SCEC and the Earthquake Research Institute, University of Tokyo held a joint workshop October 25-27 at ERI. Thirty-two presentations were given. The program is listed below. SCEC participants were John Anderson, Ralph Archuleta, Steve Day, Tom Heaton, Tom Jordan, Kim Olsen, Paul Somerville, Toshiro Tanimoto, Kenichi Tsuda. Travel for these participants was funded by SCEC and by ERI.

Besides the normal exchange of research results, the workshop provided an opportunity for SCEC scientists to look for common research themes where collaborative projects might be initiated.

2nd International Workshop on Strong Ground Motion Prediction and Earthquake Tectonics in Urban Areas

Workshop Program

October 25 AM
10:00-10:10  Shuhei Okubo (ERI Director)

Opening Remarks
10:10-10:20  Yoshichika Nishio (Earthquake Research Division Director, MEXT)

Greetings from MEXT

Research Projects
10:20-10:50  Naoshi Hirata (DaiDaiToku project leader; ERI, Univ. Tokyo)
Overview of results from the Metropolitan Project: Regional characterization of the crust in metropolitan areas for prediction of strong ground motion
10:50-11:20  Thomas H. Jordan (SCEC Director; Univ. Southern California)
SCEC’s program of earthquake system science in southern California
11:20-11:50  Hiroyuki Fujiwara (J-SHIS project leader; NIED, Tsukuba)
National seismic hazard maps of Japan

October 25 PM
Earthquake Tectonics
13:30-14:00  Toshiro Tanimoto (Univ. California, Santa Barbara)
A method to determine S-wave velocity in the shallow crust: Frequency dependence in Rayleigh wave ellipticity
14:00-14:20  Hiroshi Sato, Naoshi Hirata, Kazuki Koketsu (ERI, Univ. Tokyo), Kiyoshi Ito (DPRI, Kyoto Univ.), David Okaya (Univ. Southern California), Takaya Iwasaki (ERI, Univ.
October 26 AM

Ground Motions
09:30-10:00  John G. Anderson (Univ. Nevada, Reno)
Extreme ground motions
10:00-10:20  Saburo Midorikawa (Tokyo Inst. Tech.)
Some problems on empirical strong motion prediction
10:20-10:50  Paul G. Somerville and Arben Pitarka (URS Corporation, Pasadena)
Differences in earthquake source and ground motion characteristics between surface and buried earthquakes
10:50-11:10  Hiroe Miyake, Kazuki Koketsu, Reiji Kobayashi, Yasuhisa Tanaka, and Yasushi Ikekami (ERI, Univ. Tokyo)
Broadband source modeling and integrated 3D velocity model in the Tokyo metropolitan area: towards ground motion validation of the great 1923 Kanto earthquake
11:10-11:40  David J. Wald (USGS, Golden)
Prompt assessment of global urban earthquakes: challenges producing rapid ground motion estimations
### October 26 PM
#### Site Effects

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Topic</th>
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<tbody>
<tr>
<td>13:00-13:30</td>
<td>Thomas L. Pratt (USGS, Seattle)</td>
<td>Site response, basin effects and attenuation in the Puget lowland, Washington state</td>
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<tr>
<td>13:30-13:50</td>
<td>Shoji Sekiguchi (NIED, Tsukuba), Hiroki Hayashi (Shimane Univ.), Masashi Tsukui (Chiba Univ.), Yo Uesugi (Tsuru Univ.), Tanio Ito (Chiba Univ.), Yukio Yanagisawa (AIST, Tsukuba), Fumio Yamamizu, Kazushige Obara, Sadaki Hori, Hisanori Kimura, Makoto Matsubara, and Keiji Kasahara (NIED, Tsukuba)</td>
<td>Deep drilling at the arc-arc collision zone in the Yamakita area, central Honshu, Japan</td>
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<tr>
<td>13:50-14:10</td>
<td>Masaki Takahashi, Yukio Yanagisawa (AIST, Tsukuba), Keiji Kasahara (NIED, Tsukuba), Haruko Sekiguchi (AIST, Tsukuba), and Hiroshi Hayashi (Shimane Univ.)</td>
<td>Subsurface half-grabens in the Kanto Plain, central Japan, and its effect for long-period strong motion</td>
</tr>
<tr>
<td>14:10-14:30</td>
<td>Hiroaki Yamanaka (Tokyo Inst. Tech.)</td>
<td>Construction of 3D S-wave velocity model of the Kanto basin, Japan, using Rayleigh wave phase velocity</td>
</tr>
<tr>
<td>15:20-15:40</td>
<td>Hiroshi Kawase (Kyushu Univ., Faculty of Human-Environment Studies)</td>
<td>Site effects derived from spectral inversion method for K-NET, KiK-net, and JMA strong-motion network with special reference to soil nonlinearity in high PGA records</td>
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<tr>
<td>15:40-16:00</td>
<td>Kazue Wakamatsu (NIED, Kawasaki)</td>
<td>Development of 7.5-arc-second engineering geomorphologic classification database for metropolitan areas in Japan</td>
</tr>
<tr>
<td>16:00-16:30</td>
<td>Tom Heaton (California Inst. Tech.)</td>
<td>Simulated high-rise building response using strong motions recorded during the 2003 Tokachi-oki earthquake</td>
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</tbody>
</table>

### October 26 Evening
#### Public Lectures (in Japanese)

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<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Topic</th>
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<tbody>
<tr>
<td>17:00-18:00</td>
<td>Kojiro Irikura (Kyoto Univ.)</td>
<td>Prediction of strong ground motion with “recipe”</td>
</tr>
<tr>
<td>18:00-19:00</td>
<td>Kazuki Koketsu (ERI, Univ. Tokyo)</td>
<td>Future earthquakes and their strong ground motions in the Tokyo metropolitan area</td>
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### October 27 AM
#### Large-scale Simulation and Rupture Dynamics

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>09:10-09:30</td>
<td>Muneo Hori (ERI, Univ. Tokyo), Tsuyoshi Ichimura (Tokyo Inst. Tech.), and Kenji Oguni (ERI, Univ. Tokyo)</td>
<td>Integrated earthquake simulation - Estimation of strong ground motion and structural responses</td>
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<tr>
<td>09:30-10:00</td>
<td>Kim B. Olsen (San Diego State Univ.)</td>
<td>TeraShake: Large-scale simulations of M7.7 earthquakes on the Southern San Andreas Fault</td>
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<tr>
<td>10:00-10:30</td>
<td>Steven M. Day (San Diego State Univ.)</td>
<td>Analysis of long-period amplifications from TeraShake</td>
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<tr>
<td>10:30-10:50</td>
<td>Hidenori Kawabe and Katsuhiro Kamae (RRI, Kyoto Univ.)</td>
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Underground structure modeling of Kii peninsula, Japan, for long period ground motion simulation
10:50-11:10  Takashi Furumura (ERI, Univ. Tokyo)
Computer simulation of long-period ground motions associated by large subduction zone earthquakes
11:10-11:30  Satoshi Ide (Dep. Earth Planet. Sci., Univ. Tokyo)
Rupture propagation along fault surfaces of fractal characteristics
11:30-11:50  Takashi Miyatake (ERI, Univ. Tokyo)
Effect of negative stress drop on faulting process
11:50-12:00  Mizuho Ishida (NIED, Tsukuba)
Closing Remarks