Postdoctoral Position:

Development of µFluidics-DHM (Digital Holographic Microscopy): a new platform for studying biofilm

Prof. J. Sheng
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Minneapolis, MN

We are seeking an outstanding postdoctoral researcher to conduct a NIH funded interdisciplinary project to develop a novel integrated experimental platform for studying biofilms and to perform the initial bacteria-surface interaction studies. The research opportunities exist in several areas: 1) Development of new biological experimentation, i.e. integrating microfluidics technology and 3-D holographic microscopy, developing novel microfluidics for microbiology studies, improving 3-D digital holographic microscopy. 2) Further development of dark field digital holographic microscopy and integrated 3-D fluorescent microscopy for studying micro-transport within the biofilm matrices. 3) Performing initial studies on bacteria/microbe and surface interactions under different flow and surface chemical conditions.

Applicants must hold a PhD degree in the closely related area (mechanical engineering, physics/biomechanics, or biomedical engineering) prior to the start-date of the position. Applicants with PhD degrees in physics, electrical engineering with interdisciplinary experiences and complementary expertise in the areas of optics, 3-D microscopy, microbiology and MEMS, are also highly encouraged to apply. Research experience and expertise in one or more of the following areas: computational imaging, modern coherent optics, biomechanical modeling, and microfluidics, is a necessary credential. The position is available immediately. Funding is available through July, 2010. The continuation after this date is subject to available funding from NIH. Applications will be considered until the position is filled. Interested individuals are encouraged to contact Professor Sheng. However, all applicants must also apply online in order to be considered part of the official applicant pool. To apply online, please visit https://employment.umn.edu and search for Requisition Number 156489.

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