1145-35-1195 **Pelin Guven Geredeli*** (pguvengeredeli2@unl.edu), University of Nebraska Lincoln, 1400 R St Department of Mathematics, Lincoln, NE 68588, and **George Avalos** and **Justin Webster**.
Semigroup Wellposedness of A Linearized Compressible Flow-Plate Interaction Under Varying Boundary Interface Coupling Conditions.

We address semigroup wellposedness for a linear, compressible viscous fluid interacting at its boundary with an elastic plate. We derive the model by linearizing the compressible Navier-Stokes equations about an arbitrary flow state, so the fluid PDE includes an ambient flow profile $\mathbf{U}$. The non-dissipative flow structure model is considered (i) with a pure velocity matching condition at the interface; (ii) with an interface condition given in terms of the material derivative of the structure, $(\partial_t + \mathbf{U} \cdot \nabla)w$. We adopt here a Lumer-Phillips approach, with a view of associating fluid-structure solutions with a C_0-semigroup $e^{\mathcal{A}t}{}_{t\geq 0}$ on a suitable finite energy space of initial data. (Received September 19, 2018)