Poster presentations
Session 1 (day 1, 17:00-17:55)

P1-01 **Hirokazu Moriya et al.**, Large localized damage structures detected by acoustic emissions at an active mining front in South Africa gold mine.

P1-02 **Suguru Yabe and Satoshi Ide**, Foreshock seismicity on the frictionally heterogeneous fault

P1-03 **Hiroyuki Noda and Takane Hori**, Condition for aseismic transients in a seismogenic patch modelled by rate- and state-dependent friction

P1-04 **Shiro Hirano et al.**, Objective matched-filter analysis for detecting small events

P1-05 **Ryu Ohtani et al.**, Project of the Impact Assessment of the Uncertainties of Earthquake Forecasting Information on Societal and Individual Disaster Preparedness

P1-06 **Naoki Uchida**, Periodic slow slip and interplate earthquakes in Tohoku subduction zone

P1-07 **Yoshiyuki Tanaka**, The lunar perigee and the occurrence of historical large earthquake along the Japan Trench

P1-08 **Fumiaki Tsunomori**, Radon Concentration Anomalies at Nakaizu Observation Station and Current Situation of Geochemical Monitoring for Seismic Activity

P1-09 **Chihiro Yamanaka et al.**, Computer simulation of Heki-TEC disturbance assuming surface charge polarization

P1-10 **Sho Morita et al.**, Statistical evaluation of anomalous propagation of VHF-band radio wave and reliability of the anomaly that immediately preceded the 2016 Kumamoto Earthquake

P1-11 **Xiaocan Liu et al.**, Possible geomagnetic *Sq* abnormal related to great earthquake

P1-12 **Sanaka Saito et al.**, Statistical analysis of pre-seismic ionospheric electron density anomalies using ionosonde data, over Japan

P1-13 **Junpei Omura et al.**, Characteristics of Atmospheric Parameter Changes at Boso Peninsula, Japan ~ Observational Study to Understand Lithosphere-Atmosphere-Ionosphere Coupling ~

P1-14 **Xuhui Shen**, Preliminary Result of CSES-01 onboard during its commission test phase

Session 2 (day 2, 13:10-14:10)

P2-01 **Makoto Naoi et al.**, Possible precursors implied from acoustic emissions and strain records in deep gold mines in South Africa

P2-02 **Takeo Ishibe et al.**, Asperity as an undividable unit of earthquake rupture

P2-03 **Makiko Ohtani et al.**, Nucleation of the characteristic earthquake in simulated cycles involving huge SSEs on the deeper extension

P2-04 **Kazuyoshi Nanjo**, A global model of earthquake forecasting using spatiotemporal variation of *b*-value

P2-05 **Takahiro Omi et al.**, Real-time short-term earthquake forecasting after a large earthquake in Japan

P2-06 **Min-Chien Tsai et al.**, Using the CWB geophysical data to study pre-seismic anomalous signals preceding large earthquakes in Taiwan

P2-07 **Taku Ueda and Aitaro Kato**, Seasonal variation of seismicity in San-in district, SW Japan

P2-08 **Ayaka Ishikawa et al.**, Experimental Study on the Electro-Kinetic Effect ; Self-potential approach to monitor groundwater condition under the slope for rainfall-induced landslide forecast

P2-09 **Yoshiharu Saito**, Anomaly prior to 2018/4/9 Tottori West M5.8 and other earthquakes appeared on Ionosphere Perturbation observed by Terminator Time of AM Broadcasting Wave

P2-10 **Yoshiki Sue**, Phenomena observed before slow slip events starting on 29 January 2011 prior to the 2011 Tohoku-Oki earthquake

P2-11 **Yongxin Gao et al.**, Induced electromagnetic field by seismic wave in earth's magnetic field: a 2D layered case

P2-12 **Toru Mogi et al.**, MT survey in the source reason of SSEs in Boso peninsula, Central Japan - improving noisy data by ICA and three dimensional resistivity modeling -

P2-13 **Shih-Sian Yang**, Stratospheric Gravity Wave Activity before the 2018 Hualien Earthquakes

P2-14 **Michel Parrot**, Statistical analysis performed with the DEMETER satellite in relation with seismic activity

Session 3 (day 2, 17:10-18:10)

P3-01 **Yasuo Yabe et al.**, Foreshock activity of Mw2.2 earthquake in a South African deep mine

P3-02 **Weiyun Xie et al.**, Decrease in b-value prior to the 2003 Tokachi-oki earthquake (M8.0), Japan and the 2008 Wenchuan earthquake (M8.0), China

P3-03 **Tomoaki Nishikawa and Satoshi Ide**, Recurring slow slip events and earthquake nucleation in the source region of the *M* 7 Ibaraki-Oki earthquakes revealed by earthquake swarm and foreshock activity

P3-04 **Chieh-Hung Chen et al.**, Potential mechanisms of ground vibration before earthquakes

P3-05 **Kei Katsumata and Masao Nakatani**, Long-term earthquake forecast based on the seismic quiescence: trials in the Kurile, the Tohoku, and the Izu-Bonin subduction zones

P3-06 **Keisuke Yoshida**, Detailed view of earthquake swarms in northeastern Japan triggered by fluid migration associated with the 2011 Tohoku-Oki earthquake

P3-07 **Daichi Iwata et al.**, Statistical analysis of the correlation between earthquakes and atmospheric radon concentration

P3-08 **Yuji Enomoto et al.**, Potential mechanisms that produced the pre-seismic electromagnetic phenomena that immediately preceded the 2011 Tohoku-Oki earthquake and other strong inter-plate earthquake

P3-09 **Kuniyuki Motojima et al.**, Detection of anomalous VHF radio wave propagation associated with earthquake by artificial intelligence

P3-10 **Motoaki Mouri et al.**, A Study on Unsupervised HMM Based Anomalous Signal Detection from Waveform Images of ELF Magnetic Signals

P3-11 **Katsumi Hattori et al.**, Spatial and Temporal Characteristics of the Pre-Seismic Ionospheric Anomaly over Japan: Case study for the 2011 Off the Pacific Coast of Tohoku Earthquake (Mw9.0) and statistical study

P3-12 **Hiroyuki Nakata**, The ionospheric disturbances associated with the natural hazards using HFD and GPS-TEC

P3-13 **Koichiro Oyama et al.**, Satellite Constellation to study ionosphere disturbance before large earthquakes

P3-14 **Masashi Kamogawa et al.**, Origin of pre-seismic whistler wave intensity attenuation - Comparison between DEMETER satellite and global lightning data -