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COST Action ES1401 TIDES: a European network on TIme DEpendent Seismology

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Using the full-length records of seismic events and background ambient noise, today seismology is going beyond still-life snapshots of the interior of the Earth, and look into time-dependent changes of its properties. Data availability has grown dramatically with the expansion of seismographic networks and data centers, so as to enable much more detailed and accurate analyses. COST Action ES1401 TIDES (TIme DEpendent Seismology; http://tides-cost.eu) aims at structuring the EU seismological community to enable development of data-intensive, time-dependent techniques for monitoring Earth active processes (e.g., earthquakes, volcanic eruptions, landslides, glacial earthquakes) as well as oil/gas reservoirs. The main structure of TIDES is organised around working groups on: Workflow integration of data and computing resources; Seismic interferometry and ambient noise; Forward problems and High-performance computing applications; Seismic tomography, full waveform inversion and uncertainties; Applications in the natural environment and industry. TIDES is an open network of European laboratories with complementary skills, and is organising a series of events — workshops and advanced training schools — as well as supporting short-duration scientific stays. The first advanced training school was held in Bertinoro (Italy) on June 2015, with attendance of about 100 participants from 20 European countries, was devoted to how to manage and model seismic data with modern tools. The next school, devoted to ambient noise, will be held in 2016 Portugal: the program will be announced at the time of this conference. TIDES will strengthen Europe's role in a critical field for natural hazards and natural resource management.