

## Scientific Computing

- Publications
- Center for Biomedical Computing
- Projects
- Available Master's topics
- Intranet
- People

### CBC and CINPLA Workshop on Modelling Liquid Transport in the Brain - March 14, 2014

While neurons appear to be responsible for most of the information processing in the brain, the role of the more numerous glia cells is less understood. Astrocytes, a subtype of glia cells, have been implicated in many supporting roles including provision of nutrients to brain tissue, maintenance of the right mixture of ions in the extracellular space between cells, as well as repair of damaged neural tissue. Lately, astrocytes have also been suggested to play a role in brain liquid transport, including the transport of waste products out from neural tissue. Research groups from UiO, SIMULA and NMBU appear together to have the set of methodological tools and skill to address this problem, and at the present workshop the groups will present their activities and discuss the possibility for a joint multidisciplinary research project on the topic.

Total number of participants: 18  
 Total number of guests outside of CBC: 6  
 Number of different nationalities represented: 6  
 Total number of speakers: 7  
 Total number of talks: 7

Date: March 14th, 2014

Venue: SIMULA, IT-Fornebu

Organizers: Centre for Integrative Neuroplasticity (CINPLA) & Centre for Biomedical Computing (CBC)

#### Agenda

09.50: Gaute Einevoll: Opening

10.00: Erlend Nagelhus: Neurobiological background and experimental possibilities in mouse models

10.30: Geir Halmes: Electrodiffusive formalism for ion transport in neural tissue

11.00: Kent-Andre Mardal: On the modeling of the central nervous system in the presence of the Chiari I malformation and syringomyelia - transitional (or even turbulent flow) coupled to poroelasticity



11.30: Lunch

12.30: Per Kristian Eide: Liquid and pressure regulation in human brain

13.00: Marie Rognes: Modelling liquid flow in the brain

13.30: Klas Pettersen: Modelling of astrocyte-aided liquid transport based on electrodiffusive formalism

14.00: Discussion

<b>What</b>	
<b>When</b>	Mar 14, 2014 from 09:50 AM to 03:00 PM
<b>Where</b>	Storstua@Simula
<b>Contact Name</b>	Gaute Einevoll
<b>Attendees</b>	Hans Petter Langtangen Kent Andre Mardal Magne Nordaas Valeriya Naumova Benjamin Kehlet Geir Halmes Gaute Einevoll Klas Pettersen Marianne Hafting Fyhn Andre Massing Johan Hake Joakim Sundnes Simone Pezzuto Erlend Nagelhus Maria Franceschini Per Kristian Eide Aslak Tveito August Johansson
<b>Add event to calendar</b>	 vCal  iCal