

A. M. Nayak, J Leigh, A Johnson, R Russo, P Morin, C Laughbon, T Ahern , WiggleView : Visualizing Large Seismic Datasets, *Eos Trans. American Geophysical Union*, 83(47), Fall Meet. Suppl., Abstract U61A-0007, 2002.

2002 Fall Meeting
Search Results

Cite abstracts as *Eos Trans. AGU*, 83(47),
Fall Meet. Suppl., Abstract xxxxx-xx, 2002

Your query was:
wiggleview

HR: 0830h
AN: **U61A-0007**
TI: **WiggleView : Visualizing Large Seismic Datasets**
AU: *** Nayak, A M**
EM: *atul@evl.uic.edu*
AF: *Electronic Visualization Laboratory, University of Illinois at Chicago 851 South Morgan St. Room 1120, Chicago, IL 60607 United States*
AU: **Leigh, J**
EM: *spiff@evl.uic.edu*
AF: *Electronic Visualization Laboratory, University of Illinois at Chicago 851 South Morgan St. Room 1120, Chicago, IL 60607 United States*
AU: **Johnson, A**
EM: *aej@evl.uic.edu*
AF: *Electronic Visualization Laboratory, University of Illinois at Chicago 851 South Morgan St. Room 1120, Chicago, IL 60607 United States*
AU: **Russo, R**
EM: *ray@earth.northwestern.edu*
AF: *Dept. of Geological Sciences, Northwestern University, Locy Hall, 1847 Sheridan Road, Evanston, IL Evanston United States*
AU: **Morin, P**
EM: *lpaul@umn.edu*
AF: *Geology & Geophysics, University of Minnesota, 310 Pillsbury Drive SE , Minneapolis, MN 55455 United States*
AU: **Laughbon, C**
EM: *chris@iris.washington.edu*
AF: *IRIS Data Management Center, 1408 NE 45th Street, Seattle, WA 98105 United States*
AU: **Ahern, T**
EM: *tim@iris.washington.edu*
AF: *IRIS Data Management Center, 1408 NE 45th Street, Seattle, WA 98105 United States*
AB: Wiggleview is a tool for visualizing seismic data collected from a worldwide network of seismometers. The visualization consists of overlaying familiar 2D seismic traces recorded for the N-S, E-W and vertical components of the earth's displacement over the topographic map of the affected area. In addition, a 3D particle trace consisting of the integration of these 3 components provides a depiction of how an object placed at a particular seismic recording station would shake at the instant of the event. Data for the seismic events is obtained from repositories maintained by IRIS (Incorporated Research Institutions for Seismology) at the Data Management Center, Seattle Washington. Suppose a seismologist wants to examine data gathered when an earthquake measuring 7.2 on the Richter scale hit Turkey on October 31,1998. Wiggleview displays data at 20 stations for this event. The tool's strength lies in being able to depict as many as 60 channels of waveforms and 20 traces of particle motion on a single display. This allows one to watch the seismic wave field expand about a source and see how it differs from place to place. It can also assist in understanding surface wave multipathing and anisotropy -- this is important for revealing structure and for seismic hazard estimation. Wiggleview was designed for two display platforms: the standard PC-

based desktop or laptop with a modern-day game graphics card; and a stereoscopic projection system called the Geowall. The stereoscopic nature of the images enhances depth perception and thus allows better understanding of attenuation due to distance and earth structure, source directivity and seismic hazard estimation.

Illustrations are available at the Wiggleview website

<http://www.evl.uic.edu/atul/wiggleview>

UR: <http://www.evl.uic.edu/atul/wiggleview>

DE: 0935 Seismic methods (3025)

DE: 0994 Instruments and techniques

DE: 0999 General or miscellaneous

DE: 1734 Seismology

SC: U

MN: 2002 Fall Meeting

New Search



A. M. Nayak, J Leigh, A Johnson, R Russo, P Morin, C Laughbon, T Ahern , WiggleView : Visualizing Large Seismic Datasets, Eos Trans. American Geophysical Union, 83(47), Fall Meet. Suppl., Abstract U61A-0007, 2002.