During minimally invasive operations, a surgeon has to trust the information displayed on the screen: A virtual 3D model of the respective organ shows where a tumor is located and where sensitive vessels can be found. Soft tissue, such as the tissue of the liver, however, deforms during breathing or when the scalpel is applied. Endoscopic cameras record in real time how the surface deforms, but do not show the deformation of deeper structures such as tumors. Young scientists of the Karlsruhe Institute of Technology (KIT) have now developed a real-time capable computation method to adapt the virtual organ to the deformed surface profile.

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