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Nota di contenuto	ISOGEOMETRICANALYSIS; Contents; Preface; 1 From CAD and FEA to Isogeometric Analysis: An Historical Perspective; 1.1 Introduction; 1.1.1 The need for isogeometric analysis; 1.1.2 Computational geometry; 1.2 The evolution of FEA basis functions; 1.3 The evolution of CAD representations; 1.4 Things you need to get used to in order to understand NURBS-based isogeometric analysis; Notes; 2 NURBS as a Pre-analysis Tool: Geometric Design and Mesh Generation; 2.1 B-splines; 2.1.1 Knot vectors; 2.1.2 Basis functions; 2.1.3 B-spline geometries; 2.1.4 Refinement; 2.2 Non-Uniform Rational B-Splines 2.2.1 The geometric point of view2.2.2 The algebraic point of view; 2.3 Multiple patches; 2.4 Generating a NURBS mesh: a tutorial; 2.4.1 Preliminary considerations; 2.4.2 Selection of polynomial orders; 2.4.3 Selection of knot vectors; 2.4.4 Selection of control points; 2.5 Notation; Appendix 2.A: Data for the bent pipe; Notes; 3 NURBS as a Basis for Analysis: Linear Problems; 3.1 The isoparametric concept;

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Sommario/riassunto

"The authors are the originators of isogeometric analysis, are excellent scientists and good educators. It is very original. There is no other book on this topic."-Rene de Borst, Eindhoven University of Technology
Written by leading experts in the field and featuring fully integrated colour throughout, Isogeometric Analysis provides a groundbreaking solution for the integration of CAD and FEA technologies. Tom Hughes and his researchers, Austin Cottrell and Yuri Bazilevs, present their pioneering isogeometric approach, which aims to integrate the two techniques of CAD and FEA usin
