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Nota di contenuto	Deformable Meshes for Accurate Automatic Segmentation -- Omnidirectional Displacements for Deformable Surfaces (ODDS) -- Coupled Deformable Surfaces for Multi-object Segmentation.
Sommario/riassunto	Segmentation of anatomical structures in medical image data is an essential task in clinical practice. Dagmar Kainmueller introduces methods for accurate fully automatic segmentation of anatomical structures in 3D medical image data. The author’s core methodological contribution is a novel deformation model that overcomes limitations of state-of-the-art Deformable Surface approaches, hence allowing for accurate segmentation of tip- and ridge-shaped features of anatomical structures. As for practical contributions, she proposes application-specific segmentation pipelines for a range of anatomical structures, together with thorough evaluations of segmentation accuracy on clinical image data. As compared to related work, these fully automatic pipelines allow for highly accurate segmentation of benchmark image data. Contents Deformable Meshes for Accurate Automatic Segmentation Omnidirectional Displacements for Deformable Surfaces

(ODDS) Coupled Deformable Surfaces for Multi-object Segmentation From Surface Mesh Deformations to Volume Deformations Segmentation of Anatomical Structures in Medical Image Data Target Groups Academics and practitioners in the fields of computer science, medical imaging, and automatic segmentation. The Author Dagmar Kainmueller works as a research scientist at the Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, Germany, with a focus on bio image analysis. The Editor The series Aktuelle Forschung Medizintechnik – Latest Research in Medical Engineering is edited by Thorsten M. Buzug. .