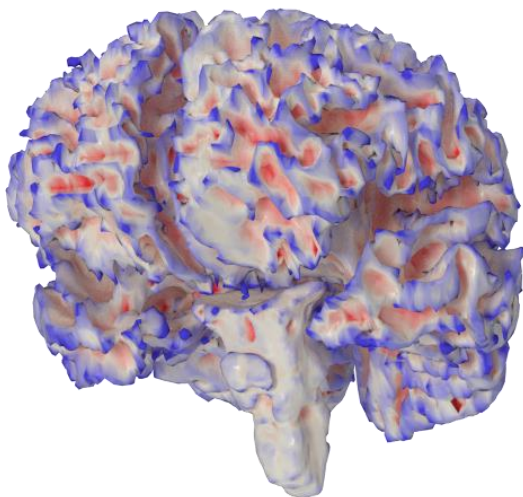


## SMOOTH ISOSURFACE RECOVERY FROM ANISOTROPIC SCALAR VOLUME DATA

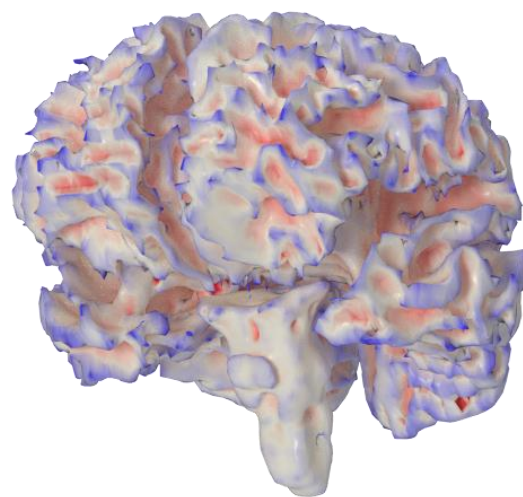
### WHAT TO EXPECT

Visualizing segmented objects is an essential aspect of medical image visualization. Unfortunately the quality of such objects is often lacking, especially for fine structures. The presence of sampling artefacts can be distracting to the physician as they introduce high frequency features in an otherwise smooth object.

In collaboration between the Smart Viewer Group at Brainlab AG and the Computer Graphics and Visualization Group at TU Munich, this thesis project aims at developing an isosurface extraction method that produces smooth meshes with clean topologies (i.e. no degenerate faces).



Segmented Brain:  
current Implementation



Segmented Brain:  
target (mockup)

## REQUIREMENTS

The thesis is suited for computer science students interested in medical imaging as well as students interested in computer graphics. Requirements for the thesis are good programming skills in C++. Familiarity with common graphics algorithms for medical imaging is a plus. In return, we offer an engaging project that will enable you to gain insight into the exciting world of computer science meeting medical imaging.

## CONTACT

We offer you a professional business atmosphere, an international team and a performance-oriented environment as a base to consequently realize your ideas. Interested? Then we are looking forward to receiving your online application including your start date!

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**TU Munich:**

## ABOUT THE COMPANY

Founded in Munich, Germany in 1989, Brainlab develops, manufactures and markets software-driven medical technology, enabling access to improved, more efficient, less-invasive patient treatments. Our key to success is our creative, talented and hard-working team, which consists of over 1200 dedicated and inspiring individuals in 17 offices worldwide. To succeed in reaching our targets, we are seeking committed colleagues who can stand behind our core values of inspiration, simplicity and integrity (m/f).



Together we are making **medical technology** and **knowledge** more impactful and accessible to **physicians** and their **patients**