

1. Record Nr.	UNISA996466419203316
Autore	Mardal Kent-André
Titolo	Mathematical Modeling of the Human Brain : From Magnetic Resonance Images to Finite Element Simulation / Kent-Andre Mardal, Marie E. Rognes, Travis B. Thompson, Lars Magnus Valnes
Pubbl/distr/stampa	Cham, : Springer Nature, 2022 Cham : , : Springer International Publishing AG, , 2022 ©2022
ISBN	3-030-95136-7
Edizione	[1st edition.]
Descrizione fisica	1 online resource (129 pages) : (XVI, 118 p. 32 illus., 25 illus. in color. :)
Collana	Simula SpringerBriefs on Computing ; ; v.10
Altri autori (Persone)	RognesMarie E ThompsonTravis B ValnesLars Magnus
Soggetti	Human physiology Biomathematics Mathematical models Cervell Imatges per ressonància magnètica Models matemàtics Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction --Working with magnetic resonance images of the brain --From T1 images to numerical simulation --Introducing heterogeneities --Introducing directionality with diffusion tensors --Simulating anisotropic diffusion in heterogeneous brain regions --Concluding remarks and outlook --References --Index.
Sommario/riassunto	This open access book bridges common tools in medical imaging and neuroscience with the numerical solution of brain modelling PDEs. The connection between these areas is established through the use of two existing tools, FreeSurfer and FEniCS, and one novel tool, the SVM-Tk, developed for this book. The reader will learn the basics of magnetic

resonance imaging and quickly proceed to generating their first FEniCS brain meshes from T1-weighted images. The book's presentation concludes with the reader solving a simplified PDE model of gadobutrol diffusion in the brain that incorporates diffusion tensor images, of various resolution, and complex, multi-domain, variable-resolution FEniCS meshes with detailed markings of anatomical brain regions. After completing this book, the reader will have a solid foundation for performing patient-specific finite element simulations of biomechanical models of the human brain.

2. Record Nr.	UNINA9910823535303321
Titolo	The art and science of assisted reproductive technology // editor, Sunita R. Tandulwadkar ; forewords by Bomi Bhote, Togas Tulandi, Prakash Trivedi
Pubbl/distr/stampa	New Delhi : , : The Health Sciences Publishers, , 2015
ISBN	93-86056-42-9
Edizione	[First edition.]
Descrizione fisica	1 online resource (xxv, 542 pages) : illustrations
Disciplina	176
Soggetti	Human reproductive technology Fertilization in vitro, Human Infertility - Treatment
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
