

# On-line session NP7.1

## Presentations

7 May, 8:30-10:15 Vienna's time

### 1 Hydraulic fractures 8:30 – 8:55 (Sergey Turuntaev) – 5 presentations

#### 1.1 *Laboratory study of hydraulic refracturing possibility*

Sergey Turuntaev, Evgeny Zenchenko, Petr Zenchenko, Maria Trimonova, and Nikolai Baryshnikov

#### 1.2 *Analysis of the laboratory hydraulic fracturing curves*

Helen Novikova and Mariia Trimonova

#### 1.3 *Interaction of a hydraulic fracture with parallel pre-existing fractures*

Haijun Wang, Shuyang Yu, Xuhua Ren, Lei Tang, Arcady Dyskin, and Elena Pasternak

#### 1.4 *Hydraulic fracture propagation in high porosity media*

Aliya Tairova, Georgy Belyakov, Nikita Iudochkin, and Aleksandr Molokoedov

#### 1.5 *3D Simulation of Fracture Propagation in Complex Reservoirs Rocks at Microscale*

Victor Nachev, Andrey Kazak, and Sergey Turuntaev

#### 1.6 *Self-similar solution analysis of hydraulic fracture growth with bottom hole pressure restriction*

Grigory Paderin

### 2 Dynamics and stability of blocky and fractured geomaterials 8:55-9:15 (Arcady Dyskin) – 3 presentations

#### 2.1 *Stability of fragmented and blocky solids*

Igor Shufrin, Elena Pasternak, and Arcady Dyskin

#### 2.2 *Rotational waves in fragmented and blocky geomaterials*

Junxian He, Elena Pasternak, Arcady Dyskin, and Igor Shufrin

#### 2.3 *Simulation of the dynamics of blocky media based on the Cosserat continuum theory using high-performance computations*

Vladimir Sadovskii and Oxana Sadovskaya

#### 2.4 *Hydraulic fracture oscillations in response to strong impulse*

Elena Pasternak and Arcady Dyskin

### 3 Waves in blocky rock mass 9:15-9:35 (Efim Pelinovsky) – 4 presentations

#### 3.1 *Modular Korteweg - de Vries equation: Riemann, cnoidal and solitary waves*

Efim Pelinovsky, Anna Kokorina, Alexey Slunyaev, and Elena Tobisch

#### 3.2 *Analysis of seismic efficiency of the electromagnetic pulse source "Yenisei"*

Oxana Sadovskaya, Vladimir Sadovskii, and Evgenii Efimov

3.3 *Intra-sonic propagation of sliding zones in a fault – 3 presentations*  
 Arcady Dyskin and Elena Pasternak

3.4 *Self-consistency between input and output data for models describing elastic properties of fractured media: does conventional models satisfy this criterion?*  
 Andrey V. Radostin and Vladimir Yu. Zaitsev

**4 Fracturing by dynamic and cyclic loading 9:35-9:50 (Arcady Dyskin, Elena Pasternak) – 2 presentations**

4.1 *Study on dynamic strength of sandstone based on SHPB numerical experimentation*  
 Wengang Zhang, Fansheng Meng, and Qi Wang

4.2 *Dynamic Stress Concentration Around Shallow-Buried Circle Cavity Under Transient P Wave Loads in Different Conditions*  
 Ming Tao, Linqi Huang, Xibing Li, and Shaofeng Wang

4.3 *The effect of seismic-like induced cyclic loading on damage response of sandstone and granite*

Rashid Geranmayeh Vaneghi, Arcady V. Dyskin, Klaus Thoeni, Mostafa Sharifzadeh, and Mohammad Sarmadivaleh

**5 Friction 9:50-9:55 (Elena Pasternak) – 1 presentation**

5.1 *Asymmetric friction effects in surface interaction*  
 Rui Xiang Wong

**6 Crack growth in compression 9:55-10:05 (Elena Pasternak) – 2 presentations**

6.1 *Experimental and CDEM Analysis on Crack Propagation Mechanism of Rock-Like Material Containing Flaws Under Uniaxial and Biaxial Compression*  
 Yong Li, Weishen Zhu, Chao Wei, Weibing Cai, Guannan Wu, Zhiheng Wang, and Weiqiu Kong

6.2 *Interaction of a hydraulic fracture with parallel pre-existing fractures*  
 Hongyu Wang Arcady Dyskin, and Elena Pasternak

**7 Permeability 10:05-10:15 (Sergey Turuntaev) 2 presentations**

7.1 *Analysis of seismicity caused by fluid injection*  
 Vasily Riga and Sergey Turuntaev

7.2 *Probable reasons of Rock Sample Apparent Permeability Loss over Time in Long-term Measurements*  
 Nikolay Baryshnikov, Evgeniy Zenchenko, and Sergey Turuntaev