

Multi-material Heterogeneous Volume Modeling

This paper provides a general overview and survey of multi-material heterogeneous volume modeling. An exposition of volume modeling is presented through a clear set of key terms and definitions. A review and examination of existing methods, techniques and representations for multi-material heterogeneous volume modeling is provided, along with the characterization and classification of these different approaches. Finally, future challenges are outlined and several examples, benchmarks and tests are proposed and provided for further consideration and discussion of multi-material heterogeneous volume modeling.