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Eurock 2022 Finland

Rock and Fracture Mechanics in
Rock Engineering and Mining conference

Eurock 2022 Finland

September 12-15, 2022   www.eurock2022.com

ril

Suomen Kalliomekaniikkatoimikunta
Finnish National Group of ISRM

Wi-Fi

Aalto Open.
No password needed

Full papers, extended abstract and presentation files are available in the online programme
eurock2022.exordo.com/programme

Organizers

ril

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Finnish National Group of ISRM

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12.9.	13.–14.9.	15.9.
Short Courses Workshops Get Together	Conference days 13.9. Dinner	Excursions

Social Programme

Get Together September 12

17-18.30 at the Exhibition area
Light snacks and drinks served. Exhibition is open!
Included in the registration fee

Dinner September 13

Separate ticket needed

18.30	Bus transportation from Conference venue Dipoli to Restaurant Haikaranpesä
19.00	Dinner
22.00	Bus transportation to Radisson Blu Espoo and Radisson Blu Royal Helsinki

Panoramic Restaurant Haikaranpesä
Hauenkallio 3, Haukilahti Water Tower, 02170 Espoo

Excursions

Please see website eurock2022.com for further information.
Registered participants have received information email

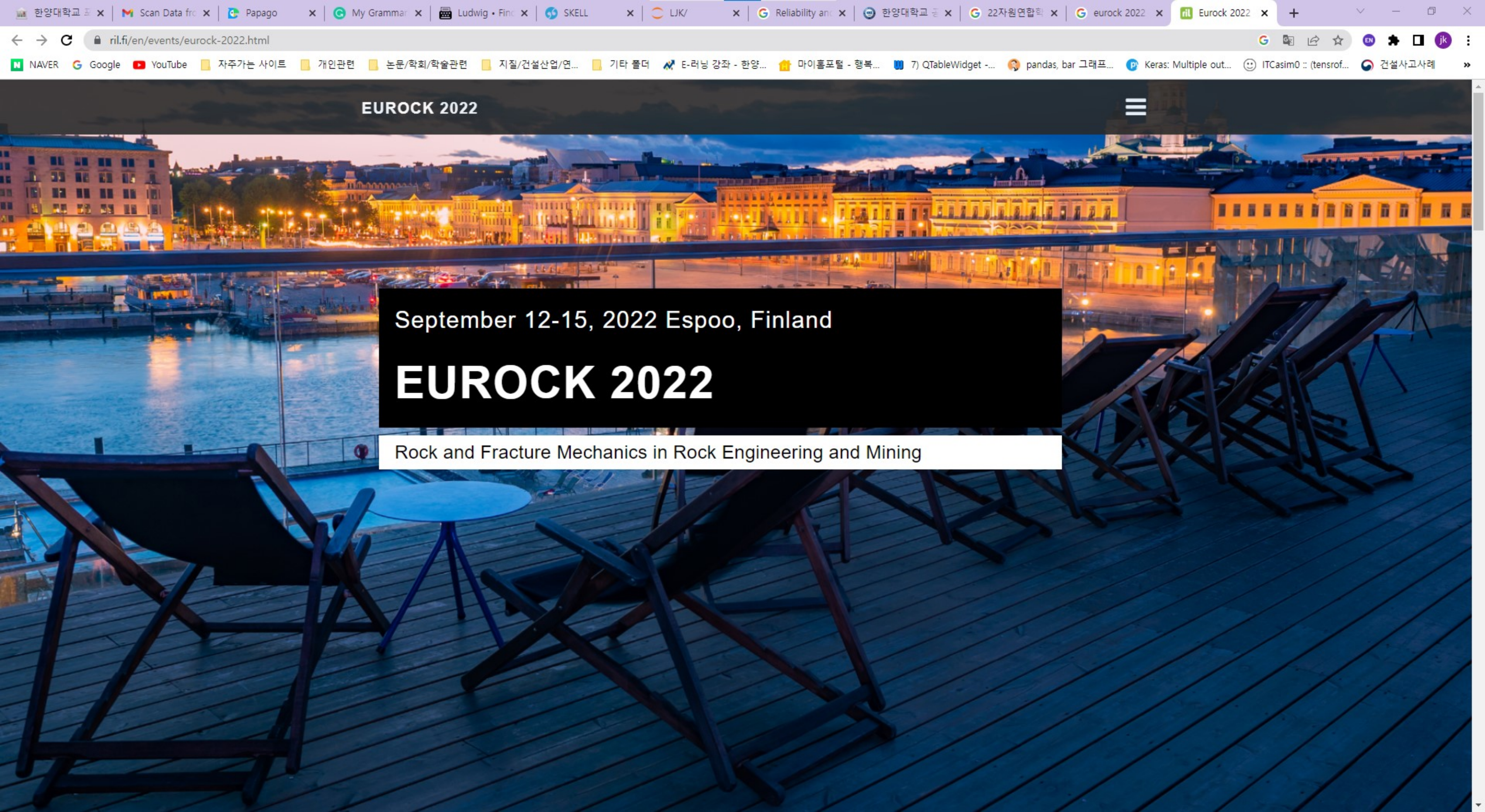| Venue:	Kaleva	Lumituuli	Palaver	Takka
13:45	**5** RECENT ADVANCES IN ROCK MECHANICS RESEARCH 2	**6** ROCK MASS CHARACTERIZATION 1	**7** MODELLING OF ROCK 2	**8** FIELD AND LABORATORY INVESTIGATIONS 2 & ROCK STRESS MEASUREMENT 1
Chair:	Ping Zhang	Ki-Bok Min	Timo Saksala	Fredrik Johansson
13:45	Early warning of overbreaks in tunnels **Manuel Entfellner,** Implenia Österreich GmbH, Austria	Application of the rockfall activity rate system (RoARs) **Prof. Michael Olsen,** Oregon State University, USA	Modelling of progressive failure mechanism of mine pillars **Dr. Giuseppe Cammarata,** Bentley Systems, Italy	Consideration of the mechanical behaviour and the influence on ground of vertical pre-reinforcement **Tomohisa Amemiya,** Tokyo metropolitan university, Japan
14:00	Probabilistic characterization of correlation between two rock properties: a data-driven approach **Dr. Adeyemi Aladejare,** University of Oulu, Finland	Method to obtain 3D point clouds of tunnels using smartphone LiDAR and comparison to photogrammetry **Masoud Torkan,** Aalto University, Finland	An advanced constitutive model for transversely isotropic rock - Evaluation of two different regularization approaches **Thomas Mader,** University of Innsbruck, Austria	Fibre Spray Concrete: Testing and Performance Criteria **Benoit De Rivaz,** Bekaert, France
14:15	Energy Release Resulting from Sudden Excavation Shape Changes during Two-sided Strainbursts **Dr. Fedilberto Gonzalez,** Queen's University, Canada	A geotechnical evaluation of the Cumba Pit Slope Failure, Dominican Republic **Neil Bar,** Gecko Geotechnics, Australia	Piezoelectric excitation of quartz in granite for improved drillability **Arturo Rubio Ruiz,** Tampere University, Finland	Experiences and preliminary results of geophysical methods on historical statues **Dr. Federico Vagnon,** Politecnico di Torino, Italy
14:30	Numerical and laboratory investigations of thermally induced fractures in rock salt **Feline Koerner,** Institute for Geotechnical Engineering, Germany	Rapid tunnel scanning using a 360-degree camera and SfM photogrammetry **Dr. Mateusz Janiszewski,** Aalto University, Finland	A new phase-field mixed-mode failure model for rock fracture and rock slope stability analysis **Dr. Yunteng Wang,** University of Natural Resources and Life Sciences, Austria	Effect of layer orientation on behaviour of 3D-printed rock specimens in indirect tensile testing **Weiyi Yang,** University of Adelaide, Australia
14:45	Determination of elastic constants of a transversely isotropic rock from a single-orientation core using strip load test and artificial neural network **Prof. Ki-Bok Min,** Seoul National University, Republic of Korea	Estimating the Hydraulic Conductivity of jointed rock mass using Genetic Programming **Prof. Murat Karakus,** The University of Adelaide, Australia	A weakening-healing law to simulate stick-slip behavior of rock joint and the associated seismicity **Dr. Qingsheng Bai,** TU Bergakademie Freiberg, Germany	A methodology for road cutting design guidelines **Ellen Robson,** Newcastle University, United Kingdom
15:00		Remote mapping and characterization of geological rock-mass features employing advanced data analytics and artificial intelligence. **Dr. Mathias Smesnik,** AFRY Austria GmbH, Austria	Automatic Extraction of Rockfall Source based on Terrain Analysis Map Using Support Vector Machine **Naoko Sakamoto,** Okayama University, Japan	
15:15	**COFFEE, EXHIBITION, NETWORKING & POSTER SESSION** EXHIBITION AREA			
15:45	**9** FIELD AND LABORATORY INVESTIGATIONS 3	**10** ROCK MASS CHARACTERIZATION 2	**11** ROCK STRESS MEASUREMENTS 2	**12** ROCK DRILLING
Chair:	Pekka Särkkä	Mateusz Janiszewski	Topias Siren	Mahdi Saadati
15:45	Dynamic compressive behaviour of Rewa shale through SHPB tests **Venkatesh M Deshpande,** Indian Institute of Technology, India	Geotechnical assessment of rock masses in metallic mineral deposits, a view on the "hidden" issues in open-pit design **Elena Angelova,** Faculty of civil engineering - Skopje, North Macedonia	Monitoring of rock stress change in deep mine using displacement measurements **Dr. Lauri Uotinen,** Aalto University, Finland	Drilling Boreholes in Sulphureous Groundwater Areas: Elements of Some Case Studies in Portugal **Prof. Luis Manuel Ferreira-Gomes,** Univesity of Beira Interior - Covilhã, Portugal
16:00	Evaluation of the Performance of the ISRM Suggested Methods for Measuring Density and Porosity when Applied to Low-Porosity Rocks **Risto Kiuru,** Aalto University, Finland	Blominmäki - Underground Wastewater Treatment Plant **Jari Haapala,** AFRY Finland Oy, Finland	Use of flow-back and pressure rebound data improves the minimum stress estimation in a tight claystone formation **Christophe de Lesquen,** Andra, France	Prediction of Pilot Hole Drilling Performance of Raise Boring Machines based on Raise Inclination and Rock Properties **Prof. Hanifi Copur,** Istanbul Technical University, Turkey
16:15	Influence of Temperature and Deviatoric Stress on Creep Behavior of Rock Salt **Prof. Khalid Alshibli,** University of Tennessee, USA	Klaukkala Mt132 bypass: The use of photogrammetric models in engineering geological analyses for excavation and reinforcement design in a BIM environment. **Lassi Hatakka,** Kalliosuunnittelu Oy Rockplan Ltd, Finland	A Bayesian regression analysis of in situ stress using overcoring data **Prof. John P. Harrison,** University of Toronto, Canada	Remotely Operated Submersible Drilling Rig for Offshore Rock Investigations **Martín Heredia Bilbao,** Geociencias y Exploraciones Marítimas (GEM), Spain
16:30	Study of size effects on the peak and residual strength of intact and artificially fissured granite samples **Manuel Alejandro González Fernández,** University of Vigo, Spain	The challenge of characterization of rock mass in karstic zones case study of a tunnel failure in Jerusalem, ISRAEL **Moshe Levin,** Geotope-Levin Geological consultants, Israel	Using cavity contraction creep displacements to identify principal stress boundaries in competent rock **Yasmin Byrne,** Cambridge Insitu Ltd, United Kingdom	Predicting the geological condition beyond the tunnel excavation face using MSP monitoring data and LSTM algorithm **Je-Kyum Lee,** Hanyang University, Republic of Korea
16:45	Laboratory-scale Rockburst Physical Model Testing Using a True-Triaxial Cell **Doandy Yonathan Wibisono,** Colorado School of Mines, USA	Potential applications of deep learning in automatic rock joint trace mapping in a rock mass **Jessica Kayi Chiu,** Norwegian Geotechnical Institute, Norway	An investigation on relations between energy dissipation and dynamic compressive strength of Kemi-Peridotite at high strain rates **Toochukwu Ozoji,** University of Oulu, Finland	
17:00	Hybrid InSARTrac for Monitoring Interglacial Movement Patterns **Christoph Zambanini,** Graz University of Techology, Austria	Effects of uncertainties on block volume estimation **Prof. Gessica Umili,** University of Turin, Italy	Discrete Element Method Simulation of Borehole Breakout Based on the Strain Energy Concept **Zizhuo Xiang,** University of New South Wales, Australia	
19:00	**DINNER**			

September 12-15, 2022 Espoo, Finland

EUROCK 2022

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