

Scientific Computing

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CBC Workshop on Adjoint-Based Methods for Transient Problems: Software and Applications - March 19, 2012

David Ham, Simon Funke and Patrick Farrell from Imperial College in London will visit CBC March 18th to 21st. In that connection, we will have a Workshop on "adjoint-based methods for transient problems: software and applications" on Monday March 19th.

Total number of participants: 16
 Total number of guests outside of CBC: 3
 Number of different nationalities represented: 5
 Total number of speakers: 10
 Total number of talks: 10

This workshop was dedicated to the subject of discrete adjoint methods for time-dependent partial differential equations. The topics included both software frameworks for the automated generation of discrete adjoints and possible biomedical and geoscientific applications of such frameworks.



Agenda

- 11.00 - 11.45: David Ham: "Multilayer abstractions for PDEs: progress on MCFC and OP2"
- 11.45 - 12.00: Coffee
- 12.00 - 12.20: Christoph Moder: "Simulating the Earth's Mantle"
- 12.20 - 12.40: Lyudmyla Vynnytska: "Calibration of a two-lithology depositional model"
- 12.40 - 13.00: Anders Logg: "Duality based adaptive finite element time stepping for ordinary and partial differential equations"
- 13.00 - 14.00: Lunch
- 14.00 - 14.45: Simon Funke: "Libadjoint - a library for developing discrete adjoints"
- 14.45 - 14.50: Break
- 14.50 - 15.35: Patrick Farrell: "Dolfin and libadjoint: the marriage of two abstractions"
- 15.35 - 15.45: Break
- 15.45 - 16.05: Joakim Sundnes: "Computer simulations of electro-mechanical interactions in the heart"
- 16.05 - 16.20: Karen Støverud: "The relation between Chiari I and syringomyelia - model concepts"
- 16.20 - 16.35: Break with cake
- 16.35 - 16.55: Martin Alnes: "Steepest descent vs preconditioned oneshot methods - a numerical standoff at the Unit Square"
- 16.55 - 17.15: Kent Andre Mardal: "Efficient Preconditioning of Optimality Systems"
- 18.30 - Dinner

Practical information for visitors:

<http://cbc.simula.no/pub/guestlist.html#usefulinfo4guests>

What	▪ Workshop
When	Mar 19, 2012 from 03:00 AM to 05:15 PM
Where	Bakrommet @ Simula
Contact Name	Marie Rognes
Attendees	Anders Logg Andre Massing Benjamin Kehlet David Ham Hans Petter Langtangen Joakim Sundnes Johan Hake Johannes Ring Karen Helene Støverud Kent Andre Mardal Lyudmyla Vynnytska Marie Rognes

	Martin Alnes NN1 Patrick Farrell Simon Funke
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