Course Name	Introduction to Wavelets
Contents and Objectives	Content: • Haar wavelets • Scaling functions • Multiresolution Analysis • Orthogonal Wavelets • Decomposition andreconstruction algorithms • Biorthogonal Wavelets Objectives of the course: Students are able to apply the discrete and continuous wavelet transform. They understand the basic properties and are able to describe the decomposition and reconstruction algorithms. They are able to describe some applications in signal analysis, pattern recognition, data compression and numerics and apply them to other problems. The students able to explain the different properties of Haar, Daubechies and Spline wavelets.
Teaching	This course consists of lectures and exercise classes. • Lecture: Wavelets (4h/week) • Exercise class: Wavelets (2h/week) This class can be taught remotely
Prerequisites	Basic notions of Analysis, Linear Algebra
Examination	Oral exam (30 minutes)
Credits	8 ECTS points
Frequency	This course is given at least every second year.
Workload	The estimated total working time for this course is 240 hours.
Duration	This course is given during one semester.