

Scientific Computing

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CBC talk: Large-Scale Neuronal Network Simulation: Challenges to Computer Science, February 12, 2009

Dr. Hans Ekkehard Plesser from the Norwegian University of Life Sciences is on sabbatical at CBC, and will present his activities in computational neuroscience at Bakrommet, Thursday February 12, at 11:00 o'clock. The focus of the presentation will be on the development of the NEST simulator for neuronal networks.

Total number of participants: 11
 Total number of guests outside of CBC: 2
 Number of different nationalities represented: 3
 Total number of speakers: 1
 Total number of talks: 1

Abstract

At the beginning of my sabbatical here at Simula, I would like to present to the group my activities in computational neuroscience. The focus will be on the development of the NEST simulator for neuronal networks. During the coming year, I would like to work on topics such as:



- Cache-effective memory structures
- ODE solvers suitable for neuronal simulation
- Optimal MPI communication for very large numbers of processes
- Strategies and languages for model descriptions
- Python and NEST

I will also briefly touch on previous experience with algorithms for the efficient simulation of reaction-diffusion systems (Gillespie method).

I hope that this seminar will give you a chance to get to know my activities better, so that we can identify areas of mutual interest and complementary competences for a fruitful collaboration during my stay.

The Speaker

Dr. Hans Ekkehard Plesser is an Associate Professor in Informatics at the Norwegian University of Life Sciences. You may find more information about the speaker on his personal website: <http://arken.umb.no/~plesser/>

What	▪ Talk
When	Feb 12, 2009 from 11:00 AM to 12:00 PM
Where	Bakrommet@Simula
Contact Name	Hans Ekkehard Plesser
Attendees	Martin Alnaes - CBC Kittel Austvoll - UMB Tim Dorscheidt - CBC Hans Petter Langtangen - CBC Glenn T. Lines - CBC Molly Maleckar - CBC (visitor) Bernardo de Olivera - CBC Hans Ekkehard Plesser - CBC (visitor from UMB) Ola Skavhaug - CBC Kirsten ten Tusscher - CBC Sam Wall - CBC
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