Welcome to the HSRW Earth Observation Lab - EOLab!

The **EOLab** is a laboratory of the **Rhine-Waal University of Applied Sciences (HSRW).**
It is located at the **Faculty of Communication and Environment, Campus Kamp-Lintfort.**

The **EOLab Wiki** is used by the **Lab3 laboratory network** consisting of

- **Earth Observation Lab**,
- **IoT Lab**,
- **Drone Lab**.



Photo: Polar Fox on Iceland, Sept. 2019, by Jan Sonntag

Current Activities at the ECOtower of the Andesflux Network

2022-10-17: Great News from Peru!

Our team member **Jan Sonntag** is currently supporting **Eric Cosio**, professor at the PUCP University in Peru. Eric is planning and managing a network of measurement towers for atmospheric research named **AndesFlux** distributed in the Amazon region of Peru along the foot of the Andes mountain range.

Jan and Eric are currently at the **ECOtower**, the first of the AndesFlux measurement towers, at Rio Tambopata, close to the city Puerto Maldonado.

The following Grafana Dashboard shows the **real-time data of a dendrometer** measuring the stem diameter variation of a tree in the vicinity of the ECOtower. The data transmission is realized via LoRaWAN and TTN!

Visiting the La Salle University of Technology (ULSA)

As part of the DAAD project LatiNet we are visiting the ULSA, Leon, Nicaragua.
More information on our activities can be found **here**.

Python Workshop at the Universidad Catolica El Salvador (UNICAES)

As part of the DAAD project LatiNet we visited the UNICAES.
On 2022-09-01 Clein and me gave a **Python workshop**.

We were hosting the FIRElinks Workgroup Meeting 2022 at HSRW!

- Official FIRElinks website
- Our **FIRElinks - Kleve Meeting** page

We were at Snap!Con 2022!

- **Our Contributions**
- **Official Snap!Con 2022 Website**



Our Talk: Let's plAIy!

Weather Station

HSRW Weather Station at Campus Kamp-Lintfort

Selected Projects, Activities and Info Collections

- Drone and Robot Related Activities
- Pegelmessung und Hochwasservorhersage in NRW
- Grundwasserdaten in NRW

Project Ideas

- digiDivers

Current Courses

Blog

First tests at the Tambopata Flux Tower for the Andesflux-Network

As a project partner of the PUCP in particular the Institue for Nature, Earth and Energy led by Eric Cosio, we are working on supporting the build-up of an infrastructure to connect multiple eddy covariance towers located in the Amazon basin into one network and also develop and install LoRaWAN Hardware, which is used to gather information from the area surrounding the towers.

→ Read more...

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Zeche Friedrich-Heinrich: Kamp-Lintfort wide Open LoRaWAN deployed!

(Jan Sonntag, Shreya Gupta, Rolf Becker, 2022-10-19)

Kamp-Lintfort is now covered by the community-driven **open LoRaWAN** network of **The Things Network (TTN)!**

Anyone in the area can now deploy their own LoRaWAN devices and use the new gateways for free to transmit data to their own TTN applications. Our **first application** is the data collection of our own **groundwater gauges** developed with and for **LINEG.**

→ Read more...

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New technology in town

On 2 June 2022, the team of Earth Observation Lab, headed by Prof. Dr. R. Becker, visited the *Zechenturm* in Zechenpark, Kamp-Lintfort. Officials from LINEG were also present for the tour inside the tower as part of the lab's plan to install LoRaWAN gateways in the tower for public and university

use.

→ Read more...

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