


Annual Report on Active Fault and Paleoseismic Researches

No. 11 (2011)



 **AIST** Geological Survey of Japan

December 2011

Contents

Preface	i-ii
Active fold survey in the shelf area off Rumoi, Hokkaido Shintaro Abe, Mayumi Sekine and Ryoyu Arai	1-14
Reconsideration of the 17 th century Kuril multi-segment earthquake Yukinobu Okamura and Yuichi Namegaya	15-20
Geologic structure and activity of the southern extension of the Kuromatsunai-Teichi Fault Zone in Uchiura Bay, Hokkaido, Japan Yuichi Sugiyama, Yasuhito Uchida, Fumitoshi Murakami and Routa Tsukui	21-53
Long-term activity and paleoseismicity of the Warikurayama fault along the southeastern foot of the Mahiru Mountains, northeast Honshu, Japan *Yasuo Awata, Masahiro Miyawaki and Masaru Saito	55-82
Seismic reflection profiling of the shallow structure of the Sakata-oki Uplift, Northeast Japan Haruo Horikawa, Yukinobu Okamura and Fumitoshi Murakami	83-96
Sedimentary features of the 2011 Tohoku earthquake tsunami deposit, on the Hasunuma coast (Central part of the Kujukuri coast), east Japan Osamu Fujiwara, Yuki Sawai, Masanobu Shishikura, Yuichi Namegaya, Haruo Kimura and Kyoko Kagohara	97-106
Fault models of the 1703 Genroku and 1923 Taisho Kanto earthquakes inferred from coastal movements in the southern Kanto area Yuichi Namegaya, Kenji Satake and Masanobu Shishikura	107-120
Geometry of fault traces on the northern terminal of the Tanna fault in Izu Peninsula, Central Japan Takashi Azuma and Zhou Lin	121-137
Comparison between the seismologically determined stress and the geologically determined slip direction along an active fault: An example of the Atera fault system, Central Japan Satoshi Tonai, Norio Shigematsu, Kazutoshi Imanishi, Takashi Azuma, Kazuo Mizoguchi, Tomoyuki Ohtani and Ryosuke Kutsuna	139-150
Spatial distribution and activity of faults in the offshore extension of the eastern margin fault zone of the Fukui plain, central Japan Shintaro Abe, Tanio Ito, Hirofumi Yamamoto, Ryoyu Arai, Yoshitaka Nakayama and Yukinobu Okamura	151-175
Paleoseismicity of the Kajiya, Sekigahara and Miyashiro faults in the Yanagase-Yoro fault system, central Japan Toshikazu Yoshioka, Koichi Sago and Hiroshi Yamane	177-195
Marine geological investigations on offshore extension of the Itsukaichi fault zone in Hiroshima Bay, southwest Japan Tadashi Maruyama	197-226
Trench excavation survey on the Iwakuni fault zone at Shimonagano, Iwakuni City, SW Japan – preliminary report of fault rock sampling – Yukari Miyashita, Masahiro Miyawaki, Hideo Kitao and Kazuhiko Okazaki	227-247

Ground penetrating radar profiling across the Kumage fault in the Iwakuni fault zone, SW Japan – A case study for deciding a trench survey location – Yukari Miyashita, Haruo Kimura, Haruo Horikawa, Jun'ichi Itoh, Masahiko Makino, Tatsuya Sumita, Hideo Kitao and Kazuhiko Okazaki	249-258
Shallow microgravity survey for determining a precise location of an active fault. – Case studies at the Iwakuni fault zone, Yamaguchi prefecture, SW Japan – Tatsuya Sumita, Masahiko Makino, Jun'ichi Itoh and Yukari Miyashita	259-272
High-resolution multi-channel seismic reflection imaging of the Futagawa-Hinagu Fault Zone, Yatsushiro Sea, southwest Japan Kyoko Kagohara, Takanobu Aiko, Ikuhisa Adachi, Izumi Sakamoto, Yoshiyuki Takino, Naoto Inoue and Naoko Kitada	273-294
Piston coring survey of the Futagawa-Hinagu Fault Zone, Yatsushiro Sea, southwest Japan Naoto Inoue, Naoko Kitada, Tomoo Echigo, Takahiro. Kubo, Naohiro Kazui, Akira Hayashida, Izumi Sakamoto, Yoshihiro Takino and Kyoko Kagohara	295-308
Changes in groundwater levels, groundwater pressures and discharge rates a day after the 2011 Off the Pacific Coast of Tohoku Earthquake (M9.0) Yuichi Kitagawa and Naoji Koizumi	309-318
Strain seismograms of the 2011 off the Pacific coast of Tohoku Earthquake recorded by borehole strainmeters Naoto Takeda, Kazutoshi Imanishi and Yuichi Kitagawa	319-330
Preliminary analyses for modeling of stress accumulation processes in the Japanese islands Ikuo Cho and Yasuto Kuwahara	331-350