

# Diploma-/ Master's Thesis in Biomedical Visualization

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The **Biomedical Image Informatics Group** at the VRVis research center (VRVis Forschungs-GmbH) in Vienna, Austria, is looking for your support in the course of a project that is conducted in close cooperation with [Dr. Renata Raidou](#), and [Prof. Eduard Gröller](#) from the [Institute of Visual Computing and Human-Centered Technology](#) of TU Wien.

We tackle biomedical image informatics challenges in a friendly and inspiring atmosphere by (pre-)processing, analyzing and visualizing large amounts of image data from medicine and biotechnology.

Currently, we are looking for support from a student (f/m) who wants to give her/his diploma or master thesis an application driven focus with the following topic:

## Optimizing Volume Rendering

In volume rendering, we are often concerned with finding optimal parameterizations. Finding, for example, optimal camera and light positions to obtain nice views is not always trivial, while deciding the optimal rendering parameters remains tedious. Additionally, the use of smart visibility concepts and occlusion-aware techniques is often discussed when trying to develop expressive visualization techniques that are able to maximize the visual information that is presented to the user. In this project, we would like to investigate, develop and evaluate novel optimization strategies for the view and the involved rendering parameters, as well as new methodologies for smart visibility in volume rendering.

Therefore, we are looking for a female or male student who would like to support optimizing volume rendering techniques as part of their diploma/ master's thesis. Your research work will be embedded in the current project operation, which is why we would closely support your work and prefer the completion of the thesis within 6 to 8 months.

## What you will bring to the team

- Bachelor's degree in computing, informatics, data science or a similar area
- Interest and knowledge in medical visualization
- Good knowledge of volume rendering
- Programming skills, in particular C++ and DirectX

## What we offer in return

- Very friendly and supportive work atmosphere
- Flexible working hours and well-equipped workplace
- Excellent professional support by our team
- Opportunity to access our network of university partners (e.g. for bachelor/master thesis supervision)
- Opportunity for female researchers to join the Women in Visual Computing Network hosted by our colleagues
- Appropriate remuneration upon successful thesis completion

## Applications are always welcome!

Please contact Katja Bühler to send in your application or to inquire about additional information.

We especially would like to encourage female students to apply!

## Contact

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