OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

INSTITUT FÜR APPARATE- UND UMWELTTECHNIK

Objectives

- Experimental and numerical investigation of fire and smoke spread mechanisms in ground wildfires with medium scale experiments to adjust the numerical models for prediction and large-scale experiments for direct prediction and validation of t numerical models
- Construction of machine learning methods to augment numerical methods for predicting fire and smoke spread
- Construction of a situation-aware risk model
- Experiments and assessments of fire operation measures to stop ground wildfires with respect to eco-friendliness of the measures
- Numerical and experimental investigation of smoke gas production and smoke gas toxicity, guidance, and limits for evacuatic of villages
- Prediction of fire and smoke production as basis for effective firefighting measures and health risk warning
- Smoke and air pollutant modelling for calibration of health risk warning systems
- Development of scenario-based firefighting measures
- Application of environmentally friendly foam agent during medium-scale and large-scale wildfire experiments (One Seven GmbH)
- Development of new extinguish systems during wildfires using fluorene-free foams (One Seven GmbH)

› **Cooperation** (https://www.iaut.ovgu.de/Lehrst%C3%BChle/Anlagentechnik+und+Anlagensicherheit/Forschung/TREEADS/Cooperation.html)