Record Nr. UNINA9910786511203321 Autore Gomes Jonas Titolo Computer graphics: theory and practice // by Jonas Gomes, Luiz Velho and Mario Costa Sousa Boca Raton, FL:,: A K Peters/CRC Press, an imprint of Taylor and Pubbl/distr/stampa Francis, , 2012 **ISBN** 0-429-10845-1 1-56881-580-8 Edizione [First edition.] Descrizione fisica 1 online resource (554 p.) COM012000TEC019000 Classificazione Disciplina 006.6 Soggetti Computer graphics Microcomputers - Programming Image processing - Mathematics C (Computer program language) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "An A K Peters Book." Nota di bibliografia Includes bibliographical references. Nota di contenuto Front Cover; Dedication; Contents; Foreword; About the Cover; Preface; 1. Introduction: 2. Geometry: 3. Coordinates: 4. The Space of Rotations: 5. Color; 6. Image; 7. Planar Graphics Objects; 8. Spatial Graphics Objects; 9. Hierarchies; 10. Geometric Modeling; 11. Virtual Camera; 12. Clipping; 13. Visibility; 14. Illumination; 15. Rasterization; 16. Mappings; 17. Composition; 18. Radiometry and Photometry; 19. The Illumination Equation; Bibliography Computer Graphics: Theory and Practice provides a complete and Sommario/riassunto integrated introduction to this area. The book only requires basic knowledge of calculus and linear algebra, making it an accessible introductory text for students. It focuses on conceptual aspects of computer graphics, covering fundamental mathematical theories and models and the inherent problems in implementing them. In so doing, the book introduces readers to the core challenges of the field and provides suggestions for further reading and studying on various

> topics. For each conceptual problem described, solution strategies are compared and presented in algorithmic form. This book, along with its companion Design and Implementation of 3D Graphics Systems, gives

readers a full understanding of the principles and practices of implementing 3D graphics systems.