The goal of the workshop is the development of a fully 3D printed '3D PAWS' weather station at the Institute of Meteorology of the Freie Universität Berlin. The scientists will learn how to print meteorological instruments (3D print), connect sensors with a RaspberryPi (electronics and programming), how to make sure the instrumentation works (statistics and calibration), how to combine different instruments into one weather station.

Mon	Day 1 *Start & Prepare*	Tue	Day 2 *Build Instruments*	Wed	Day 3 *Build Instruments*	Thu	Day 4 *Combine Instruments*	Fri	Day 5 *Install Weather Station*
10:00 12:30	*10:00 – 10:15* Welcome (HR&CK) *10:15 – 11:00* Opener: New Technologies at the IFM[1] + Coffee *11:00 – 12:30* 3D Paws[2] and Group Building[3]	10:00 12:30	Group Work incl. Coffee Break	10:00 12:30	Group Work incl. Coffee Break	10:00 12:30	Group Work incl. Coffee Break	10:00 12:30	Installation of weather station in the measurement garden
12:30 13:30	Lunch Break (Institute)	12:30 13:30	Lunch Break (away)	12:30 13:30	Lunch Break (away)	12:30 13:30	Lunch Break (away)	12:30 13:30	Lunch Break (Institute)
13:30 15:00	Group Work – start with instructions and preparations	13:30 15:00	Group Work	13:30 15:00	Group Work	13:30 15:00	Group Work – start combing instruments	13:30 15:00	Launch weather station in measurement garden
15:00 15:15	Coffee Break	15:00 15:15	Coffee Break	15:00 15:15	Coffee Break	15:00 15:15	Coffee Break	15:00 15:15	Good Bye notes (HR&CK)
15:15 16:30	Talk: Colloquia about 3D PAWS[4]	15:15 16:30	Group Work	15:15 16:30	Group Work, testing the Instruments	15:15 16:30	Preparation of Weather Station, combining and calibrating instruments		
16:30 19:00	Ice Breaker in the Measurement Garden of IFM FUB	16:30 17:30	Impulse Talk: Energy Efficiency[5]	16:30 17:30	Talk: Instrumentation[6] (Beyrich, DWD)	16:30 17:30	Buffer Slot		
Mon	*Start & Prepare*	**Tue**	*Build Instruments*	**Wed**	*Build Instruments*	**Thu**	*Combine Instruments*	**Fri**	*Install Weather Station*

1) Henning IoT, Jens Drone, Christopher 3D Printer
2) Introduction of 3D Paws Technologies to build a Weather Station (P. Kucera NCAR)
3) GROUPS – Defnition of Task Forces build a 3D printed weather station: 1. Temperature, Huminity, Pressure; 2. Radiation; 3. Wind Speed; 4. Wind Direction; 5. Precipitation
4) Work in undeveloped countries – 3D printed weather stations change meterological services (P. Kucera NCAR)
5) Energy Efficiency in Instrumentation (Daniel Beiter, GFZ)
6) The role of measurements and instrumentation at the German Weather Service (Frank Beyrich DWD)

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