

Applications are invited for a

Postdoctoral Fellowship

in the Biomechanics Division at the Institute for Surgical Technology and Biomechanics, University of Bern. The successful applicant will join a program focused on the further development of a novel method for the non-invasive, dynamic measurement of the full three-dimensional kinematics of the spine. The method employs video fluoroscopy sequences and a unique 2D-3D image registration technique developed within a Swiss National Science Foundation National Research Program. Your task will be to implement and validate a new intensity-based registration technique and to develop the software / hardware interface and the GUI to an appropriate level for implementation in the clinic.

Candidates with a Ph.D. or equivalent in Engineering Science, Computer Science or a closely related field should apply. Experience with the following is strongly desired: software development, image analysis methods and mathematics of rigid body kinematics. Additional experience with biomechanics and human anatomy would be advantageous. An excellent knowledge of the English language is required and knowledge of the German language would be helpful, but not mandatory.

The Biomechanics Division comprises a multi-disciplinary research team focused on the treatment of spinal disorders, with projects in the areas of implant design and evaluation, spine biomechanics, computational modelling, soft-tissue mechanics, intervertebral disc biology and tissue engineering. The project is co-supervised by Dr. Guoyan Zheng of the Division of Surgical Technology. Dr. Zheng's group is at the forefront of developments in 2D-3D medical image registration for surgical planning and navigation applications.

The position is available immediately, or as agreed, with an initial duration of 1 year.

Please send a CV and the contact information for 2 references via e-mail to:

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