



University of Genova

Department of Earth, Environmental
and Life Sciences

Doctorate Course in Earth and
Environmental Science and
Technology

Earth Science Curriculum

Università degli Studi di Genova



Dottorato in Scienze e Tecnologie
per l'Ambiente e il Territorio

Research Theme n. 1

<p>Titolo (Italiano) Stima dei parametri della sorgente sismica in tempo quasi reale in Italia Settentrionale Title (inglese) Quasi real-time Earthquake source parameter estimation in Northern Italy</p>
<p>Tutor (name and email) and eventual co-tutor Daniele Spallarossa daniele.spallarossa@unige.it Stefano Parolai sparolai@inogs.it Angela Saraò asarao@inogs.it</p>
<p>Program description including the formation program abroad (Inglese)</p> <p>Development of methodologies for rapid estimation of source parameters of local and regional seismic events to be applied to Northern Italy. Procedures for estimating the seismic moment and stress drop will be developed and tested: the reliability and the accuracy limits will also be evaluated. The planned activities will lead to an implementation of specific procedures that will become operative at the Seismology laboratory of the Department of Earth, Environmental and Life Sciences (DISTAV) and at the OGS Seismological Research Center. This study aims at contributing to further improve the seismic surveillance. The activities will also be carried out in the framework of EPOS and integrated with the RAMONES project (Rapid Assessment of MOmeNt and Energy Service) launched by the DISTAV seismological group.</p>
<p>Financial support by National Institute of Oceanography and Applied Geophysics – OGS – Seismological Research Centre – Institutional Fund</p>
<p>Tutor's publications (max 3)</p> <p>S Parolai, L Moratto, M Bertoni, C Scaini, A Rebez. Could a decentralized onsite earthquake early warning system help in mitigating seismic risk in northeastern Italy? The case of the 1976 $M_s 6.5$ Friuli earthquake. <i>Seismological Research Letters</i>, 2020, 91(6), pp. 3323–3333</p> <p>Ahmadzadeh, S., Javan-Doloei, G., Parolai, S., Oth, A. Nonparametric Spectral Modeling of Source Parameters, Path attenuation and Site effects from Broadband waveforms of the Alborz Earthquakes (2005-2017), <i>Geophysical Journal International</i>, Volume 219, Issue 3, December 2019, Pages 1514–1531, https://doi.org/10.1093/gji/ggz377</p> <p>M. Picozzi, Oth A., Parolai S., Bindi D., De Landro G., Amoroso O. Accurate estimation of seismic source parameters of induced seismicity by a combined approach of generalized inversion and genetic algorithm: Application to The Geysers geothermal area, California. <i>Journal of Geophysical Research- Solid Earth</i>. First published: 9 May 2017 https://doi.org/10.1002/2016JB013690</p>