Cell Petting App for iPhone

Keywords: iPhone, Red Blood Cell

The most important component of the blood is red blood cell (RBC). Physical properties of the membrane are well understood and computational models of the cell are available [1]. RBC can be modelled as membrane which consists of vertices connected with springs. Each vertex is modelled as a particle. This project aims at building a RBC model on the Apple mobile platform. The user will be able to drag the cell, stroke and deform it. The RBC will also interact with solid objects (such as micropipette).

This project can be adapted to BSc or MSc level. A student job (HiWi) is also possible. Collaboration with a group providing experimental data is possible.

PREREQUISITES
Solid programming skills of mobile apps development

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LITERATURE

CSE LAB
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In the CSE lab, we combine computational methods, computer science tools and domain specific knowledge to solve scientific and engineering problems in areas such as Fluid Mechanics, Nanotechnology and Life Sciences. Motivated by challenges in application fields, we focus on identifying the common elements among computational techniques and on formulating common methodological, algorithmic and software structures that facilitate their further development.