

## Fakultät für Ingenieurwissenschaften, Informatik und Psychologie Informatik-Fachvortrag

Donnerstag, den 27. Februar 2025, 11:00 Uhr Universität Ulm, Oberer Eselsberg Gebäude O27, Raum 2203

Herr Prof. Dr. Günther Palm Universität Ulm

spricht zum Thema

## Novelty, Information and Surprise

In this talk, I will introduce these closely related notions with subtle differences, primarily used in the context of learning and attention, perhaps also motivation, in psychology, neuroscience, and sometimes even in modern 'artificial intelligence'.

I use these terms to define three quantities, which result from a moderate generalization of classical Shannon information theory. I will explain where the theory deviates from the classical one and the older physical notion of entropy. I will try to convey the essential new ideas and the resulting differences between these three concepts, provide the definitions, and give some examples. I will also point to some of the mathematical difficulties, consequences, and potential applications, most likely in statistics.

Es laden ein die Dozenten der Fakultät für Ingenieurwissenschaften, Informatik und Psychologie.

Ulm, den 10.02.2025

gez. Prof. Dr. Hans Kestler