

Diploma-/ Master's Thesis in Biomedical Visualization

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:

Feature-aware Volume Rendering of Ultrasound Data

In volume rendering, Transfer Functions (TFs) link data information to visual properties that reveal relevant information to the user and enable interactive data exploration. TF research has been very successful with regard to Computed Tomography applications, but with other modalities such as Magnetic Resonance data or Ultrasound data they have been less successful. For ultrasound data in particular, it would be helpful to identify features, i.e., data characteristics, which can be employed in the design of new TFs that support feature- and context-aware volumetric rendering. In this project, we would like to investigate, develop and evaluate novel strategies for feature extraction in ultrasound data and for the design of new feature-aware TFs.

Therefore, we are looking for a female or male student who would like to help advance feature extraction from ultrasound data and to design new feature-aware transfer functions 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 6-8 months.

What you will bring to the team

- Bachelor's degree in computing, informatics, data science or a similar area
- Interest in medical visualization with strong background in image processing
- Knowledge of volume rendering
- Programming skills

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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