

一般研究集会（課題番号：30K-09）

集会名：地殻ダイナミクス国際集会 ” The Second International Symposium on Crustal Dynamics (ISCD-2)

-Toward integrated view of island arc seismogenesis-

研究代表者：飯尾 能久

所属機関名：京都大学

所内担当者名：飯尾 能久

開催日：平成31年3月1日～平成31年3月3日

開催場所：京都大学 宇治おうばくプラザ きはだホール

参加者数：123名（所外100名，所内23名）

- ・大学院生の参加状況：33名（修士18名，博士15名）（内数）
- ・大学院生の参加形態【ポスター発表，運営補助】

研究及び教育への波及効果について

「東北沖地震後の列島変動の統一的理解」という目的に向けて日本列島内の応力・歪の時空間変化が明らかとなり，内陸地震の予測へ向けての今後の研究の方向性が見えてきた。海外からの多数の研究者を含めた学際的なシンポジウムは，各参加者が異分野の研究に刺激を受け新しい研究を創出出来る可能性があるほか，国際共同研究を生む場ともなりその波及効果は大きい。また，若手研究者および大学院生においては，特に海外からの第1線の研究者と直接議論することにより大きな刺激となったほか，一定の評価を受け，自分自身の研究に自信を持つことが出来た。

研究集会報告

(1) 目的

本国際研究集会の目的は過去5年間行われて来た，文部科学省 新学術領域研究（平成26～30年度）「地殻ダイナミクス—東北沖地震後の内陸変動の統一的理解—」について，関連する分野の第1線の研究者が本テーマについての最先端の研究を共有し，地殻ダイナミクスについて根本的理解を深めることである。また，次世代を担う若手研究者・大学院生に，特に海外からの第1線の研究者と議論する場を提供することである。

(2) 成果のまとめ

本国際集会研究集会では，新学術領域研究の6つの計画研究（A01 応力，A02 変形，B01 構造，B02 変形実験，B03 地殻流体，C01 モデル）の各グループから5年間の研究で到達された研究成果が発表された。特に新学術領域研究の最大のテーマであった地殻の絶対応力の推定のほか，流体移動と震源移動の関係，鳥取県西部地震の地震震源域に展開されている「0.1 満点地震観測」の成果，余震域と地質断層の対比，精細GPS観測から推定される地殻の変形様式，地殻と断層のレオロジー，地殻流体，各種モデリング等についての先端研究の成果を参加者が共有し，今後の新しい研究を模索することが出来た。3日間の国際研究集会では様々な分野から14名の海外からの研究者を含む120名を超える研究者・大学院生が参加し，日々活発な研究討議が行われて大変実りの多い国際研究集会となった。

(3) プログラム

※別添のとおり

(4) 研究成果の公表

「Earth, Planets, and Space」誌において特集号「Crustal Dynamics: Toward Integrated View of Island Arc Seismogenesis」を発行予定である（投稿締め切りは2019年6月30日）。

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

1-3 March, 2019, Uji, Japan

Program

Oral Session

March 1st (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 2nd (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 3rd (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 Search 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

Updated Program

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	C38	Energy Budget of Earthquakes: Investigating the Relation Between Actual and Seismologically Inferred Quantities using Dynamic Simulations of Earthquake Sequences Valère LAMBERT*, Nadia LAPUSTA
13:00	C39	Timing of Earthquakes on Intraplate Active Faults: Earthquake Sequence Simulation Accounting for Stress Perturbation by Megathrust Earthquakes Hiroyuki NODA*
13:20	C40	Crustal Stress, Fault Geometry and Dynamic Rupture: Lessons Learned from Recent Earthquake Events Ryosuke ANDO*
13:40	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
14:00 ~ 14:15		Coffee break
14:15	C42	(INVITED) The Anatomy of Subduction Zone: Insight from Geodetic Imaging and Modeling Sylvain BARBOT*
14:45	C43	Viscoelastic Corrections of the Earthquake Cycle for Estimating Interplate Coupling along the Nankai Trough Takuya NISHIMURA*, Fred F. POLLITZ
15:05	C44	Modeling Deformation and Stress State of the Japanese Island Arc Crust Considering Heterogeneous Rheological Structure Bunichiro SHIBAZAKI*
15:25		Discussion
15:40		Coffee break
15:55		Discussion
17:45		Closing