is quite appropriate for The NURBS Book to be part of the Monographs in Visual Communication Series. B-spline curves and surfaces have been an enduring element throughout my professional life. The first edition of Mathematical Elements for Computer Graphics, published in 1972, was the first computer aided design/interactive computer graphics textbook to contain material on B-splines. That material was obtained through the good graces of Bill Gordon and Louie Knapp while they were at Syracuse University. A paper of mine, presented during the Summer of 1977 at a Society of Naval Architects and Marine Engineers meeting on computer aided ship surface design, was arguably the first to examine the use of B-spline curves for ship design. For many, B-splines, rational B-splines, and NURBS have been a bit mysterious.

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Synopsis The book covers all aspects of non-uniform rational B-splines necessary to design geometry in a computer-aided environment. Basic B-spline features, curve and surface algorithms, and state-of-the-art geometry tools are all discussed. Detailed code for design algorithms and computational tricks are covered too, in a lucid, easy-to-understand style, with a minimum of mathematics and using numerous worked examples. The book will be a must for students, researchers, and implementors whose work involves the use of splines.