**NumPDE VO Videos Faustmann 2022**

L01 PDEs and 1 d model problem 20220307

<https://www.youtube.com/watch?v=vrrx8a7hvkU>

L02 1 d FEM 8.3.

<https://www.youtube.com/watch?v=rlHL_P4-hS8>

L03 abstract solvability 14.3.

<https://www.youtube.com/watch?v=DPWRuIES9WM>

L04 Glaerkin method 15.3.

<https://www.youtube.com/watch?v=RiQgN0zGgt8>

L05 Sobolev spaces 21.3.

<https://www.youtube.com/watch?v=x-tytKMOz7U>

L06 Trace Operators 22.3.

<https://www.youtube.com/watch?v=iNWv3ThDH2Q>

L07 Solvability, Finite elements 28.3.

<https://www.youtube.com/watch?v=02LU6ciEgyQ>

L08 Equivalent Finite Elements 29.3.

<https://www.youtube.com/watch?v=GkImXbP2yd4>

L09 Global FEM spaces, Assembly 4.4.

<https://www.youtube.com/watch?v=bDn8ydBuPPw>

L10 Implementation of 2D FEM 5.4.

<https://www.youtube.com/watch?v=zOA_Wlii168>

L11 Higher order elements, error estimates 25.4.

<https://www.youtube.com/watch?v=VQL4sT9rrAk>

L12 Higher order error estimates 26.4.

<https://www.youtube.com/watch?v=_pwrx5xbOgk>

L13 Adaptive Finite Elements 2.5.

<https://www.youtube.com/watch?v=LUqIBFchXZ4>

L14 Convergence of AFEM 3.5.

<https://www.youtube.com/watch?v=3MtmseJVJHs>

L15 Inf-sup Stability 9.5.

<https://www.youtube.com/watch?v=Yf7DNnLf2V8>

L16 Saddle point problems 10.5.

<https://www.youtube.com/watch?v=jZtat-50dLo>

L17 Raviart Thomas elements 16.5.

<https://www.youtube.com/watch?v=R9OxytmFHRA>

L18 Approximation of mixed formulations 17.5.

<https://www.youtube.com/watch?v=PAy2wiaFHhc>

L19 FEM for Stokes 23.5.

<https://www.youtube.com/watch?v=umx7Yr5sI7U>

L20 Convection dominated problems 24.5.

<https://www.youtube.com/watch?v=VLCD3NVOdos>

L21 Convergence of SUPG 30.5.

<https://www.youtube.com/watch?v=C57qTTcjwS8>

L22 Finite elements for Maxwell 31.5.

<https://www.youtube.com/watch?v=zUV9vBW7TgA>

L23 Finite differences 13.6.

<https://www.youtube.com/watch?v=wLaQS57b_6M>

L24 Semi-discretization of parabolic PDEs 14.6.

<https://www.youtube.com/watch?v=WNzzeRM5FyE>

L25 Convergence of semi-discretization 20.6.

<https://www.youtube.com/watch?v=a60ajJ-zN5Q>

L26 Time stepping for wave equation 21.6.

<https://www.youtube.com/watch?v=jflpVt15oU0>

L27 DG, BEM and my research – not for exam 27.6.

<https://www.youtube.com/watch?v=F95j6sym62Q>