



## Two PhD Research Positions

Applications are invited, from suitably qualified candidates, to work in the field of Modelling of Acoustic Waves and Bubble Dynamics. These positions are funded by a major new project including 17 participating institutions from the EU, as part of the Nanotechnology call of the FP7 European Commission Programme, which will be starting in Autumn 2009.

The main objective of the project is design of production line for medical antibacterial textiles by use of nanoparticles.

### **Position 1: Modelling acoustic waves in bubbly liquid**

A model for wave propagation will be developed in the reactor, which will take into account interactions between ultrasound waves and bubble clouds. The model will be solved using the Boundary Element Method (BEM).

### **Position 2: Modelling multiple bubble dynamics**

A model describing the bubble dynamics will be developed. The Boundary Element Method (BEM) will be used to solve the model for multiple bubble dynamics in three dimensions.

Applicants are expected to hold a good first degree in Engineering, Mathematics or Physical Sciences. It would be beneficial if the applicants have experience in numerical modelling of waves or fluid flow. Previous experience in programming is desirable. The successful candidates will be registered for a PhD degree and will have a stipend covering their living expenses and fees. The positions are for three years.

Applications including your CV, cover letter and contact details of three referees, should be sent, preferably by email, to:

Prof. Viktor Popov,  
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