



TECHNISCHE UNIVERSITÄT  
IN DER KULTURHAUPTSTADT EUROPAS  
CHEMNITZ

# Institut für Physik

## Physikalisches Kolloquium



**Donnerstag, 30.01.2025, 15:30 Uhr**

Ort: Reichenhainer Str. 90;  
Zentrales Hörsaal- und Seminargebäude, Raum C10.013

**Dr. Olaf Hellwig**

TU Bergakademie Freiberg,  
Institute of Geophysics and Geoinformatics

## **Earthquake monitoring in Saxony - Current swarm earthquakes in the Vogtland region and the collapse of the Carola Bridge in Dresden**

Earthquakes are a well-known phenomenon in Saxony, in particular the swarm quakes in the Vogtland region and in West Bohemia. Stronger earthquakes above magnitude 2.5 can be felt in the immediate vicinity of the epicentres, such as several events during the earthquake swarm between March and July 2024 or now on 2nd January 2025 near Klingenthal. The monitoring network in Saxony consists of two observatories and about 20 seismic stations for recording the ground motion. The two observatories Collm near Oschatz and Berggießhübel near Pirna are also part of the global digital seismometer network and are equipped with high-precision STS-2 seismometers. Because of the coupling to the crystalline basement and a relatively low anthropogenic noise level near the observatories, these instruments are capable of resolving ground motions down to a few nanometers. This makes it possible to record almost all teleseismic events occurring worldwide with magnitudes above 5. In addition to these natural earthquakes, the seismic network records many anthropogenic events, such as quarry blasting or underground tests of nuclear weapons.

Since autumn 2023, the Institute of Geophysics and Geoinformatics of TU Bergakademie Freiberg has been inviting schools in Saxony to become part of the monitoring network and is providing simple and robust Raspberry Shake earthquake sensors for this purpose. In the meantime, this network has grown to about 30 stations. Real-time access to the data and tools for data processing and data analysis as well as information about current earthquakes is provided by an online user interface on <https://stationview.raspberrysshake.org>, so that the obtained data can be easily integrated into science lessons in participating schools. The Raspberry Shake sensors not only record movements within the school buildings. During the nights, on weekends and during school holidays, stronger events such as the earthquake of 5 December 2024 off the coast of Northern California with a moment magnitude of 7.0 or the magnitude 7.1 earthquake in Tibet on 7 January 2025 can be easily detected. Even the collapse of the Carola Bridge in Dresden in the early morning hours of 11 September 2024, which received a lot of attention in the media, was captured by such a Raspberry Shake instrument in the St. Benno-Gymnasium Dresden, only 800 m away from the bridge.



Alle Zuhörer sind ab 15:15 Uhr zum Kaffee vor dem Hörsaal eingeladen.

Informationen zum Vortrag erteilt:  
Prof. Dr. Olav Hellwig, Tel.: 531 30521

[www.tu-chemnitz.de/physik](http://www.tu-chemnitz.de/physik)