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Altri autori (Persone)	TonniGabriele LopesJorge
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Soggetti	Gynecology Radiology Computer-aided engineering Computer-Aided Engineering (CAD, CAE) and Design Malformacions del fetus Ecografia fetal Visualització tridimensional Medicina prenatal Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di contenuto	Introduction -- 3D Printing Technologies -- Post-processing Images -- Virtual Reality Technologies -- 3D Printing and Virtual Reality in fetal surgery -- 3D Printing and Virtual Reality in postnatal surgery -- Virtual and Physical models in main fetal pathologies -- Virtual and Physical models in multiple pregnancy -- Virtual Navigation in fetal medicine -- Maternal-fetal attachment in blind women using physical model - Fetal Imaging and Haptics technology to physically feel the fetus.
Sommario/riassunto	Technological innovations accompanying advances in medicine have given rise to the possibility of obtaining better-defined fetal images that assist in medical diagnosis and contribute toward genetic counseling offered to parents during the prenatal care. 3D printing is an emerging technique with a variety of medical applications such as

surgical planning, biomedical research and medical education. Clinical Relevance: 3D physical and virtual models from ultrasound and magnetic resonance imaging have been used for educational, multidisciplinary discussion and plan therapeutic approaches. The authors describe techniques that can be applied at different stages of pregnancy and constitute an innovative contribution to research on fetal abnormalities. We will show that physical models in fetal medicine can help in the tactile and interactive study of complex abnormalities in multiple disciplines. They may also be useful for prospective parents because a 3D physical model with the characteristics of the fetus should allow a more direct emotional connection to their unborn child.
