# SEMINARAS

## 2023 balandžio 4 d. 09:00 SRL-I 420

## Nazim Zazai

### Monthly Streamflow Prediction Using ANN, KNN and ANFIS Models: Example of Gediz River Basin

Stream flow forecasting is crucial in many aspects such as irrigation, building water infrastructures, water supply and taking precautions against floods. The ability to predict future streamflow helps us anticipate and plan for upcoming flooding, decreasing property destruction, preventing deaths and managing water in the best way possible. Different hydrological models have been developed for forecasting streamflow and they have different characteristics, driven by the research area and available data. İn this study, three types of Artificial Intelligence models; K-Nearest Neighbor (KNN), Artificial Neural Network (ANN) and Adaptive Neuro Fuzzy Inference System (ANFIS) have been used to study the Gediz River Basin which is located in the Aegean region of western Turkey. The results varied due to the complication of the data and different parts of the study area as well as the structure of the models, over all, looking at R2, RMSE and WT values, ANFIS was more accurate compared to ANN and KNN models. Conversely, according to Taylor diagram, KNN was more accurate compared to ANN and ANFIS.

**Kviečiame dalyvauti.**
**Seminaro sekretorius A. Bugajev**