

1. Record Nr.	UNINA9910556880903321
Autore	Silva Lucas Filipe Martins da <1973->
Titolo	Computational Concepts in Simulation of Welding Processes / / by Reza Beygi, Eduardo Marques, Lucas F.M. da Silva
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-97910-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (97 pages)
Collana	SpringerBriefs in Computational Mechanics, , 2191-5350
Disciplina	671.520285
Soggetti	Metals Materials science - Data processing Metals and Alloys Computational Materials Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Classification of welding processes -- Heat sources in welding processes -- Thermal analysis in welding -- Microstructure evolution in welding -- Mechanical analysis in welding -- Coupled thermo-mechanical analysis -- Modelling of distortion -- Modelling of residual stresses -- Data analysis in welding -- Optimization of welding.
Sommario/riassunto	This book introduces basic concepts related to computer-aided simulation of welding and prepares the reader to perform the simulation of welding by commercial simulation software. It focuses on conceptualizing the physics of welding, heat transfer, stress development and microstructure development in welding. This book helps the reader to implement these concepts in any commercial software to simulate the welding process according to their own requirement.