1145-35-984 **Alex A. Himonas** (himonas@nd.edu), **Dionyssios Mantzavinos** (mantzavinos@ku.edu) and **Fangchi Yan*** (fyan1@nd.edu). *Well-posedness of initial-boundary value problems for NLS and KdV via the Fokas Method.*

We shall discuss the well-posedness of initial-boundary value problems (ibvp) for the Korteweg-de Vries (KdV) and the nonlinear Schödinger (NLS) equations using a novel approach which is based on the solution formula produced via Fokas' unified transform method for the associated forced linear ibvp. Replacing in this formula the forcing by the nonlinearity and using data in Sobolev spaces suggested by the space-time regularity of the Cauchy problem of the corresponding linear equation gives an iteration map for the ibvp which is shown to be a contraction in an appropriately chosen solution space. (Received September 17, 2018)