Record Nr. UNINA9910438337003321 3D Immersive and Interactive Learning [[electronic resource] /] / edited **Titolo** by Yiyu Cai Pubbl/distr/stampa Singapore:,: Springer Singapore:,: Imprint: Springer,, 2013 **ISBN** 1-299-40867-2 981-4021-90-3 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (128 p.) Disciplina 006.693 Soggetti Educational technology Signal processing Image processing Speech processing systems User interfaces (Computer systems) **Educational Technology** Signal, Image and Speech Processing User Interfaces and Human Computer Interaction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 3D Immersive & Interactive Learning -- Use of Virtual Reality in Teaching and Learning Molecular Biology -- daVinci Lab @ River Valley High School -- 3D Education Developmental Process in National Junior College: A Case Study -- Adapting 3D System for Learning Gains in the Lower Secondary Normal (Technical) Stream -- Effects of Virtual Reality Elements on Spatial Visualisation Skills of Secondary 3 Students in Singapore -- 3D Sabbatical and STEM Learning -- 3D Virtual Pink Dolphins for Special Needs Education. Sommario/riassunto 3D technology is not new; research on 3D started back in early 1960s.

But unlike in previous times, 3D technology has now rapidly entered our daily life from cinema to office to home. Using 3D for education is a new yet challenging task. This book will present several innovative efforts using 3D for immersive and interactive learning covering a wide spectrum of education including gifted program, normal (technical)

stream, and special needs education. The book will also share experience on curriculum-based 3D learning in classroom setting and co-curriculum-based 3D student research projects. The book is organized as follows. Chapter 1 introduces the fundamentals of 3D educational technology and their applications in immersive and interactive learning. Chapter 2 discusses the use of virtual reality in teaching and learning of Molecular Biology. Chapter 3 presents the daVinci Lab @ River Valley High School. Chapter 4 describes the 3D education development process. Chapter 5 studies the adaption 3D system for learning gains in lower secondary normal (technical) stream. Chapter 6 investigates the effects of virtual reality technology on spatial visualization skills. Chapter 7 showcases a sabbatical program for students to use 3D for Science, Technology, Engineering and Mathematics (STEM) learning. Chapter 8 shares the use of 3D virtual pink dolphin to assist special education. The foreword of this book is written by Dr Cheah Horn Mun, Director, Education Technology Division, Ministry of Education, Singapore.