

## **Epileptic seizure detection and forecasting using wearable devices and machine learning**

The research involves several projects funded by the Swiss National Fund (SEVERITY, PEDESITE), including a Sinergia project (PEDESITE) with EPFL and ETZ partners, aiming at developing and tested innovative wearable devices and analytical methods to improve the field of epileptic seizure detection and forecasting. Data are being collected from a large European consortium of epilepsy monitoring units where patients are being recorded with video-EEG systems and wearable devices for comparison.

Development of innovative and performant algorithms relies on the integration of edge machine learning with the view to learn from individual patient's seizure characteristics. The MD-PhD project would require solid background in mathematics but would primarily consists in an integrated research collating the various medical and data science dimensions at stake in such a project, including translation into clinical studies.