Topics in Numerical Analysis
(Modern approach to old and new issues)

Advanced Seminar – Applied Mathematics
Tuesday 14–16:00 Schrieber 006

Eitan Tadmor

Possible topics include

• Iterative root finders: global convergence, Newton-Moser,...

• Symmetric eigenproblems: the Divide & Conquer method

• Symmetric eigenproblems as flows of ODEs (Toda lattice)

• Numerical stability: resolvent estimates vs. power-boundedness

• Numerical boundary treatments of time dependent problems

• Discrete solvers for semi-discrete time-dependent problems

• Multilevel methods: compression and localization

• Deblurring, enhancement and capturing moving fronts