

## Scientific Computing

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### CBC Talk on Coupling Blood Flow and Tissue Transport - May 21, 2014



Timo Koch, our visiting master student from Prof. Rainer Helmig's group in Stuttgart will give a kickoff-talk on his master project.

Total number of participants: 8  
 Total number of guests outside of CBC: 0  
 Number of different nationalities represented: 3  
 Total number of speakers: 1  
 Total number of talks: 1

#### Coupling concept of a vascular graph model and the surrounding bio-tissue to simulate blood flow and transport processes in vascular systems

##### Abstract:

In this master thesis, coupling concepts for the coupling of a reduced 1D one-phase free flow model with a 3D/2D one-phase porous medium model are examined for non-matching grids. To this end, we employ the toolboxes FEniCS and DuMux as flexible and efficient tools for modeling free flow and porous medium domains, respectively. The main concept will be an iterative approach that gives the possibility to use efficient solvers for both domain. This concept is to be tested against other approaches.

<b>What</b>	
<b>When</b>	May 14, 2014 from 12:15 PM to 01:00 PM
<b>Where</b>	Bakrommet @ simula
<b>Contact Name</b>	Marie Rognes
<b>Attendees</b>	Dr. Marie E. Rognes Dr. August Johansson Ms. Karen Støverud Assoc. Prof. Kent-Andre Mardal Dr. Simon Funke Dr. Andre Massing Dr. Martin Alnæs Mr. Timo Koch
<b>Add event to calendar</b>	 vCal  iCal