Modeling and benchmarking of fractured porous media: flow, transport and deformation - 2017

University of Bergen

June 8-9, 2017

Program

Thursday		
8.30-8.40	Coffee&fruit	
8.40-9.00	Welcome and description of the workshop	*Chair: Inga Berre*
9.00-9.30	Session 1	
9.30-10.20	Session 2	
10.20-10.50	Coffee&food at the posters	
10.50-12.10	Session 3	*Chair: Alexandru Tatomir*
12.10-13.10	Lunch break	
13.10-14.30	Session 4	*Chair: Alessio Fumagalli*
14.30-15.30	Poster session with coffee&food	
15.30-16.50	Session 5	*Chair: Anna Scotti*
18.00-18.30	Boat for the restaurant	
18.30-22.30	Social dinner	
22.30-23.00	Boat from the restaurant	

Friday		
8.50-9.00	Coffee&fruit	
9.00-10.20	Session 6	*Chair: Bernd Flemisch*
10.20-10.50	Coffee&food at the posters	
10.50-12.10	Session 7	*Chair: Alexandru Tatomir*
12.10-12.50	Discussion with panel	*Moderators: Wietse Boon, Ivar Stefansson*
13.00-14.00	Lunch break	

Note: the presentations are 20+5 minutes. Each speaker should provide her/his own laptop.

Sessions

Session 1

1. Bernd Flemisch, "Benchmarks for single-phase flow in fractured porous media"

Session 2

1. Florian Doster, "Improved Dual Porosity Modelling of Multiphase Flow Phenomena"
2. Pål Næverlid Sævik, "Using topology to predict fracture permeability"

Session 3

1. Markus Koeppel, "A discrete, conductive fracture model in porous media using non-conforming grids"
2. Julian Hennicker, "A comparison of hybrid- and equi-dimensional two phase flow models through fractured pourous media"
3. Konstantin Brenner, "Immiscible two-phase Darcy flow model accounting for vanishing and discontinuous capillary pressures: application to the flow in fractured porous media."

Session 4

1. Adriana Paluszny, "Modelling the mechanical interaction between fractures and its effect on effective permeability"
2. Holger Steeb, "Effective mechanical properties of fluid-filled fractures"
3. Katja K. Hanowski, "Coupling Deformation and Flow in Fractured Poroelastic Media"

Session 5

1. Stephan Matthai, "Mesh generation for naturally fractured porous media considering special needs for multiphase flow simulation"
2. Thomas Nagel, "Exploring the role of evolving discontinuities in host rocks for deep geological repositories"
3. Dennis Gläser, "An mpfa-dfm model for multi-phasic, non-isothermal problems"

Session 6

1. Hadi Hajibeygi, "Multiscale Projection-based EDFM Method"
2. Xavier Raynaud, "Discrete and virtual element method for fracture modeling"
3. Stefano Berrone, "New approaches for the simulation of flows in complex poro-fractured domains with non conforming meshes"

Session 7

1. Eren Uçar, "Understanding the stimulation of deep geothermal reservoirs through modeling and simulation"
2. Martin Beck, "Coupling Porous Media Flow and Geomechanics"
3. Nina Khvoenkova, "Reduced mesh for fluid flow in Fracture Network (application to the conductivity Upscaling)"

Posters

1. Daniel Wong, “Numerical Upscaling using the Embedded Discrete Fracture Model (EDFM)”
2. Ivar Stefansson, “Finite Volume Methods for Flow and Transport in 3-Dimensional Fractured Porous Media”
3. Mats K. Brun, “Upscaling of coupled geomechanics/flow/geochemistry”
4. Ana Budisa, “BDDC Preconditioner for Robust Discretization of Flow in Fractured Porous Media”
5. Rafael March Castaneda Neto, “CO2 Storage Potential in Naturally Fractured Reservoirs”
6. Alessio Fumagalli, “Dual Virtual Element Method for Darcy Problems on Realistic Geometries”
7. Eirik Keilegavlen, “PorePy: A Simulation Tool for Fractured and Deformable Porous Media written in python”
8. Runar Berge, “Fracture deformation models in geothermal reservoirs”
9. Wietse Boon, “Robust Discretization of Flow in Fractured Porous Media”
10. Michael Sargado, “High-accuracy phase-field models for brittle fracture”
11. Klaus Mosthaf, “Modeling of flow and transport processes in a fractured limestone aquifer”
12. Insa Neuweiler, “Double continuum modeling and memory functions for two-phase flow in fractured media”
13. Odilla Magalhães Vilhena de Oliveira, “The Impact of Fractures on Existing Multi-Phase Flow Formulations”
14. Ingeborg Gåseby Gjerde, “Using Mixed Methods to Solve the Poisson Equation with a Dirac Right-Hand Side”
15. Jakub Both, “Iterative Coupling of Mechanical Deformation and Flow in Unsaturated Porous Media”
16. David Landa Marban, “A non-standard model for microbial enhanced oil recovery including the oil-water interfacial area”