Biographical Sketch for: Masayuki Kikuchi

BORN: January 19, 1948, at Iwate, Japan; Male.
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EDUCATION:
B.Sc. (1970), M.Sc. (1972), and D.Sc. (1976), in Geophysics, University of Tokyo.

POSITIONS HELD:
Research Associate, Yokohama City University (1973-83).
Research Fellow, Northwestern University (1979-80).
Research Associate, California Institute of Technology (1980-81).
Associate Professor, Yokohama City University (1983-88).
Professor, Yokohama City University (1988-96).
Professor, Earthquake Research Institute, University of Tokyo (1996-present).

SCIENTIFIC CONTRIBUTIONS:
(1) Computer simulation for dynamic rupture propagation. The specific fracture energy associated with large earthquakes was estimated to be much larger, by 5-6 of the order of magnitude, than that of the ordinary solid material in laboratory.
(2) Source rupture processes. Waveform inversion technique was developed in an attempt to extract the information of detailed source rupture processes. Heterogeneous fault slip distributions were determined for many large earthquakes. These are now being compiled into a fault asperity map in the world.
(3) Effect of multiple scatterings on the attenuation and dispersion of wave propagation. The numerical method to estimate the impulse response was developed and applied to laboratory data.

SELECTED PUBLICATIONS:
Takeuchi, H. and M. Kikuchi (1973). A dynamical model of crack propagation, J. Phys. Earth, 21, 27-37.
Kikuchi, M. and Y. Fukao (1976). Seismic return motion, Phys. Earth Planet. Inter., 12, 343-349.
Kikuchi, M. (1979). A numerical method for estimation of impulse response and its application to laboratory data, Phys. Earth Planet. Inter., 19, 255-262.
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Kikuchi, M. and Kanamori, H. (1982). Inversion of complex body waves, Bull. Seism. Soc. Am., 72, 491-506.
Kikuchi, M. and Y. Fukao (1987). Inversion of long-period P-waves from great earthquakes along subduction zones, Tectonophysics, 144, 231-247.
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Kisslinger, C., and M. Kikuchi (1997). Aftershocks of the Andreanof Islands earthquake of June 10, 1996, and local seismotectonics, Geophys. Res. Lett., 24, 1883-1886.
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Kikuchi,M., Y. Yagi, and Y. Yamanaka,(2000). Source process of the Chi-Chi, Taiwan, earthquake of September 21, 1999 inferred from teleseismic body waves, Bull. Earthq. Res. Inst., 75, 1-13.
Yagi, Y., M. Kikuchi, and T. Sagiya (2001). Co-seismic slip, post-seismic slip, and aftershocks associated with two large earthquakes in 1996 in Hyuga-nada, Japan, Earth, Planets and Space, 53, 793-803.