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Titolo	Material appearance modeling : a data-coherent approach / / Yue Dong, Stephen Lin, Baining Guo
Pubbl/distr/stampa	Berlin ; ; New York, : Springer, c2013
ISBN	3-642-35777-6
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (x, 176 pages) : illustrations (chiefly color)
Collana	Gale eBooks
Altri autori (Persone)	LinStephen <1970-> GuoBaining
Disciplina	006.6
Soggetti	Computer graphics Image processing - Digital techniques Computer vision
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes erratum (2 pages at end).
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Surface Reflectance Overview -- Efficient SVBRDF acquisition with manifold bootstrapping -- Interactive SVBRDF Modeling from a Single Image -- Overview of Subsurface Light Transport -- Modeling subsurface light transport with the kernel Nystrom method -- Modeling and rendering subsurface scattering using diffusion equations -- Modeling textured translucent materials with lazy solid texture synthesis -- Overview of Material Fabrication -- Fabricating spatially-varying subsurface scattering -- Conclusion.
Sommario/riassunto	One of the most prominent goals of computer graphics is to synthesize imagery indistinguishable in appearance from the real world. This however has been a challenge to achieve due to the complex factors that determine the appearance of objects, as well as the broad range of appearances that a given object can exhibit. This book presents a general framework to address this problem based on the inherent coherency in the reflectance data of materials. This coherence-based approach can be comprehensively applied to all the major elements of image-based appearance modeling, from data acquisition and user-assisted modeling to efficient rendering and model editing. The techniques and underlying ideas in this book can benefit practitioners, researchers and students who wish to enhance the realism of their

computer graphics imagery.

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