

# Recent Additions to the Isogeometric Segmentation Pipeline

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## ABSTRACT

While the framework of Isogeometric Analysis (IGA) has opened new perspectives for the improved interaction between design and analysis, it has also led to new challenging problems which are related to the representation of the geometry. In particular, while models in geometric design are typically given in boundary representation (BRep), the use of parameterized volumes is essential for IGA. During the last years we established the isogeometric segmentation pipeline as a process that converts BRep models into volumetric parameterizations [1]. The latest additions to the pipeline include algorithms for the segmentation of solids into contractible pieces based on Morse theory [2] and improved methods for the construction of cutting surfaces [3]. The talk will summarize the overall process and describe the two latest additions in more detail.

## REFERENCES

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