**Comparative Visualization of Pelvic Organs Segmentations**

One of the most common treatment techniques of prostate cancer is radiotherapy. In radiotherapy, tumorous tissues are irradiated with a high dose, while the adjacent healthy tissue is preserved. Therefore, high accuracy is required during treatment planning.

One of the preliminary steps of radiotherapy planning requires the segmentation of the prostate and the adjacent organs at risk (i.e. rectum, bladder, seminal vesicles). However, the variability in shapes and sizes of the organs of interest may have a high impact on the segmentation procedure and, later, on the dose planning and the radiotherapy outcome. The project will focus on the development of a web-based visualization for the exploration of the variability in shape and size of pelvic organs (prostate, bladder, rectum and seminal vesicles) in prostate cancer patients.

**[1]** Busking S. et al. : Dynamic Multi-View Exploration of Shape Spaces, 2010

**[2]** Klemm P. et al. : Visualization and Analysis of Lumbar Spine Canal Variability in Cohort Study Data, 2013

**[3]** Schmidt et al. : YMCA - Your Mesh Comparison Algorithm, 2014

