

MATH 4822/5822
Wavelets and Digital Signal Processing
Winter 2022

Instructor: Y. Billig

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Office Hours: Thursdays 6:00pm, in Zoom.

Recommended Textbook: Gilbert Strang, Truong Nguen,
Wavelets and Filter Banks.

Syllabus: Lossless Data Compression
Continuous and discrete Fourier transform
Fast Fourier transform
Wavelet Analysis
Wavelet Compression
Compression of digital audio, images and video

Method of Evaluation:	Assignments	25%
	Midterm	35%
	Project	40%

Midterm Date: Tuesday March 1, in class.

The philosophy of this course is to balance mathematical theory with hands-on computer based assignments using MATLAB.

Projects are to be presented in class during the last 3 weeks of classes.