

# SCEC REGIONAL SEISMICITY MODULE

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## ANNUAL REPORT

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### INVESTIGATIONS

The undergraduate level educational module "Investigating Earthquakes through Regional Seismicity" was expanded during 1999, to include the third and final section entitled "Measuring Earthquakes". This section has been sent out for scientific review. The final release of this section will be done once the reviews have been returned.

During 1999, the work on the undergraduate module focused on: 1) structuring the module to adhere to the "storyline" (Figure 1) created with the help of the Development of Earth Science Curricula (DESC) Online group; 2) the completion, scientific review, and release (September 1999) of Section 2, "The Distribution of Earthquakes"; and, 3) the completion of Section 3, "Measuring Earthquakes", sent out for scientific review in December 1999. Previously created products such as the monthly and yearly animations and histograms for southern California seismicity were updated regularly and made available on the WWW by John Marquis. Since, December, work has also begun on the initial development stages of a combined middle-school version of the Regional Seismicity and GPS modules.

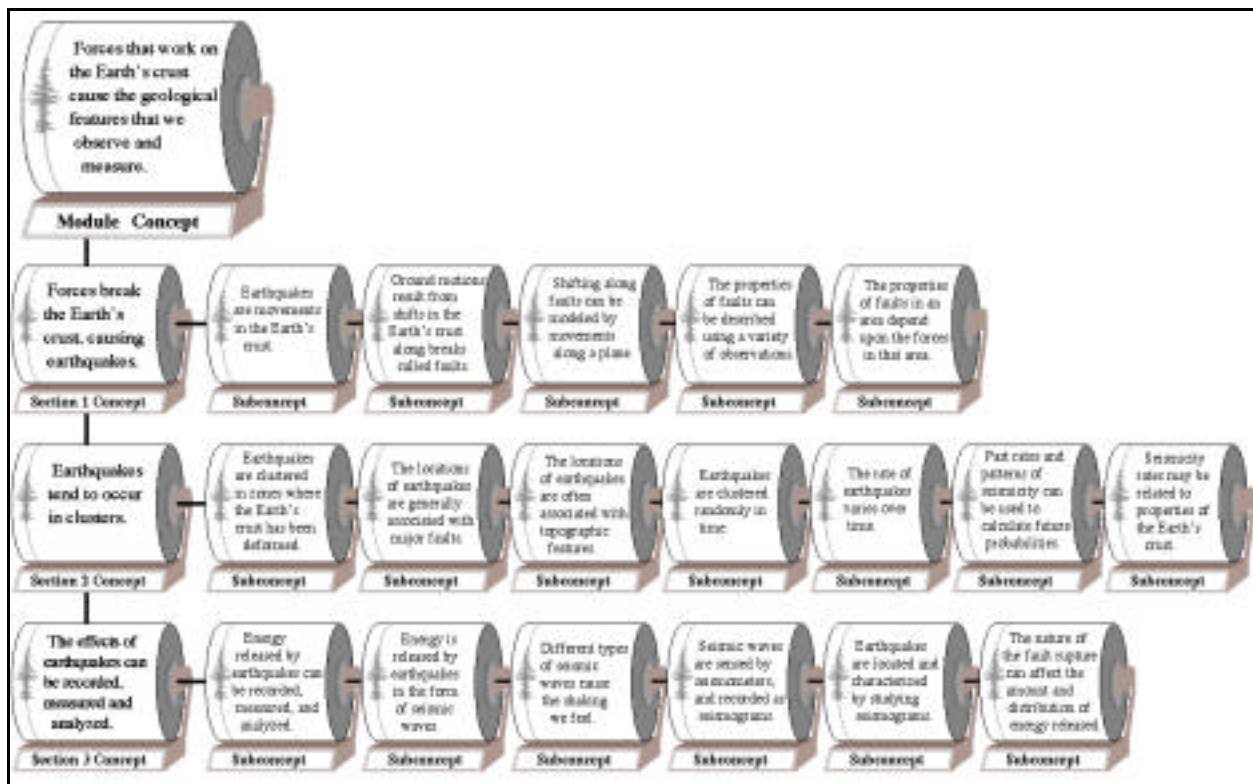
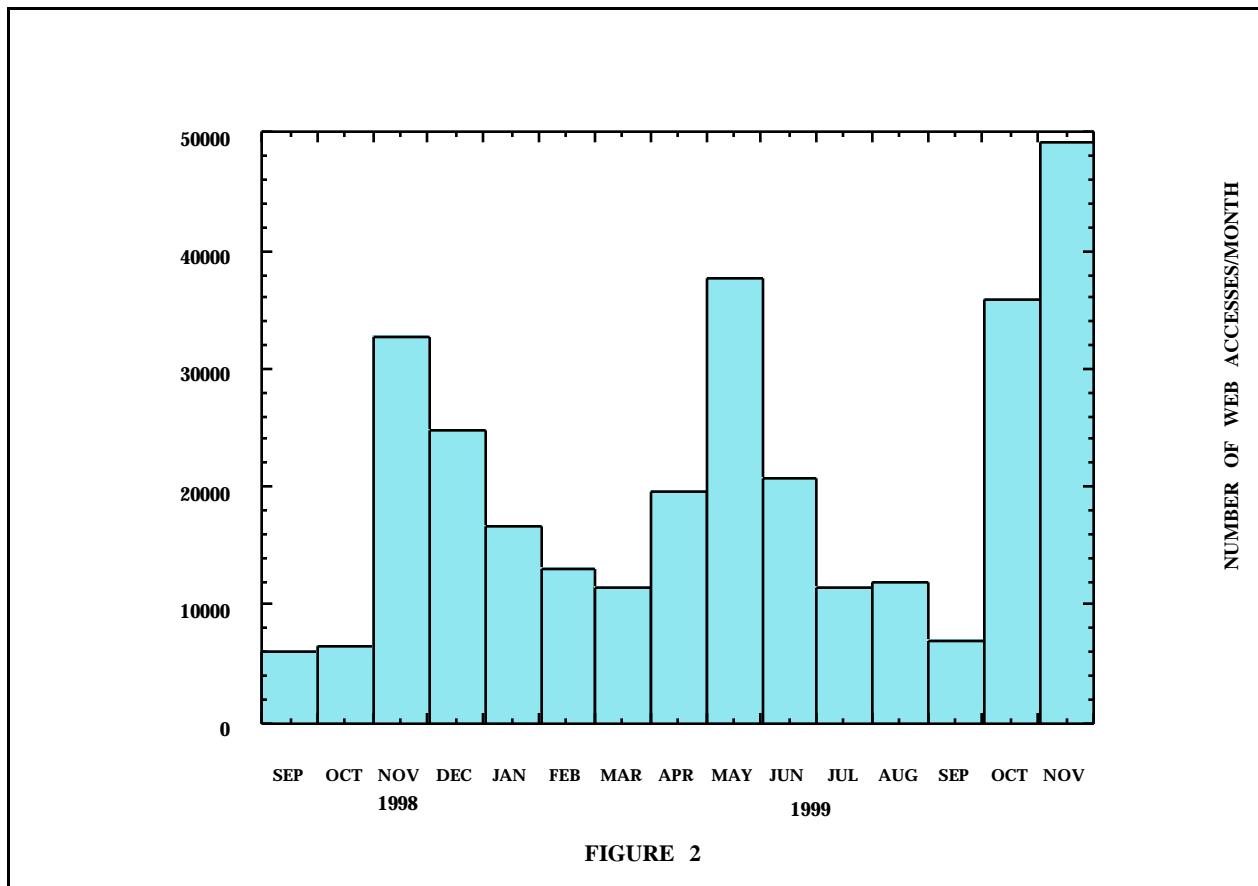


FIGURE 1

## RESULTS

Portions of the module were presented during the year at a number of meetings. An online tour of the module (sections 1 and 2) were presented to a receptive audience at the 1999 Technology in Education (TechEd99) Conference & Exposition for Community Colleges, held in Ontario, California. The module was also presented as part of the "Seismology in Education" session at the 94th Annual Meeting of the Seismological Society of America, in Seattle, Washington. Activities and other material from the newly created Section 3 ("Measuring Earthquakes") were presented at two poster sessions, and combined with samples of the new middle school module at two conferences during the latter part of 1999. This new material was well received, and seemed to generate high levels of interest and enthusiasm, even among those previously familiar with the Regional Seismicity module. While there are still many months of work left to go before the beta release of the middle school module, the initial stages (of both development and publicity) are well underway. Half of the hands-on lessons have been drafted up by the DESC Online group and placed within the newly created architecture of the module's Web site. Interest in the module as an educational resource for instructors at all levels continues to be high, and the announced additions (e.g. Section 3, "Measuring Earthquakes") seemed to be eagerly anticipated among those who previewed the partially completed product. Clearly the module is filling a demand for educational materials in seismology, and earth science in general.



Access to the module (Figure 2) has shown that there continues to be interest in this product. The peak in access rate in May, just before schools went into summer recess, may indicate that the module has been useful for the kinds of independent research projects typically due at the end of a term, or it may be that many teachers were adding the module to their curricula once they had finished covering other required topics and material. We anticipate an increase in the number of

accesses with the return of students to schools, and with the release of the newly completed sections, which will greatly expand the scope of material covered by the module. This should generate more interest in the module not only from educators and students of seismology, but from members of the general public seeking a straightforward tutorial on the basics of earthquakes. Increased access to the module, in turn, will improve the visibility of the SCEC Outreach program's efforts to provide the community with reliable, user-friendly information about earthquakes.

**URLS:**

**Regional Seismicity Module URL**

<http://www.scecdc.scec.org/Module/module.html>

**DESC-Online Middle School Module URL** (in the beginning stages of development)

<http://www.scecdc.scec.org/DESCware/>

**PUBLICATIONS:**

Marquis, J., Hafner, K., and Hauksson, E., 1999, Updates to the "Investigating Earthquakes Through Regional Seismicity" Educational Module, <http://www.scecdc.scec.org/Module/module.html>, (abstract) Spring 1999 SSA Meeting (special session on Seismology in Education).

Marquis, J., Hafner, K., and Hauksson, E., 1999, Release of Version 2.0 of "Investigating Earthquakes Through Regional Seismicity:" <http://www.scecdc.scec.org/Module/module.html>, (abstract) Fall 1999 AGU Meeting.

**CONFERENCES & WORKSHOPS PARTICIPATED IN:**

1999 Technology in Education Conference & Exposition, Ontario, CA, March 1999.

1999 SSA Annual Meeting, Seattle, WA, May 1999.

Education and Outreach in Seismology and Earthquake Engineering, IRIS sponsored workshop, Harbortowne, St. Michaels, MD, May 16-18, 1999.

DESC Online Advisory Team Workshop, Santa Barbara, CA, June 4-6, 1999.

Seismologists Learning to Teach the Teachers, IRIS Education Workshop, Tenaya Lodge at Yosemite, CA, June 9, 1999.

SCEC Annual Meeting, Palm Springs, CA, September 1999.

CSTA Annual Meeting, Long Beach, CA, October 9, 1999.

DESC Online Advisory Team Workshop, Mission Viejo, November 20, 1999.

GIFT Workshop, Exploratorium, San Francisco, CA, December 13, 1999.

1999 AGU Fall Meeting, San Francisco, CA, December 13-16, 1999.

**UNDERGRADUATE PROFESSORS WHO HAVE USED OR HAVE EXPRESSED  
INTEREST IN USING THE MODULE**

Dr. Gerry Simila - CSUN

Dr. Charlie Rubin - Central Washington University

Dr. Michael Forrest - Rio Hondo College

Dr. Lisa Grant - Chapman College

Dr. Sally McGill - Cal State San Bernardino