







# Earthquake Early Warning Workshop

July 13 - 15, 2005

# EARTHQUAKE EARLY WARNING WORKSHOP ABSTRACTS CALIFORNIA INSTITUTE OF TECHNOLOGY BECKMAN INSTITUTE AUDITORIUM

JULY 13-15, 2005

# **ORGANIZING COMMITTEE:**

RICHARD ALLEN
RICHARD EISNER
WILLIAM ELLSWORTH
THOMAS JORDAN
HIROO KANAMORI (CHAIRMAN)

<sup>\*</sup>ABSTRACTS IN ALPHABETICAL ORDER BY FIRST AUTHOR

## **Workshop on Earthquake Early Warning**

#### **Schedule**

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June 13 Morning
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**Introduction** (9:00-9:10)

Session 1. Earthquake Early Warning - 1 (Romanowicz) (9:10-10:40) coffee break

Session 2. Earthquake Early Warning - 2 (Heaton) (11:00-12:30)

Lunch, Poster (12:30-14:00)

#### June 13 Afternoon

Session 3. Earthquake Early Warning - 3 (Ellsworth) (14:00-15:30) coffee break

Session 4. Tsunami Warning (Allen) (16:00-17:30) poster

#### June 13 Evening

Dinner at Athenaeum (18:30-)

#### June 14 Morning

**Session 5. New Methods (Lind) (9:00-10:30)** 

coffee break

Session 6. Interface with Engineering Practice (Jones) (11:00-12:30)

Lunch, Poster (12:30-14:00)

#### June 14 Afternoon

Session 7. Social Implications (Hudnut) (14:00-15:30)

coffee break

Session 8. Earthquake Early Warning - 4 (Hauksson) (16:00-17:30) poster

#### June 15 Morning

Session 9. Earthquake Early Warning - 5 (Teng) (9:00-10:30) coffee break

Session 10. Looking at the Future (Jordan) (11:00-12:30)

#### **Program**

# July 13. Morning

#### Introduction

#### 1. Earthquake Early Warning - 1 (Romanowicz)

Yutaka Nakamura

Performance of an Early Warning System, Compact UrEDAS, during Destructive Shaking

Juan Manuel Espinosa Aranda

Seismic Alert Systems in Mexico

Ta-liang Teng, Yih-Min Wu, Tzay-Chyn Shin, William H. K. Lee, Yi-Ben Tsai, Chung Chi Liu, and Nai-Chi Hsiao

Development of Earthquake Rapid Reporting and Early Warning Systems in Taiwan

#### 2. Earthquake Early Warning - 2 (Heaton)

Richard Allen

Application of Elarms across California

Toru Hayama, Shigeki Horiuchi, Shinya Tsukada, and Yukio Fujinawa A National Research Project on Earthquake Early Warning System and Its Applications

Shinya Tsukada

Earthquake Early Warning System in Japan

#### June 13. Afternoon

#### 3. Earthquake Early Warning - 3 (Ellsworth)

Mustafa Erdik

Istanbul Earthquake Early Warning & Rapid Response System

#### Maren Böse

Development of a Neural Network Based Approach for EEW in Istanbul, Turkey

#### Dimitris Diagourtas

Towards an EEW System for Greece

#### 4. Tsunami Warning (Allen)

#### Eddie Bernard

Tsunami Warning Systems

#### Emile Okal

Tsunami Warning: the Specific Challenges

#### Bill Knight

Rapid Mwp Determination for Tsunami Warning System

#### Barry Hirshorn

Method for Automated Mwp Determination Short After Earthquake Onset

#### July 14. Morning

## 5. New Methods (Lind)

Peter Shearer

Earthquake Imaging Using Teleseismic P waves

Shigeki Horiuchi, Shunroku Yamamoto, Aya Kamimura, Takaki Iwata, Hiroaki Negishi, and Toru Hayama

Hypocenter Location and Shaking Intensity Estimation for EEW

Yih-Min Wu, H. Kanamori, R. Allen, and E. Hauksson

Experiment on an Earthquake Early Warning Method for SCSN.

#### 6. Interface with Engineering Practice (Jones)

Structural Control Engineering TBD

Veronica Grasso

Method to Estimate the Probability of False and Missed Alarm

Aldo Zollo et al.

**TBD** 

Bill Iwan

**TBD** 

#### July 14. Afternoon

#### 7. Societal Implications (Hudnut)

Louise Comfort

Earthquake Early Warning Information

David Wald

Users

Societal Implications of EEW: Inferences from ShakeMap Applications and

Comments by Dick Andrews

#### 8. Earthquake Early Warning - 4 (Hauksson)

Friedemann Wenzel

Seismic Early Warning for the Romanian Capital Bucharest - Status and Perspectives

Aldo Zollo et al.

Ongoing Development of a Prototype System for Seismic Early Warning Applications in the Campanian Region (Southern Italy)

A. Iglesias, S. K. Singh, M. Santoyo, J. Pacheco, and M. Ordaz

The Seismic Alert System for Mexico City: An Evaluation of its Performance and a Strategy for its Improvement

# July 15. Morning

# 9. Earthquake Early Warning - 5 (Teng)

Steve Malone

Making the case for Earthquake Early Warning in Cascadia

Yutaka Nakamura

Observational Results of UrEDAS in Pasadena and Other Locations

Constantin Ionescu and Alexandru Marmureanu Early Warning System for Bucharest & Industrial Facilities

# 10. Looking at the Future (Jordan)

Tadashi Nasu (Kajima, not confirmed yet))
Smart Building

Ken Hudnut

Fault Slip Sensors: GPS & Gyros in Earthquake Early Warning Systems

Egill Hauksson

CISN Plan for Testing EEW Alogorithm

#### **Posters**

Philip Maechling

Using Earthquake Wave Propagation Simulation in EEW System Development

Mizuho Ishida

Real-time Observation System for Earthquakes

W.H.K. Lee, K. F. Ma, and T.L. Teng

A Proposed Plan for Integrating Earthquake and Tsunami Warning at CWB in Taiwan

N.C. Hsiao, W.H.K. Lee, T.C. Shin, T.L., and Y.M. Wu

Earthquake Rapid Reporting and Early Warning Systems at CWB in Taiwan

Don Helmberger

TBD

A. Zollo et al.

**TBD** 

Shigeki Horiuchi, Shunroku Yamamoto, Aya Kamimura, Takaki Iwata, Hiroaki Negishi, and Toru Hayama

Hypocenter Location and Shaking Intensity Estimation for EEW

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C. Ionescu and A. Marmureanu