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WWW.SISMOSCHOLAR.IT :
WEB PLATFORM FOR SHARING AND MANAGEMENT OF SEISMIC
DATA ACQUIRED IN SCHOOLS
AND DISSEMINATION ACTIVITIES

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The portal sismoscholar.it was born from an initiative to re-launch in Southern Italy educational information on earthquakes. The educational activities began two decades ago with the project EduSeis (Educational Seismology), but slowly proceeded on due to lack of human and material resources and the usual difficulties in carrying out projects of medium and long-term collaboration with schools in our country. The opportunity is provided by the European project NERA (Network of European Research Infrastructures for Earthquake Risk Assessment and Mitigation, EC Seventh Framework Program, FP7, Contract n. 262330) and REAKT (Strategies and tools for Real-Time Earthquake Risk Reduction, EC Seventh Framework Program, FP7, Contract n.282862) whose ambitious objective is to create an infrastructure for sharing, management and dissemination of seismic data acquired from research and monitoring centers in Europe. Within the project, special attention is given to the interaction between the world of research and that of school through the installation of seismic stations within the schools and the distribution of recorded data. Our ambition is that the website sismoscholar.it becomes the meeting place for various actors in the science education project in seismology, thus facilitating the interaction and sharing of data and information between teachers, students, researchers, and a wider audience that is interested in science and in particular in seismology. The new frontier of web sites dedicated to science education is open to social networks and blogs, transforming them from static archives of documents and multimedia material in a public place where people can discuss, ask questions, comment, "tweet", share pictures and experiences teaching about earthquakes.

The web site is the product of a synergic collaboration between students and researchers from the RISSC-Laboratory (University of Naples, Federico II, Italy) and has been developed through the

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Joomla! platform (www.joomla.org). The site consists of four different sections: Focus, Seismological Pills, Seismology@School and Community/News.

The Focus section collects a series of in-depth articles of seismological character and recent scientific discoveries from the world of geophysics. The purpose of this section is to satisfy the curiosity and answer the questions of seismological nature that may arise in each of us when listening to the news or reading a newspaper.

The Seismological Pills are a collection of topics found in college textbooks and scientific papers, translated into a simplified language accessible to all. The text is enriched with clarifying images and supported by a glossary of terms (called SismoWiki).

The section Seismology@School represents the core of the whole project and has a double purpose for the website. On the one hand, the section is aimed at supporting and completing the structure of the portal, by providing useful material for students and teachers. In this section, for example, educational modules, arranged as a sort of “mini-lessons” can be found. The modules include theoretical explanations and practical examples and can be used both by teachers (for frontal lessons and/or laboratory experiments) and by students. At the end of each module, an interactive questionnaire is also proposed, for a quick and effective learning of the key concepts. Within the Seismology@School section, one page is also dedicated to the most popular free softwares and tools for seismic analyses, such as SeisGram2K (<http://alomax.free.fr/seisgram/SeisGram2K.html>), SeismicityViewer (<http://alomax.free.fr/seismicity/>), QuakeExplorer (<http://alomax.free.fr/QuakeExplorer/>) and others. A brief guide for installation and use of each software is also available on the software page. On the other side, the section Seismology@School has been developed to be the mirror of activities in schools. Within the framework of EU projects a series of educational activities have been launched, involving 5 schools in the neighbourhood of Naples. The map of the schools of the “Seismology@School” network is shown in Figure 1.



Figure 1. Map of the schools involved in the project that are part of the network of Seismology@School. The station name is shown for each school.

The selected schools are the ITIS “E. Majorana” in Somma Vesuviana (NA) (station MAJI); the Liceo Statale “Rinaldo D'Aquino” in Montella (AV) (station MOTI); the Department of Physics of the University of Naples “Federico II” in Naples (station NAPI); the IISS “The Sanctis” in Sant’Angelo dei Lombardi (AV) (station SALI); the IIS “Pomponio Leto” in Teggiano (AV) (station TEGI).

Each school is equipped with a 3-component accelerometric sensor, connected to a digital acquirer, and transmits data to the Local Control Center in Naples (at RISSCLab). In case of an event recorded at one or more stations of the network, data are available by download. A compressed archive containing the earthquake records at each station can be found in a dedicated web-page (Figure 2). Currently, data are stored in SAC format (Goldestein et al., 2003), but will be shortly available also in other formats.

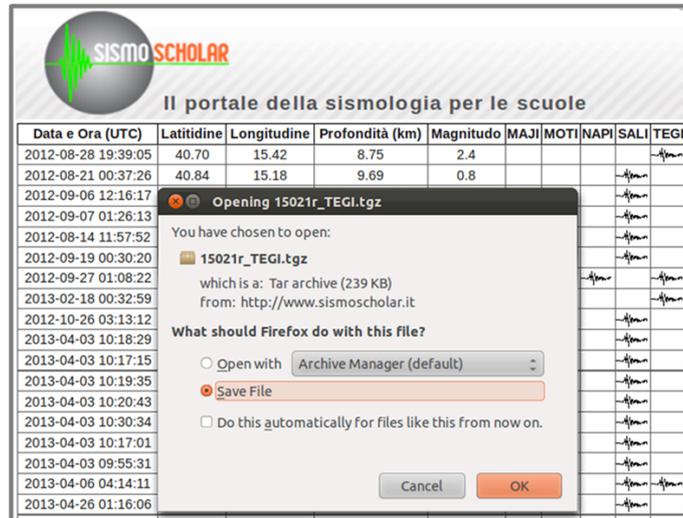


Figure 2. Screenshot of the webpage in the section Seismology@School: database. This is an example of how data are shared from the website. By clicking on the seismogram icon, the download will start.

In case of an earthquake, students can download the data and compare the earthquake waveforms recorded at different stations. They can use these data to simulate the routinely operations of a seismological laboratory, such as the phase picking or the computation of local magnitude.

The section Seismology@School also includes a link to station helicorders, where students and teachers can continuously monitor what is occurring at their own school. The helicorder data can be used, for example, to monitor the background noise level of the site.

Finally, the section News and Community is the virtual place where students and teachers can find the latest news from the seismological and geophysical world. In this section, interesting links, images, videos and other relevant contents can be found and easily shared, through the most common sharing tools, such as Facebook and Twitter. The purpose of this section is to create a virtual community of people that shares the interest for seismological and geophysical problems. Here, students and teachers can satisfy their curiosity boths by visiting the official web-pages and links that will be available and also by directly addressing questions to an “expert” within a dedicated forum area (that is planned to be activated).

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