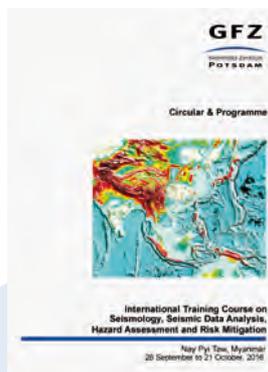




### Training Course 2016 in Nay Pyi Taw, Myanmar



The GFZ Potsdam and the German Federal Foreign Office agreed to offer the International Training Course 2016 in Myanmar, in cooperation with the Department of Meteorology and Hydrology which is also responsible for earthquake monitoring and tsunami early warning in Myanmar. The 4-weeks course will take place in the capital town Nay Pyi Taw in the time September 26 – October 21, 2016.

Interested scientist and engineers from Southeast Asia engaged in seismology, seismic monitoring, earthquake engineering, seismic and tsunami hazard assessment are invited to apply to the course. The corresponding documents can be downloaded from the course website (<http://www.gfz-potsdam.de/en/events/international-training-courses>). The deadline for application is June 3, 2016.

### Partner 2016

This year's partner is the Department of Meteorology and Hydrology (DMH, Nay Pyi Taw). DMH is under the administration of the Ministry of Transport and Communications and is the responsible agency for Cyclone/Storm warning, flood forecasting and warning as well as Earthquake information and Tsunami Early Warning in the country. Daily weather forecasting from DMH are based on multifunctional Satellite Image ground receiving system and JMA GSM, GRIB data, a JMA storm surge model is being used now.



The former course participant Mr. Phyo Maung Maung is working at DMH in Nay Pyi Taw in the National Earthquake Data Center (NEDC) and is co-organising the course 2016. The photo (right) shows him standing in front of the NEDC building. Sorry to say, but it is not his car. In the NEDC (left), incoming data are being analysed by an Antelope System, SeisComp3 and SEISAN.

Earthquake recording was undertaken at Yangon as early as 1962 and at Mandalay in 1966, using only then the electromagnetic seismographs with photographic recordings.

The National Earthquake Data Center (NEDC), belonging to DMH, has organized monitoring of earthquakes and disseminates information of earthquake events to authorities and the public in Myanmar. Nowadays, NEDC is collaborating with the United States Geological Survey (USGS) in order to upgrade the seismic network in Myanmar by installing more seismic stations and a new monitoring system. Thailand based RIMES (Regional Integrated Multi-Hazard Early Warning System for Africa and Asia) also provides assistance for improvement of the seismic network in Myanmar together with capacity building development of DMH staff. DMH and GFZ are planning to install two GEOFON seismic stations in Myanmar in 2016 and 2017 together with a special training program at the GFZ Potsdam for DMH staff. Website: <http://www.dmh.gov.mm/>



### Former course participants as visitors at GFZ

We welcome Mr. José Bayona from Mexico as new Ph.D. student at the GFZ Potsdam. José Bayona participated at the Training Course 2014 in Bogota/Colombia. When he arrived in Germany, José Bayona went to German Classes for 6 months first, speaking nearly perfect German now.



“Now under the supervision of Prof. Fabrice Cotton and Prof. Dr. Danijel Schorlemmer (Section 2.6), I am doing my PhD at GFZ. Together, we will be working on the development of a global, data-driven and testable hazard model that could lead us to reduce the uncertainties associated with seismic hazard and therefore to mitigate the risk due to earthquakes in a more effective manner.”

Evgeny Poldolskiy (Russia, course participant 2013) is visiting the Section 2.1, discussing with Dr. Simone Cesca (left) and Dr. Sebastian Heimann (right) about moment tensor analysis of Ice-quakes. The photo caught them in the kitchen, drinking an espresso.



Mouloud Hamidatou (Algeria) is visiting the Section 2.6 (Prof. Cotton). Before participating at the training course 2015 he was working already on the seismic hazard and risk of Constantine city (Algeria). In the frame of his PhD work on seismic risk assessment in urban areas Mouloud discussed with Prof. Dr. Fabrice Cotton about a publication on the "Probabilistic seismic hazard assessment in the Constantine region, Northeast Algeria", the analysis of the regional seismicity in northern Algeria, the seismic hazard assessment and the uncertainties in the parameters of seismic activity rate.



### News

Olga Zakharova (course participant 2010 in Turkey) finalized her PhD successfully in 2015 in Germany. She worked together with PD Dr. Sebastian Hainzl (GFZ, Section 2.1) investigating statistical properties of earthquakes. During her PhD she published 2 papers in international journals.



The photo shows Dr. Olga Zakharova after the PhD-defence, which went very successful.

The topic of my PhD thesis was "Analysis and modeling of transient earthquake patterns and their dependence on local stress regimes". In this work I investigated properties of aftershock sequences, which occurred on different scales and tried to explain their occurrence by the relative stress level in the

area of interest. To analyze aftershock sequences I used a statistical approach, in particular, the Epidemic Type Aftershock Sequence (ETAS) Model. My PhD thesis can be downloaded at the website of the University of Potsdam library using the link [https://publishup.uni-potsdam.de/opus4-ubp/files/8645/zakharova\\_diss.pdf](https://publishup.uni-potsdam.de/opus4-ubp/files/8645/zakharova_diss.pdf)

### Forum

#### Paper published, Carlos Tassara - Universidad Arturo Prat (UNAP) Iquique, Chile



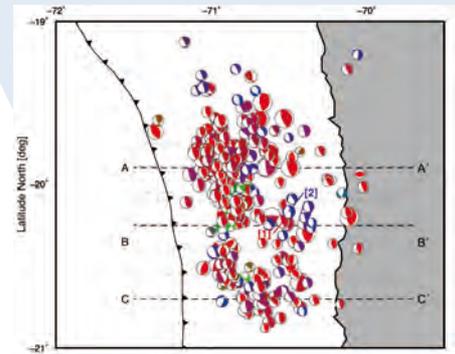
As a scientific collaborator of GFZ in the framework of the international attempt to monitor seismicity at the Northern Chile slab, I had the opportunity to join a research effort upon the occurrence of the Mw 8.2 earthquake, which struck offshore my city, Iquique, Northern Chile, in April 2014.

The seismological research was performed using some novel techniques, through the mapping of seismicity distribution, full waveform moment tensor inversion, spatial and focal mechanism seismicity clustering, and stress inversion. Some of these techniques and their theoretical background were among the topics of the Training Course lectures during the training course 2014 in Bogota/Colombia, so that I could put in practice recently acquired competences and partially contribute to the research.

As a result of this joined research, we recently published a scientific article (Cesca et al. 2016, the article can be down-

loaded from the GFZ-website of section 2.1) on the seismic sequence of the 2014 Iquique earthquake, mostly focusing on a careful analysis of the exceptional fore-shock sequence, preceding this large earthquake, in comparison to the aftershock sequence.

The discussion of our results, through the assessment of changes in seismicity patterns before and after a large earthquake, is used to support a model for the rupture processes taking place during the preparation, co-seismic and post-seismic phases, and further discuss possible changes in the stress conditions.



#### Making a PhD at the GFZ – some personal views Olga Zakharova

After my participation in the International Training course in Turkey in 2010, I decided that I was clever enough for future study and started to apply for PhD positions. I was then fortunate enough to be accepted to the GeoSim research school and, started my PhD at the GFZ/University of Potsdam. However, after one month of my PhD, I realized that I underestimated how prepared I was. I felt, that the least prepared student in our section was me! The next few years were very difficult. Now it was clear that my English was actually not very good, my programming skills existed only in my imagination, and my supervisor had to invest a huge amount of time to explain to me the very basics of statistical seismology.

New culture, no experience in traveling and at the end of my PhD the usual financial issues, as well as an additional job lead to two burn outs and a state close to depression. I hope that I have scared you enough and now we can go on to the positive aspects of the PhD study. I was lucky with the field (statistical seismology) as well as with the topic of my research. Although my background was physics, my favorite subject at school and university was always mathematics, it was one of the reasons why I enjoyed my PhD study every day. I always liked languages and during this time learned some of them: German, Python and C. And finally (!) physics opened for me some understanding of nature! It is important to say that the human factor around me was friendly and positive. And of course, I am very-very thankful to my supervisor!

For me, a PhD was not just a study, it was also a journey of personal development. I have already had my defense, which went unexpectedly very well! I am now very curious to see what is waiting for me in the future!

#### Contact

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