

**International Symposium**  
**Crustal Dynamics (ISCD-2):**  
**Toward Integrated View of Island Arc Seismogenesis**

**1-3 March, 2019, Uji, Japan**

**Program**

**Oral Session**

**March 1<sup>st</sup> (Fri.)**

9:30		Opening
9:45	A01	Stress and Strength in the Seismogenic Zones in the Japanese Islands Toru MATSUZAWA*
10:00	A02	Earthquake Activities Induced by the 2011 Tohoku-Oki Earthquake Related to the Heterogeneities in Stress and Strength in the Tohoku District Keisuke YOSHIDA*, Akira HASEGAWA, Takeyoshi YOSHIDA, Toru MATSUZAWA
10:15	A03	Stress Field in the Aftershock Area of the 2016 Central Tottori Prefecture Earthquake Yoshihisa IIO*, Satoshi MATSUMOTO, Shinichi SAKAI, Aitaro KATO
10:30	A04	Estimation of Heterogeneity of Stress Field by Using Misfit Angles in Focal Mechanisms Yohei YUKUTAKE*, Yoshihisa IIO
10:45	A05	A Bayesian Estimation of a Focal Mechanisms Based on the Spatial Stress Pattern Inferred From a P wave first-motion dataset Takaki IWATA*
11:00	A06	(INVITED) Seismic Anisotropy and its Relation to Stress and Strain in the Crust Martha SAVAGE*, Hubert ZAL, Kenny GRAHAM, Yosuke AOKI
11:30	A07	Stress and Strength Control on Complex Rupture of the 2016 Kaikoura, New Zealand Earthquake from Seismic Observation T. OKADA*, T. SATO, Y. IIO, S. MATSUMOTO, S. BANNISTER, J. RISTAU, S. OHMI, M. MATSUNO, T. MIURA, M. SAVAGE, J. PETTINGA, F. GHISSETTI, R. H. SIBSON
11:45	A08	(INVITED) Thermo-mechanical Properties of the Seismogenic Crust in Southern California Egill HAUKSSON*
12:15	A09	Modeling and Estimating the 3D Absolute Stress Field Using Earthquake Focal Mechanism Solutions Toshiko TERAOKAWA*, Egill HAUKSSON
12:30		Discussion
12:45 ~ 13:45		Lunch

13:45		Introduction of the session Takeshi SAGIYA
13:55	A10	(INVITED) Lessons for Subduction Yone Earthquakes from GPS, Repeating Earthquakes, and Physics-based Models Paul SEGALL*, Kaj JOHNSON, Camilla CATTANIA
14:25	A11	Formation of Island Arc-Trench System due to Plate Subduction on the Basis of Elastic Dislocation Theory Yukitoshi FUKAHATA*, Mitsuhiro MATSU'URA
14:45	A12	Resolution of Inelastic Crustal Deformation in the Japanese Inland and its Tectonic Implications Takeshi SAGIYA, Angela MENESES-GUTIERREZ, Xuelei ZHANG, Koki KUMAGAI
15:05	A13	Lessons from Crustal Responses to Co- and Inter-seismic Stress Disturbances: Japan and SW Taiwan Youichiro TAKADA, Tomomi INAMATSU, Kotaro TSUKAHARA, Takeshi SAGIYA, Takuya NISHIMURA, Kuo-En CHING
15:25		Coffee break
15:40	A14	(INVITED) Luminescence Thermochronometry and the Evolution of Mountains, Climate and Tectonics Frédéric HERMAN, Georgina E. KING
16:10	A15	Long-term Uplift-denudation of the Japan Arc Revealed by Low-temperature Thermochronology Takahiro TAGAMI, Shigeru SUEOKA
16:30		Discussion
16:45 ~ 18:15		Poster Session
18:30 ~		Reception

### **March 2<sup>nd</sup> (Sat.)**

9:10	B16	(INVITED) Fluid-triggered High-speed Deformation at Different Levels of the Continental Crust: Evidences from Paleo-earthquake Proxies Marco HERWEGH*, Alfons BERGER
9:40	B17	Development of the Median Tectonic Line, Mie Prefecture, South-West Japan: A Possible Interpretation for Strain Localization and Softening Toru TAKESHITA, Dong Van BUI, Thomas CZERTOWICZ, Shun ARAI, Takafumi YAMAMOTO*, Jun-Ichi ANDO, Norio SHIGEMATSU, Koichiro FUJIMOTO
10:00		Introduction to two poster presentations (P19 and P20) on the studies of the Median Tectonic Line in the eastern Kii Peninsula, SW Japan Norio SHIGEMATSU*
10:10	B18	Fracturing of Plagioclase Grains: Roles for Deformation Mechanism and Fluid Pathway at Lower Crust Yusuke SODA*, Takamoto OKUDAIRA
10:25	B19	Distribution and Development Process of Faults Retrieved from Aftershock Areas of the 2000 Western Tottori Earthquake Hideki MUKOYOSHI*, Hideto UCHIDA, Kenta KOBAYASHI, Satoshi TONAI, Shunya KANEKI, Tetsuro HIRONO

- 10:40 Coffee break
- 10:55 B20 Heterogeneous Seismic Activity in Focal Area of the 2000 Western Tottori EQ (M7.3) Detected by “0.1 manten” Hyper Dense Seismic Observation  
Satoshi MATSUMOTO\*, Shinichi SAKAI, Aitaro KATO, Yoshihisa IIO
- 11:15 B21 Spatio-temporal Evolution of Micro-Earthquakes Illuminated by “0.1 manten” Hyper Dense Seismic Observation: Implication of Fault Growth  
Aitaro KATO\*, Shinichi SAKAI, Satoshi MATSUMOTO, Yoshihisa IIO
- 11:35 B22 (INVITED) Enhancing Slip Inversions via Joint Seismo-Geodetic Approaches: Examples from Anza and Parkfield, California  
Asaf INBAL\*
- 12:05 Discussion
- 12:10 ~ 13:10 Lunch
- 13:10 B23 Crustal Strength across the Frictional to Plastic Zones: Laboratory Data, Theories, and Extrapolation to Nature  
Ichiko SHIMIZU\*, B02 and Utrecht Groups, B01 MTL Research Group
- 13:30 B24 (INVITED) Physics of Fault Friction at low Shearing Velocities: From the Micro- to Meter Scale  
Christopher J. SPIERS\*
- 14:00 B25 The Evolution of Fault-zone Rheology  
Kiyokazu OOHASHI\*, Toru TAKESHITA, Ken-ichi HIRAUCHI
- 14:20 B26 The Origin of Macroscopic Friction between Single Crystal Mica Surfaces  
Hiroshi SAKUMA\*, Kenji KAWAI, Ikuo KATAYAMA, Shigeru SUEHARA
- 14:40 ~ 14:50 Coffee break
- 14:50 B27 (INVITED) Diffusion Creep in Eclogites: Relationship Between Mineral Reactions and Deformation and Consequences for Crustal Weakening  
Holger STÜNITZ\*, Kai NEUFELD, Ane FINSTAD, Jiri KONOPASEK, Renee HEILBRONNER, James MCKENZIE
- 15:20 B28 Rheological Weakening of the Lower Crustal Rocks Promoted by Anomalous Diffusion of Water  
Masanori KIDO\*, Jun MUTO, Sanae KOIZUMI, Hiroyuki NAGAHAMA
- 15:40 B29 Persistent Deep Afterslip Driven by Nonlinear Transient Mantle Flow and Recovery of Coastal Subsidence after the 2011 Tohoku Earthquake  
Jun MUTO\*, James D. P. MOORE, Sylvain BARBOT, Takeshi IINUMA, Yusaku OHTA, Syunsuke HORIUCHI, Hikaru IWAMORI
- 16:00 Discussion
- 16:10 ~ 18:00 Poster session

### March 3<sup>rd</sup> (Sun.)

- 9:10 C30 Electromagnetic Mapping of Geofluids Using Wideband Magnetotellurics: Implications for Seismogenesis  
Yasuo OGAWA\*, Masahiro ICHIKI

9:30	C31	High Resolution Shallow Crustal Structure of the Central Japan by Using Surface-wave Tomography Hiro NIMIYA*, Tatsunori IKEDA, Takeshi TSUJI
9:50	C32	Fluid Distribution in the Crust – Inference from Seismic Velocity and Electrical Conductivity Tohru WATANABE*, Guillaume DESBOIS, Kenta YOSHIDA
10:10	C33	(INVITED) Preparation Zones for Large Crustal Earthquakes as a Consequence of Fault-Valve Activity Richard H. SIBSON*
10:40	C34	Researches for Flux Estimation and Continuous Monitoring of Slab-Derived Fluids Norio Matsumoto*, Kohei Kazahaya, Fumiaki Tsunomori, Noritoshi Morikawa
11:00	C35	A 3-D Crust and Uppermost Mantle Electrical Conductivity Model of Subduction Zone Beneath NE Japan Masahiro ICHIKI*, Toshiki KAIDA, Yasuo OGAWA
11:20	C36	Roles of Water in Subduction Zone Dynamics Hikaru IWAMORI*, Hitomi NAKAMURA, Atsushi NAKAO, Tatsuji, NISHIZAWA
11:40 ~ 12:40		Lunch
12:40	C37	(INVITED) Study of Potential Biases in Seismologically Estimated Stress Drops of Microseismicity Using Dynamically Simulated Earthquake Sources Nadia LAPUSTA*
13:10	C38	Energy Budget of Earthquakes: Investigating the Relation Between Actual and Seismologically Inferred Quantities using Dynamic Simulations of Earthquake Sequences Valère LAMBERT*, Nadia LAPUSTA
13:25	C39	Timing of Earthquakes on Intraplate Active Faults: Earthquake Sequence Simulation Accounting for Stress Perturbation by Megathrust Earthquakes Hiroyuki NODA*
13:45	C40	Crustal Stress, Fault Geometry and Dynamic Rupture: Lessons Learned from Recent Earthquake Events Ryosuke ANDO*
14:05	C41	Rapid Mantle Flow with Power-law Creep Explains Transient Deformation Following the 2011 Tohoku-Oki Earthquake Ryoichiro AGATA*, Sylvain BARBOT, Kohei FUJITA, Mamoru HYODO, Takeshi IINUMA, Ryoko NAKATA, Tsuyoshi ICHIMURA, Takane HORI
14:25	C42	(INVITED) The Anatomy of Subduction Zone: Insight from Geodetic Imaging and Modeling Sylvain BARBOT*
14:55	C43	Viscoelastic Corrections of the Earthquake Cycle for Estimating Interplate Coupling along the Nankai Trough Takuya NISHIMURA*, Fred F. POLLITZ
15:15	C44	Modeling Deformation and Stress State of the Japanese Island Arc Crust Considering Heterogeneous Rheological Structure Bunichiro SHIBAZAKI*
15:35		Discussion
15:40		Coffee break
15:55		Discussion
17:45		Closing

## Poster Session

- P01 The Subduction of the Philippine Sea Plate and the Origin of the Kanto Plain, Japan  
Naoki UCHIDA\*, Aki ITO
- P02 Cause of the Spatiotemporal Variation of the Earthquake Swarms in Wakayama Region, NW Kii Peninsula, Japan  
Sumire MAEDA\*, Makoto OTSUBO, Toru MATSUZAWA
- P03 P-wave Polarity Determination of Waveform Data Observed in Western Japan, Using Deep Learning  
Shota HARA\*, Yukitoshi FUKAHATA, Yoshihisa IIO
- P04 Spatio-temporal Analysis of Seismic Anisotropy Associated with the Cook Strait and Kaikoura Earthquake Sequence in New Zealand  
Kenny GRAHAM\*, Martha SAVAGE, Richard ARNOLD
- P05 Geological Background of Inland Earthquakes in the Northeast Japan Arc  
Takeyoshi YOSHIDA\*
- P06 Thermal Structure from Supporting Data for Regional Heat Flow Studies in and Around Japan  
Akiko TANAKA\*
- P07 Crustal Movement Acceleration Prior to the 2011 Tohoku-Oki Earthquake  
Yo KAWASHIMA\*, Takeshi SAGIYA
- P08 Three Dimensional GPS Velocities and Crustal Deformation in Colombia  
Sindy Carolina LIZARAZO\*, Takeshi SAGIYA, H. MORA-PAEZ
- P09 Intraplate Faulting, Stress Accumulation, and Shear Localization of a Crust-Upper Mantle System with Nonlinear Viscoelastic Rheologies  
Xuelei ZHANG\*, Takeshi SAGIYA
- P10 Non-linear Effects on Stress and Brittleness of Viscoelastic Fluids under Transient Deformation at Large Strain Rate  
Mie ICHIHARA\*, Masaharu KAMEDA
- P11 Localized Strain Rate in Central and Northeast Japan Before and After the Tohoku-oki Earthquake  
Tomomi INAMATSU\*, Youichiro TAKADA, Takeshi SAGIYA, Takuya NISHIMURA
- P12 Elastic/inelastic Behavior of the Upper Crust by Geologic and Geodetic Explorations: Niigata High Strain Region (Central Japan)  
Makoto OTSUBO\*, Takeshi SAGIYA
- P13 Quantification of Strain Rate of Brittle Shear Zone in the High Strain-rate Zone, Central Japan  
Tomonori TAMURA\*, Kiyokazu OOHASHI, Makoto OTSUBO, Ayumu MIYAKAWA, Masakazu NIWA
- P14 Implication of Persistent Ductile Deformation in the Crust from Temporal Variation in coda Q in the Northeastern Part of the Niigata-Kobe Tectonic Zone, Central Japan  
Masanobu DOJO, Yoshihiro HIRAMATSU\*
- P15 Evaluation of Effects Related to Seamount Subduction on a Shallow Accretionary Prism off Muroto Using Ocean Drilling Cores and High Resolution Subbottom Profile Images  
Yuichi OKUMA\*, Asuka YAMAGUCHI, Rina FUKUCHI, Hiroaki KOGE, Juichiro ASHI
- P16 Revealing the Mountain Building Process of the NE Japan Arc Using Low-temperature Thermochronology: Preliminary Data of the North Area  
Shoma FUKUDA\*, Shigeru SUEOKA, Noriko HASEBE, Akihiro TAMURA, Tomoaki MORISHITA, Takahiro TAGAMI

- P17 Uplift and Denudation History of the South Fossa Magna Region Using Low-temperature Thermochronometric Methods  
Yumi KOBAYASHI\*, Shigeru SUEOKA, Shoma FUKUDA, Noriko HASEBE, Akihiro TAMURA, Tomoaki MORISHITA, Tagami TAGAMI
- P18 Monazite Fission-track Dating Method: Development of Lower-temperature Thermochronometer  
Ai SHISHIKURA\*, Etienne SKRZYPEK, Sean JONES, Ling CHUNG, Andy GLEADOW, Shigeru SUEOKA, Takahiro TAGAMI
- P19 3D Fault Architecture Model along the Median Tectonic Line, Eastern Kii Peninsula, SW Japan  
Norio SHIGEMATSU\*, Takuma KATORI, Jun KAMEDA, Ayumu MIYAKAWA
- P20 Recent Studies along the Median Tectonic Line (MTL) in the Eastern Kii Peninsula, SW Japan  
Norio SHIGEMATSU\*, Koichiro FUJIMOTO, Masao. KAMETAKA, Takamoto OKUDAIRA, Hiroshi MORI, Simon WALLIS
- P21 Median Tectonic Line Outcrop at Takamiyama in the Central Kii Peninsula, Japan  
Tomohiro IMORI, Koichiro FUJIMOTO\*, Norio SHIGEMATSU
- P22 Mineralogical and Geochemical Features of Cataclasites and Planar Fault Fougues along the Median Tectonic Line, in the Eastern Kii, SW Japan  
Chisaki INAOI, Jun KAMEDA\*, Norio SHIGEMATSU, Tomoyuki OHTANI
- P23 Deformation Overprint During the Development of the Median Tectonic Line Fault Zone in Mie Prefecture, Southwest Japan: Evidences for Strain Localization  
Dong Van BUI\*, Toru TAKESHITA, Shun ARAI, Takafumi YAMAMOTO, Jun-Ichi ANDO
- P24 An Introduction to Ryoike Cataclasite Rocks in Tsukide, Mie Prefecture, Japan: An Approach Using 3D Reconstructions from Thin Sections  
Thomas Jing-Yi YEO\*, Toru TAKESHITA
- P25 The Role of Pressure Solution Creep on Frictional Healing of Quartz Gouge  
Naoki NISHIYAMA\*
- P26 Formation and Development of Lower Crustal Shear Zones: A Petrological Perspective  
Takamoto OKUDAIRA\*, Yusuke SODA
- P27 Regional Variations in Mineralogical Characteristics of Fault Rocks Retrieved from Aftershock Areas of the 2000 Western Tottori Earthquake  
Shunya KANEKI\*, Tetsuro HIRONO, Hideki MUKOYOSHI, Kenta KOBAYASHI, Toru TAKESHITA
- P28 Microstructure of Fault Zone That Slipped at the Aftershock of M5.5 Orkney Earthquake  
Yuki YOKOYAMA\*, Shunya KANEKI, Yasuo YABE, Hiroshi OGASAWARA
- P29 Low- to High-velocity Frictional Properties and Microstructure Evolution of Volcaniclastic Sediments  
Akari FUKU\*, Tetsuro HIRONO, Shunya KANEKI
- P30 Estimation of Difference Stress Value Using Residual Strain of Quartz in Deformed Conglomerate and Inhomogenous Strain of Conglomerate Layer -An Example of Multiple Collision Zone of Izu-Bonin arc, Hamaishidake Formation, Central Japan-  
Shun SUZUKI\*, Kenta KOBAYASHI
- P31 Description of Itoigawa-Shizuoka Tectonic Line Outcrop Exposed during Repair Work of Fossa Magna Park, Itoigawa, Niigata Prefecture, Central Japan  
Keita TAKAHASHI\*, Shun SUZUKI, Kenta KOBAYASHI, Kou TAKENOUCI, Makoto OHKOUCHI
- P32 Kinematic and Chemical Processes in the Aftershock Area and the Neighboring Area of the 2000 Tottori-ken Seibu Earthquake, Japan  
Kenta KOBAYASHI\*, Shun SUZUKI, Hideki MUKOYOSHI, Tetsuro HIRONO

- P33 The Spatiotemporally Change of the Stress Condition around Hinagu Fault Zone through the 2016 Kumamoto Earthquake Sequence, Central Kyushu, Japan  
Ayaho MITSUOKA\*, Satoshi MATSUMOTO, Azusa SHITO, Yusuke YAMASHITA, Manami NAKAMOTO, Masahiro MIYAZAKI, Shinichi SAKAI, Yoshihisa IIO, Group for urgent joint seismic observation of the 2016 Kumamoto earthquake
- P34 Non-double Couple Micro-earthquakes in the Focal Area of the 2000 Western Tottori earthquake (M7.3) by "0.1 manten" Hyper Dense Seismic Observation  
Yuto HAYASHIDA\*, Satoshi MATSUMOTO, Yoshihisa IIO, Shinichi SAKAI, Aitaro KATO, Group of "0.1 manten" hyper dense seismic observation
- P35 Seismological Imaging Using S-wave Reflection Analysis and Receiver Function Analysis about the Fault Zone Extending to the Lower Crust  
Shinya KATOH\*, Yoshihisa IIO, Takuo SHIBUTANI, Hiroshi KATAO, Masayo SAWADA, Kazuhide TOMISAKA
- P36 Strength Profile of The Median Tectonic Line Fault Zone Determined by High-Pressure and -Temperature Experiments  
Miki TAKAHSHI\*, Chisaki INAOI, Jun KAMEDA, Hiroshi SAKUMA, Norio Shigematsu
- P37 The Role of Metasomatic Alteration on Frictional Behavior of Subduction Thrust Faults at Seismogenic Depths  
Ken-ichi HIRAUCHI\*, Yuzuru YAMAMOTO, Sabine A. M. DEN HARTOG, André R. NIEMEIJER
- P38 Effects of Temperature on Frictional Strength of Rocks in an Argon Atmosphere  
Yuki YOKOYAMA, Michiyo SAWAI\*, Kyuichi KANAGAWA
- P39 Nanocrystalline Principal Slip Zones  
Berend Antonie VERBERNE\*, Oliver PLÜMPER
- P40 First-Principles Investigation for Frictional Characteristics of Brucite and its Application for Macroscopic Frictional Characteristics of Sheet-Structure Minerals  
Hanaya OKUDA\*, Kenji KAWAI, Hiroshi SAKUMA, Ikuo KATAYAMA
- P41 Microstructural Development and Strain Partitioning in Experimentally-sheared Granitic Rocks at Brittle Ductile Transition Zone  
Shun ARAI\*, Jun MUTO, Masanori KIDO
- P42 Dislocation Creep of Orthoenstatite Aggregates under High Pressure and Temperature Conditions  
Yumiko TSUBOKAWA\*, Tomohiro OHUCHI, Yuji HIGO, Yoshinori TANGE, Tetsuo IRIFUNE
- P43 Dynamically Recrystallized Microstructures of Quartz in the Sanbagawa Metamorphic Belt, Shikoku, Japan  
Tadamasa UEDA\*, Ichiko SHIMIZU
- P44 Spatial and Temporal Variation of Seismic Velocity in the Japanese Island  
Takeshi TSUJI\*, Tatsunori IKEDA
- P45 Sintering of Polycrystalline Clinopyroxene and Ultrasonic Velocity Measurements under High P-T Conditions  
Yumiko TSUBOKAWA\*, Masahiro ISHIKAWA
- P46 Laboratory Measurements of  $V_p$ ,  $V_s$ , and  $V_p/V_s$  for Polycrystalline Labradorite up to 800°C and 1GPa  
Satoko HONDA\*, Masahiro ISHIKAWA
- P47 Magnetotelluric Imaging of Kitakami Mountains, Forearc of NE Japan, in Sereach for Water Wall  
Masato FUKAI, Yasuo OGAWA\*, Kuo-Hsuan TSENG, Masahiro ICHIKI, Shinichi TAKAKURA
- P48 Comparison of Permeability of Fault Zone Between In-situ Hydraulic Tests and Laboratory-Derived Data at the Median Tectonic Line, Central Japan  
Norio MATSUMOTO\*, Norio SHIGEMATSU

- P49 Estimation of Magmatic Water Content in Saline Groundwater in Tohoku district, Japan  
Yoko S. TOGO\*, Kohei KAZAHAYA, Masaaki TAKAHASHI, Yuki TOSAKI,  
Noritoshi MORIKAWA, Hiroshi A. TAKAHASHI, Tsutomu SATO, Keika HORIGUCHI
- P50 Chlorine Rich Prograde Mineral Assemblage Observed in Diamond-Bearing Garnet Peridotite from the  
Qianghai Province, NW CHINA  
Kosuke NAEMURA\*
- P51 Saline Fluid Inclusions in Pinatubo Mantle Xenoliths Linking Subducted Seawater to Arc Magmas  
Tatsuhiko KAWAMOTO\*, Jun-Ichi KIMURA, Qing CHANG, Masako YOSHIKAWA,  
Mitsuru OKUNO, Tetsuo KOBAYASHI
- P52 Quantitative Relationship between Aseismic Migration Speed and Frictional Properties  
Keisuke ARIYOSHI\*, Jean-Paul Ampuero, Roland Bürgmann, Toru MATSUZAWA,  
Akira HASEGAWA, Ryota HINO, Takane HORI
- P53 Modulation of Fault Strength during the Seismic Cycle by Grain-size Evolution around Contact Junctions  
Sylvain BARBOT\*
- P54 Quasi-static Simulation of Earthquake Cycles in the Nankai Trough, Southwest Japan, Based on Finite  
Element Modeling  
Ryoichiro AGATA\*, Takane HORI, Kohei FUJITA, Mamoru HYODO, Tsuyoshi ICHIMURA
- P55 Coulomb Stress Change of Inland Faults during a Megathrust Earthquake Cycle in Southwest Japan  
Tsukasa MITOGAWA\*, Takuya NISHIMURA
- P56 Dense GNSS Observation in the San-in Shear Zone After the 2011 Tohoku-oki Earthquake  
Angela MENESES-GUTIERREZ\*, Takuya NISHIMURA
- P57 Revisiting the Coseismic Slip Distribution of the 2011 Tohoku-oki Earthquake Considering Early  
Postseismic Deformation and Heterogeneous Structure  
Takeshi IINUMA\*, Ryoichiro AGATA, Yusaku OHTA, Ryota HINO, Takane HORI
- P58 Mechanism of Interseismic Subsidence of the Northeast Japan Forearc During the Late Period of a Gigantic  
Earthquake Cycle  
Ryohei SASAJIMA\*, Bunichiro SHIBAZAKI, Hikaru IWAMORI, Takuya NISHIMURA
- P59 Modeling Absolute Stress Fields in the Hanging Wall of the Northeast Japan Forearc Before and After the  
2011 Tohoku Earthquake  
Ryohei SASAJIMA\*, Bunichiro SHIBAZAKI, Hikaru IWAMORI, Keisuke YOSHIDA
- P60 Constructing A New Locking Model for the Southern Kurile Trench Including Viscoelastic Relaxation and  
Upper Plate Deformation  
Yuji ITOH\*, Takuya NISHIMURA, Kelin WANG, Jiangheng HE, Tianhaozhe SUN
- P61 Numerical Simulations of Tsunamis at Hypothetical Megathrust Earthquakes  
Shion OSADA\*, Tetsuro HIRONO, Shoichi YOSHIOKA, Toshitaka BABA
- P62 History of Crustal Deformation and Estimated Earthquake Recurrence Along the Sagami Trough  
Junki KOMORI\*, Ryosuke ANDO, Masanobu SHISHIKURA